

UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549  
**FORM 10-K**

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

**For the fiscal year ended December 31, 2022**

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from \_\_\_\_ to \_\_\_\_

**Commission File No. 001-34400**

**TRANE TECHNOLOGIES PLC**

(Exact name of registrant as specified in its charter)

**Ireland**

**98-0626632**

*(State or other jurisdiction of incorporation or organization)*

*(I.R.S. Employer Identification No.)*

**170/175 Lakeview Dr.  
Airsides Business Park  
Swords Co. Dublin  
Ireland**

*(Address of principal executive offices)*

Registrant's telephone number, including area code: +(353)(0) 18707400

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of each class</u>	<u>Trading Symbol</u>	<u>Name of each exchange on which registered</u>
Ordinary Shares, Par Value \$1.00 per Share	TT	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.:

Large accelerated filer  Accelerated filer  Emerging growth company   
Non-accelerated filer  Smaller reporting company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes  No

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to § 240.10D-1(b).

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes  No

The aggregate market value of ordinary shares held by nonaffiliates on June 30, 2022 was approximately \$30.0 billion based on the closing price of such stock on the New York Stock Exchange.

The number of ordinary shares outstanding of Trane Technologies plc as of February 3, 2023 was 229,074,725.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant's proxy statement to be filed within 120 days of the close of the registrant's fiscal year in connection with the registrant's Annual General Meeting of Shareholders to be held June 1, 2023 are incorporated by reference into Part II and Part III of this Form 10-K.

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**TRANE TECHNOLOGIES PLC**  
**Form 10-K**  
**For the Fiscal Year Ended December 31, 2022**  
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## CAUTIONARY STATEMENT FOR FORWARD LOOKING STATEMENTS

Certain statements in this report, other than purely historical information, are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These forward-looking statements generally are identified by the words “believe,” “project,” “expect,” “anticipate,” “estimate,” “forecast,” “outlook,” “intend,” “strategy,” “plan,” “may,” “might”, “could,” “should,” “will,” “would,” “will be,” “will continue,” “will likely result,” or the negative thereof or variations thereon or similar terminology generally intended to identify forward-looking statements.

Forward-looking statements may relate to such matters as projections of revenue, margins, expenses, tax provisions, earnings, cash flows, benefit obligations, share or debt repurchases or other financial items; any statements of the plans, strategies and objectives of management for future operations, including those relating to any statements concerning expected development, performance or market share relating to our products and services; any statements regarding future economic conditions or our performance including our future performance statements related to the continued impact of the Coronavirus Disease 2019 (COVID-19) global pandemic; any statements regarding our sustainability commitments; any statements regarding pending investigations, claims or disputes; any statements of expectation or belief; and any statements of assumptions underlying any of the foregoing. These statements are based on currently available information and our current assumptions, expectations and projections about future events. While we believe that our assumptions, expectations and projections are reasonable in view of the currently available information, you are cautioned not to place undue reliance on our forward-looking statements. You are advised to review any further disclosures we make on related subjects in materials we file with or furnish to the Securities and Exchange Commission. Forward-looking statements speak only as of the date they are made and are not guarantees of future performance. They are subject to future events, risks and uncertainties - many of which are beyond our control - as well as potentially inaccurate assumptions, that could cause actual results to differ materially from our expectations and projections. We do not undertake to update any forward-looking statements.

Factors that might affect our forward-looking statements include, among other things:

- overall economic, political and business conditions in the markets in which we operate including recessions, economic downturns, price instability, slow economic growth and social and political instability;
- impacts of the COVID-19 global pandemic on our business operations, financial results and financial position and on the world economy;
- commodity shortages, supply chain risks and price increases;
- national and international conflict, including war, civil disturbances and terrorist acts, such as the Russia-Ukraine conflict;
- trade protection measures such as import or export restrictions and requirements, the imposition of tariffs and quotas or revocation or material modification of trade agreements;
- competitive factors in the industries in which we compete;
- the development, commercialization and acceptance of new and enhanced products and services;
- attracting and retaining talent;
- work stoppages, union negotiations, labor disputes and similar issues;
- other capital market conditions, including availability of funding sources, interest rate fluctuations and other changes in borrowing costs;
- currency exchange rate fluctuations, exchange controls and currency devaluations;
- the outcome of any litigation, governmental investigations, claims or proceedings;
- risks and uncertainties associated with the asbestos-related bankruptcy for our deconsolidated subsidiaries Aldrich Pump LLC and Murray Boiler LLC;
- the impact of potential information technology system failures, vulnerabilities, data security breaches or other cybersecurity issues;
- evolving data privacy and protection laws;
- intellectual property infringement claims and the inability to protect our intellectual property rights;
- changes in laws and regulations;
- health epidemics or pandemics or other contagious outbreaks;

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- climate change, changes in weather patterns, natural disasters and seasonal fluctuations;
- national, regional and international regulations and policies associated with climate change and the environment;
- the outcome of any tax audits or settlements;
- the strategic acquisition or divestiture of businesses, product lines and joint ventures;
- impairment of our goodwill, indefinite-lived intangible assets and/or our long-lived assets; and
- changes in tax laws and requirements (including tax rate changes, new tax laws, new and/or revised tax law interpretations and any legislation that may limit or eliminate potential tax benefits resulting from our incorporation in a non-U.S. jurisdiction, such as Ireland).

Some of the significant risks and uncertainties that could cause actual results to differ materially from our expectations and projections are described more fully in Part I, Item 1A “Risk Factors.” You should read that information in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Part II, Item 7 of this report and our Consolidated Financial Statements and related notes in Part II, Item 8 “Financial Statements” of this report. We note such information for investors as permitted by the Private Securities Litigation Reform Act of 1995.

## PART I

### Item 1. **BUSINESS**

#### **Overview**

Trane Technologies plc, a public limited company, incorporated in Ireland in 2009, and its consolidated subsidiaries (collectively we, us, our, the Company) is a global climate innovator. We bring sustainable and efficient solutions to buildings, homes and transportation through our strategic brands, Trane® and Thermo King®, and our environmentally responsible portfolio of products, services and connected intelligent controls. We generate revenue and cash primarily through the design, manufacture, sales and service of solutions for Heating, Ventilation and Air Conditioning (HVAC), transport refrigeration, and custom refrigeration solutions. As an industry leader with an extensive global install base, our growth strategy includes expanding recurring revenue through services and rental options. Our unique business operating system, uplifting culture and highly engaged team around the world are also central to our earnings and cash flow growth.

Through our sustainability-focused strategy and purpose to *boldly challenge what's possible for a sustainable world*, we meet critical needs and growing global demand for innovation that reduces greenhouse gas emissions while enabling healthier, efficient indoor environments and safe, reliable delivery of essential temperature-controlled cargo. We have announced certain defined sustainability commitments with a goal of achieving these commitments by 2030 (2030 Sustainability Commitments). Trane Technologies' bold 2030 Sustainability Commitments have been verified by the Science Based Targets initiative (SBTi) and include our 'Gigaton Challenge' to reduce customer greenhouse gas emissions by a billion metric tons, 'Leading by Example' through carbon-neutral operations across our own footprint, and 'Opportunity for All' by building a diverse workforce reflective of our communities.

#### **Reportable Segments**

We operate under three reportable segments.

- Our Americas segment innovates for customers in North America and Latin America. The Americas segment encompasses commercial heating, cooling and ventilation systems, building controls, and energy services and solutions; residential heating and cooling; and transport refrigeration systems and solutions. This segment had 2022 net revenues of \$12,640.8 million.
- Our EMEA segment innovates for customers in the Europe, Middle East and Africa region. The EMEA segment encompasses heating, cooling and ventilation systems, services and solutions for commercial buildings and industrial processing, and transport refrigeration systems and solutions. This segment had 2022 net revenues of \$2,034.5 million.
- Our Asia Pacific segment innovates for customers throughout the Asia Pacific region. The Asia Pacific segment encompasses heating, cooling and ventilation systems, services and solutions for commercial buildings and transport refrigeration systems and solutions. This segment had 2022 net revenues of \$1,316.4 million.

## Products and Services

Our principal products and services include the following:

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Air conditioners	Large commercial unitary
Air exchangers	Light commercial unitary
Air handlers	Multi-pipe HVAC systems
Airside and terminal devices	Package heating and cooling systems
Air-sourced heat pumps	Parts and supplies (aftermarket and OEM)
Auxiliary power units (electric and diesel)	Rail refrigeration systems
Building management systems	Rate chambers
Bus air purification systems	Refrigerant reclamation
Bus and rail HVAC systems	Renewable energy projects
Chillers	Repair and maintenance services
Coils and condensers	Rental services
Container refrigeration systems and gensets	Residential Air Filtration System
Control systems	Residential Hybrid Heating Solutions
Cryogenic refrigeration systems	Self-powered truck refrigeration systems
Dehumidifiers	Service agreements
Ductless	Telematics Solutions
Energy efficiency programs	Temporary heating and cooling systems
Energy infrastructure programs	Thermal energy storage
Energy management services	Thermostats/controls & associated digital solutions
Energy performance contracting	Trailer refrigeration systems (diesel, electric and hybrid)
Furnaces	Transport heater products
Geothermal systems	Truck refrigeration systems (diesel, electric and hybrid)
Home automation	Ultra-low temperature freezers
Humidifiers	Unitary systems (light and large)
HVAC Performance-monitoring applications	Variable refrigerant flow
Indoor air quality assessments and related products for HVAC and Transport solutions	Vehicle-powered truck refrigeration systems
Industrial refrigeration	Ventilation
Installation contracting	Water source heat pumps

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These products are sold primarily under our tradenames including Trane® and Thermo King®.

## Competitive Conditions

Our products and services are sold in highly competitive markets throughout the world. Due to the diversity of these products and services and the variety of markets served, we encounter a wide variety of competitors that vary by product line and services. They include well-established regional or specialized competitors, as well as larger U.S. and non-U.S. corporations or divisions of larger companies.

The principal methods of competition in these markets relate to price, quality, delivery, service and support, technology and innovation. We are one of the leading manufacturers in the world of HVAC systems and services and transport temperature control products and services.

## Distribution

Our products are distributed by a number of methods, which we believe are appropriate to the type of product. U.S. sales are made through branch sales offices, distributors and dealers across the country. Non-U.S. sales are made through numerous subsidiary sales and service companies with a supporting chain of distributors throughout the world.

## Operations by Geographic Area

Approximately 28% of our net revenues in 2022 were derived outside the U.S. and we sold products in approximately 100 countries. Therefore, the attendant risks of manufacturing or selling in a particular country, such as currency devaluation, nationalization and establishment of common markets, may have an adverse impact on our non-U.S. operations.

### **Customers**

We have no customer that accounted for more than 10% of our consolidated net revenues in 2022, 2021 or 2020. No material part of our business is dependent upon a single customer or a small group of customers; therefore, the loss of any one customer would not have a material adverse effect on our results of operations or cash flows.

### **Materials**

We both manufacture and procure many of the components included in our products. For components we manufacture, we are required to source a wide variety of commodities such as steel, copper, and aluminum. These principal commodities are purchased from a large number of independent sources around the world, primarily within the region where the products are manufactured. We believe that available sources of supply will generally be sufficient for the foreseeable future.

For many components we procure, we have multiple capable sources with minimal concerns for sufficient supply, however there are certain categories of components that continue to see limited availability or shortages.

### **Seasonality**

Demand for certain of our products and services is influenced by weather conditions. For instance, sales in our commercial and residential HVAC businesses historically tend to be higher in the second and third quarters of the year because this represents spring and summer in the U.S. and other northern hemisphere markets, which are the peak seasons for sales of air conditioning systems and services. Therefore, results of any quarterly period may not be indicative of expected results for a full year and unusual weather patterns or events could positively or negatively affect certain segments of our business and impact overall results of operations.

### **Research and Development**

We engage in research and development activities in an effort to introduce new products, enhance existing product effectiveness, improve ease of use and reliability as well as expand the various applications for which our products may be appropriate. In 2022, we spent \$211.2 million on research and development, focused on product and system sustainability improvements such as increasing energy efficiency, developing products that allow for use of lower global warming potential refrigerants, reducing material content in products, and designing products for circularity. All new product development (NPD) programs must complete a Design for Sustainability module within our NPD process to ensure that every program has a positive impact on sustainability.

We also have a strong focus on sustaining activities, which include costs incurred to reduce production costs, improve existing products, create custom solutions for customers and provide support to our manufacturing facilities. We anticipate that we will continue to make significant expenditures for research and development and sustaining activities as we look to maintain and improve our competitive position.

### **Patents and Licenses**

Our intellectual property rights are important to our business and include numerous patents, trademarks, copyrights, trade secrets, proprietary technology, technical data, business processes, and other confidential information. Although in the aggregate we consider our intellectual property rights to be valuable to our operations, we do not believe that our business is materially dependent on a single intellectual property right or any group of them. In our opinion, engineering, production skills and experience are more responsible for our market position than our intellectual property rights.



**Backlog**

Our backlog of orders, believed to be firm, at December 31, was as follows:

<i>In millions</i>	2022		2021	
Americas	\$	5,325.2	\$	3,856.7
EMEA		616.1		727.2
Asia Pacific		941.8		852.8
Total	\$	6,883.1	\$	5,436.7

These backlog figures are based on orders received and only include amounts associated with our equipment and contracting and installation performance obligations. Beginning in 2022, our backlog figures include additional revenue streams due to increased lead times. A major portion of our residential products are built in advance of order and either shipped or assembled from stock. As a result, we expect to ship a majority of the December 31, 2022 backlog during 2023. However, orders for specialized machinery or specific customer applications are submitted with extensive lead times and are often subject to revision and deferral, and to a lesser extent cancellation or termination. During the year ended December 31, 2022, we experienced significant increases in end market demand for our sustainability-focused products and services resulting in a higher backlog of orders in the current year as compared to prior year. In addition, we are seeing industry-wide supply chain and resource constraints impacting our ability to produce and ship product, which we are proactively managing. To the extent projects are delayed or there are additional supply chain and resource constraints, the timing of our revenue could be affected.

**Environmental Matters**

We continue to be dedicated to environmental and sustainability programs to minimize the use of natural resources, reduce the utilization and generation of hazardous materials from our manufacturing processes and to remediate identified environmental concerns. As to the latter, we are currently engaged in site investigations and remediation activities to address environmental cleanup from past operations at current and former manufacturing facilities and off-site waste disposal facilities.

It is our policy to establish environmental reserves for investigation and remediation activities when it is probable that a liability has been incurred and a reasonable estimate of the liability can be made. Estimated liabilities are determined based upon existing remediation laws and technologies. Inherent uncertainties exist in such evaluations due to unknown environmental conditions, changes in government laws and regulations, and changes in cleanup technologies. The environmental reserves are updated on a routine basis as remediation efforts progress and new information becomes available.

We are sometimes a party to environmental lawsuits and claims and have received notices of potential violations of environmental laws and regulations from the Environmental Protection Agency and similar state and international authorities. We have also been identified as a potentially responsible party (PRP) for cleanup costs associated with off-site waste disposal at federal Superfund and state remediation sites. In most instances at multi-party sites, our share of the liability is not material.

In estimating our liability at multi-party sites, we have assumed that we will not bear the entire cost of remediation of any site to the exclusion of other PRPs who may be jointly and severally liable. The ability of other PRPs to participate has been taken into account, based on our understanding of the parties' financial condition and probable contributions on a per site basis.

For a further discussion of our potential environmental liabilities, see Note 20 "Commitments and Contingencies" to the Consolidated Financial Statements.

## **Separation of Industrial Segment Businesses**

On February 29, 2020 (Distribution Date), we completed our Reverse Morris Trust transaction (the Transaction) with Gardner Denver Holdings, Inc. (Gardner Denver, which changed its name to Ingersoll Rand Inc. (Ingersoll Rand) after the Transaction) whereby we distributed Ingersoll-Rand U.S. HoldCo, Inc., which contained our former Industrial segment (Ingersoll Rand Industrial) through a pro rata distribution (the Distribution) to shareholders of record as of February 24, 2020 (Spin-off Shareholders). Ingersoll Rand Industrial then merged into a wholly-owned subsidiary of Ingersoll Rand. Upon close of the Transaction, the Spin-off Shareholders received 50.1% of the shares of Ingersoll Rand common stock on a fully-diluted basis and Gardner Denver shareholders retained 49.9% of the shares of Ingersoll Rand on a fully diluted basis. As a result, the Spin-off Shareholders received .8824 shares of Ingersoll Rand common stock with respect to each share owned as of February 24, 2020. In connection with the Transaction, we received a special cash payment of \$1.9 billion.

During the year ended December 31, 2022, the Company recorded a reduction to *Retained earnings* of \$18.9 million primarily related to tax matters associated with Ingersoll Rand Industrial and the settlement of certain items related to the Transaction. During the year ended December 31, 2021, we paid Ingersoll Rand \$49.5 million to settle certain items related to the Transaction. This payment was related to working capital, cash and indebtedness amounts as of the Distribution Date, as well as funding levels related to pension plans, non-qualified deferred compensation plans and retiree health benefits. We recorded the settlement as a reduction to *Retained earnings* during the first quarter of 2021.

After the Distribution Date, we do not beneficially own any Ingersoll Rand Industrial shares of common stock and no longer consolidate Ingersoll Rand Industrial in our financial statements. The historical results of Ingersoll Rand Industrial are presented as a discontinued operation in the Consolidated Statements of Earnings and Consolidated Statements of Cash Flows.

## **Asbestos-Related Matters**

We are involved in a number of asbestos-related lawsuits, claims and legal proceedings. In June 2020, our indirect wholly-owned subsidiaries Aldrich Pump LLC (Aldrich) and Murray Boiler LLC (Murray) each filed a voluntary petition for reorganization under Chapter 11 of Title 11 of the United States Code (the Bankruptcy Code) in the United States Bankruptcy Court for the Western District of North Carolina in Charlotte (the Bankruptcy Court). As a result of the Chapter 11 filings, all asbestos-related lawsuits against Aldrich and Murray have been stayed due to the imposition of a statutory automatic stay applicable in Chapter 11 bankruptcy cases. Only Aldrich and Murray have filed for Chapter 11 relief. Neither Aldrich's wholly-owned subsidiary, 200 Park, Inc. (200 Park), Murray's wholly-owned subsidiary, ClimateLabs LLC (ClimateLabs), Trane Technologies plc nor its other subsidiaries (the Trane Companies) are part of the Chapter 11 filings. In addition, at the request of Aldrich and Murray, the Bankruptcy Court has entered an order temporarily staying all asbestos-related claims against the Trane Companies that relate to claims against Aldrich or Murray (except for asbestos-related claims for which the exclusive remedy is provided under workers' compensation statutes or similar laws).

The goal of these Chapter 11 filings is to resolve equitably and permanently all current and future asbestos-related claims in a manner beneficial to claimants, Aldrich and Murray through court approval of a plan of reorganization that would create a trust pursuant to section 524(g) of the Bankruptcy Code, establish claims resolution procedures for all current and future asbestos-related claims against Aldrich and Murray and channel such claims to the trust for resolution in accordance with those procedures.

For detailed information on the bankruptcy cases of Aldrich and Murray, see:

- Part I, Item 1A, "Risk Factors - Risks Related to Litigation,"
- Part I, Item 3, "Legal Proceedings,"
- Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations - Significant Events," and
- Part II, Item 8, Consolidated Financial Statements, Note 1, "Description of Company," and Note 20, "Commitments and Contingencies."

## **Human Capital Management**

Our people and culture are critical to achieving our operational, financial and strategic success.

As of December 31, 2022, we employed approximately 39,000 people in nearly 60 countries including approximately 14,000 outside of the United States. As of December 31, 2022, 25.7% of our global employees were women and 37.4% of our employees in the United States were racially and ethnically diverse. In 2022, 30.2% of our new hires globally were women and 50.5% of new hires in the United States were racially and ethnically diverse. Approximately 24.2% of leadership and management positions were held by women as of December 31, 2022. The diversity percentages included in this section exclude current year business acquisitions.

As a result of maintaining a consistent focus on an uplifting culture, our key talent (employees with the highest potential rating) retention rate excluding retirements in 2022 was 93.1%. Our company-wide (all employees) voluntary retention rate excluding retirements was 86.3%.

### ***Culture and Purpose***

In 2022, we continued to drive our purpose to boldly challenge what's possible for a sustainable world through our strategic priorities and 2030 Sustainability Commitments. We use our Leadership Principles to guide our actions each day and enable our uplifting, engaging and inclusive culture. As part of our commitment to people and culture, we strive to create a work environment where our people uplift each other, make a positive impact on the planet and thrive at work and at home.

Since 2006, our annual employee engagement survey has enabled employees to share their experiences and perceptions of our Company. Employees provide ratings and written comments for continuous improvement. In 2022, 88% of our workforce participated in our annual engagement survey, and our overall employee engagement score remains high. While our work on culture is never done, these scores indicate that we're continuing to raise the bar to increase pride, energy and optimism across the company and create the best employee experience.

### ***Diversity and Inclusion***

Our commitment to Diversity and Inclusion is core to our purpose and our 2030 Sustainability Commitments. We are proud members of Paradigm for Parity (a coalition of more than 100 corporations who have committed to closing the gender gap in corporate leadership) and OneTen (a coalition dedicated to hiring one million Black Americans in the next ten years to achieve economic mobility). In addition, we are a 2017 signatory to the CEO Action for Diversity and Inclusion pledge (the largest CEO-driven business commitment to advance diversity and inclusion within the workplace).

We offer company-sponsored forums to promote diversity and inclusion in the workplace including:

- Bridging Connections – a safe forum created to allow our employees to speak from the heart about a variety of topics without fear of retribution.
- Employee Resources Groups (ERGs) – we sponsor eight ERGs (the Women's Employee Network, the Black Employee Network, the Veterans Employee Resource Group, the Asian Employee Resource Group, the Global Organization of Latinos, the Lesbian, Gay, Bisexual, Transgender and Allies (LGBTQA) Employee Resource Group, the InterGenerational Employee Network, and VisAbility). All ERGs are voluntary, open and inclusive organizations that offer employees a sense of belonging, networking and learning opportunities.
- Women's Leadership Development Programs
  - The Women in Action Leadership Program is a virtual, self-paced cohort program that provides women with access to content that promotes their leadership development skills.
  - The Women on the Rise (WOR) program is designed over eight-weeks to help empower, develop, connect and support emerging women leaders.
  - The Women's Leadership Program (WLP) is a cohort program for high potential talent that provides an opportunity to network with other senior women leaders, gain individual insights through an executive mentoring partnership and build leadership skills and confidence through a variety of learning components, speakers, experiences and assessments.
- In 2022, the Inclusive Leader Learning Experience was promoted to people leaders detailing three stages of inclusive leadership: Becoming Aware, Becoming an Ally and Upstander, and Becoming a Change Agent.
- In 2022, the Global Diversity & Inclusion summit continued its focus on development of the inclusive leader behaviors; highlighting allyship.

Additionally, our corporate citizenship strategy, Sustainable Futures, which was launched in 2021, aims at creating educational and career opportunities specifically for people of color who are under-represented in our industry. This strategy will support our efforts to create opportunity for all by providing marginalized students with a range of resources, from classroom curriculum introducing them to careers at a climate innovation company, to soft-skill development for landing a science, technology, engineering, and mathematics (STEM) job.

### ***Learning and Development***

We offer learning and career development opportunities that enhance our employees' skills and abilities and ensure contemporary technical and functional skills and competencies such as innovation, collaboration and leadership. Examples of these programs include:

- Team Leader Development Program – An eight-week experiential development program that engages, teaches and empowers front-line plant leaders to apply continuous improvement methods, make sound business decisions, solve problems, and serve as a coach to their teams.
- Graduate Training Program (GTP) – A five-month development program designed to prepare university graduate engineers for a rewarding career in technical sales. The program prepares sales engineers to sell Trane's complex HVAC systems and energy services. The program, started in 1926, is recognized as the industry's most comprehensive training program and provides intensive technical, business, sales, and leadership training.
- Accelerated Development Program (ADP) – An early career rotational program focused on both functional and leadership development, designed to build a pipeline of strong talent for key roles in the organization. Participants rotate to multiple geographic locations and business units during the 2.5 year program, while completing diverse assignments, and receiving dedicated functional training and developmental experiences.
- Leadership Development - We invest in custom, key transition leadership development programs for our high potential talent. We partner with best-in-class external leadership development experts such as INSEAD, Center for Creative Leadership, and the NeuroLeadership Institute to deliver these programs globally each year. Additionally, we offer our Trane Technologies people leaders learning programs to develop their skills in leading their teams, such as building diverse and inclusive teams, increasing engagement, and coaching skills.
- Professional development – We have numerous online courses in professional development skills as varied as working virtually, resiliency, Microsoft Teams, unconscious bias, and strategic capability initiatives such as product management and other programs that support our strategy of being a world class lean enterprise.
- Dependent Scholarships - To support learning in our employees' families, we offer scholarships to support their dependent children's pursuits beyond high school, whether for a traditional degree, or a trade certification.
- Compliance Training – Our Compliance Training curriculum covers key topics that are important to protect our Company, our people and our customers. Topics include certification in our Code of Conduct, Information Security, Understanding and Preventing Sexual Harassment and Human Trafficking Prevention. All salaried employees globally complete our annual compliance curriculum.

### ***Employee Volunteerism***

In 2022, with the height of the COVID-19 pandemic behind us, we saw many employees re-engage in in-person volunteerism. From Monterrey, Mexico to St. Paul, MN and Dubai UAE to Davidson, NC, our teams made meaningful contributions to their local communities.

This year, we formed Purple Teams, a new global employee network that provides vital support for driving our corporate citizenship efforts around the world, and volunteerism in particular. More than 70 Purple Teams were stood up, spanning each business and region where we do business. They are comprised of local champions who will cultivate the spirit of volunteerism, ensure alignment with our strategy, and also help ensure accurate data tracking. After launching in summer 2022, one of their first coordinated engagements was a back-to-school volunteer literacy project in partnership with Reading Is Fundamental. Employees in multiple locations donated hundreds of hours assembling literacy backpacks with three new STEM-themed books and bookmarks for more than 11,000 elementary school students around the U.S. Our definition of the term community also includes our own colleagues and this year, we were honored to be able to provide relief grant support to nearly 800 employees in Puerto Rico who were impacted by Hurricane Ivan.

### ***Employee Well-being***

Trane Technologies believes employees that can thrive at work, at home and in their communities are our greatest asset. We integrate well-being into our culture through core global resources that support physical, social, emotional, and financial well-being. Several elements of our holistic well-being actions include:

- Giving 100% of our team members access to company-sponsored wellness offerings, including a global Employee Assistance Program and a global wellness platform covering an array of topics like mindfulness, resiliency, and nutrition.
- Offering financial relief through the Helping Hand program, an employee funded program created to help associates facing financial hardship immediately after a qualified disaster or an unforeseen personal hardship.
- Implementing and adapting Flex Time and Flex Place policies and resources as well as work-from-home arrangements, and other approaches to support evolving employee needs.

Recognizing the pervasiveness of mental health challenges facing employees and their families post-pandemic, we prioritized mental well-being globally by:

- Introducing a series of conversations with team members around the world to share their stories related to mental health to address stigma and promote a culture that encourages and supports open discussion about mental health issues.
- Implementing an enterprise Mental Well-Being Hub to streamline access to mental health resources and guidance for supporting others and leveraging our global Employee Assistance Program to provide frequent communications targeted to concerns such as mental health, stress & burnout, relationships, childcare and education.

### ***Competitive Pay and Benefits***

Trane Technologies' compensation programs and policies are designed to align the compensation of our employees with the Company's performance and strategy: to attract and retain a talented workforce and to meet the needs of employees globally. We are committed to providing competitive and equitable wages and benefits that will allow our employees to thrive at work and at home. In addition, the structure of our compensation programs balances incentive earnings for both long-term and short-term performance, with our annual incentive plan closely tied to our 2030 sustainability commitments, which includes environmental sustainability and workforce diversity goals, in addition to financial goals.

Trane Technologies' benefits programs and policies are designed to support the well-being of employees and their families. Purpose-driven and locally relevant benefits programs are provided globally. In addition to core and competitive medical, welfare and retirement programs, we offer programs to support work-life balance, including:

- Expanded family support programs inclusive of child and elder back-up care programs;
- Enhanced parental leave programs; and
- Tuition assistance to support the ongoing growth and development of our employees.

Our proxy statement provides more detail on the competitive compensation and benefit programs we offer.

### ***Employee Safety***

In 2022, we continued our multi-year, world class safety record with a Lost-time Incident Rate of 0.13 and Recordable Rate below 1.00. In response to the pandemic, we continue to monitor, track, update and implement our COVID-19 guidance based on World Health Organization (WHO), U.S. and European Centers for Disease Control and Prevention and other local or country specific guidelines. We completed over 35,000 observations of our service technicians and manufacturing employees to ensure all employees were following safe work practices and COVID-19 protocols.

In addition, we reviewed and updated our Automatic External Defibrillator program so that locations globally can respond to sudden cardiac arrest emergencies. We also continue to maintain all our locations globally as Tobacco Free Workplaces.

**Available Information**

We have used, and intend to continue to use, the homepage, the investor relations and the “News” section of our website (www.tranetechnologies.com), among other sources such as press releases, public conference calls and webcasts, as a means of disclosing additional information, which may include future developments regarding the Company and/or material non-public information. We encourage investors, the media, and others interested in our Company to review the information it makes public in these locations on its website.

We file annual, quarterly, and current reports, proxy statements, and other documents with the Securities and Exchange Commission under the Securities Exchange Act of 1934.

This Annual Report on Form 10-K, as well as our quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to all of the foregoing reports, are made available free of charge on our Internet website (www.tranetechnologies.com) as soon as reasonably practicable after such reports are electronically filed with or furnished to the Securities and Exchange Commission. The Board of Directors of our Company has also adopted and posted in the Investor Relations section of our website the Corporate Governance Guidelines and charters for each of the Board’s standing committees. The contents of our website are not incorporated by reference in this report.

**Executive Officers of the Registrant**

The following is a list of our executive officers as of February 10, 2023.

<b>Name and Age</b>	<b>Date of Service as an Executive Officer</b>	<b>Principal Occupation and Other Information for Past Five Years</b>
David S. Regnery (60)	8/5/2017	Chair of the Board (since January 2022); Chief Executive Officer and Director (since July 2021); President and Chief Operating Officer (January 2020 to June 2021); Executive Vice President (September 2017 to December 2019)
Christopher J. Kuehn (50)	6/1/2015	Executive Vice President and Chief Financial Officer (since July 2021); Senior Vice President and Chief Financial Officer (March 2020 to June 2021); Vice President and Chief Accounting Officer (June 2015 to February 2020)
Paul A. Camuti (61)	8/1/2011	Executive Vice President and Chief Technology and Strategy Officer (since January 2020); Senior Vice President, Innovation and Chief Technology Officer (August 2011 to December 2019)
Raymond D. Pittard (57)	7/1/2021	Executive Vice President, Supply Chain, Engineering and Information Technology (since July 2021); Transformation Office Leader (December 2019 to June 2021); Vice President, SBU President of Transport Solutions North America and EMEA (December 2013 to December 2019)
Evan M. Turtz (54)	4/3/2019	Senior Vice President and General Counsel (since April 2019); Secretary (since October 2013); Vice President (2008-2019); Deputy General Counsel, Industrial, General Counsel, CTS (2016-2019)
Keith A. Sultana (53)	10/12/2015	Senior Vice President, Supply Chain and Operational Services (since January 2020); Senior Vice President, Global Operations and Integrated Supply Chain (October 2015-December 2019)
Mairéad A. Magner (45)	1/6/2022	Senior Vice President, Chief Human Resources Officer (since January 2022); Vice President, Talent and Organization Capability (January 2018 to January 2022); Vice President, Human Resources, CTS (March 2015 to January 2018)
Mark A. Majocho (51)	12/1/2022	Vice President and Chief Accounting Officer (since December 2022); Vice President, Finance CHVAC Americas (April 2020-November 2022); Vice President, Corporate Development (July 2018 - April 2020)

No family relationship exists between any of the above-listed executive officers of our Company. All officers are elected to hold office for one year or until their successors are elected and qualified.

**Item 1A. RISK FACTORS**

*Our business, financial condition, results of operations, and cash flows are subject to a number of risks that could cause the actual results and conditions to differ materially from those projected in forward-looking statements contained in this Annual Report on Form 10-K. The risks set forth below are those we consider most significant. We face other risks, however, that we do not currently perceive to be material which could cause actual results and conditions to differ materially from our expectations. You should evaluate all risks before you invest in our securities. If any of the risks actually occur, our business, financial condition, results of operations or cash flows could be adversely impacted. In that case, the trading price of our ordinary shares could decline, and you may lose all or part of your investment.*

**Risks Related to Economic Conditions**

***The full extent to which a resurgence of COVID-19 or spread of new infectious diseases will affect us will depend on future developments that are highly uncertain and cannot be accurately predicted.***

The COVID-19 pandemic has had widespread, rapidly evolving and unpredictable impacts on global society, economics, financial markets and business practices. Government efforts to contain COVID-19 have included travel bans and restrictions, quarantines, shelter in place orders and shutdowns. Our business and global operations have been impacted by supply chain delays, higher material costs and product prices, lower revenues for some quarters, and unfavorable foreign currency exchange rates. The COVID-19 pandemic has also at times affected our ability to obtain needed products and services, operate in certain locations, maintain our distribution channels, and attract and retain talent. We continue to closely monitor the impact of the COVID-19 pandemic on all aspects of our business and geographies, including how it has and will impact our customers, team members, suppliers, vendors, business partners and distribution channels.

The extent to which COVID-19 or other widespread outbreaks of infectious disease impact our business going forward will depend on factors such as the duration and scope of infections; governmental, business, and individuals' actions in response to the health crisis; and the impact on economic activity including the possibility of financial market instability or recession. How a resurgence of COVID-19 or other potential global pandemics will affect us will depend on future developments that are highly uncertain and cannot be accurately predicted. Such events may also exacerbate other risks discussed herein, any of which could have a material adverse effect on us.

***Our global operations subject us to economic risks.***

Our global operations are dependent upon products manufactured, purchased and sold in the U.S. and internationally. These activities are subject to risks that are inherent in operating globally, including:

- changes in local laws and regulations including potential imposition of currency restrictions, new or changing tax laws and other restraints;
- limitation of ownership rights, including expropriation of assets by a local government, and limitation on the ability to repatriate earnings;
- sovereign debt crises and currency instability in developed and developing countries;
- trade protection measures such as import or export restrictions and requirements, the imposition of burdensome tariffs and quotas or revocation or material modification of trade agreements;
- difficulty in staffing and managing global operations including supply chain disruptions which may be exacerbated by pandemics or other events affecting the supply of labor, materials and components;
- difficulty of enforcing agreements, collecting receivables and protecting assets through non-U.S. legal systems;
- national and international conflict, including war, civil disturbances and terrorist acts; and
- recessions, economic downturns, price instability, slowing economic growth and social and political instability.

These risks could increase our cost of doing business internationally, increase our counterparty risk, disrupt our operations, disrupt the ability of suppliers and customers to fulfill their obligations, limit our ability to sell products in certain markets and have a material adverse impact on our results of operations, financial condition, and cash flows.

***Commodity shortages, supply chain risks and price increases could adversely affect our financial results.***

We rely on suppliers to secure commodities, particularly steel and non-ferrous metals, and third-party parts and components required for the manufacture of our products. A disruption in deliveries from our suppliers or decreased availability of commodities and third-party parts and components could have an adverse effect on our ability to meet our commitments to customers or increase our operating costs. Disruptions have occurred due to the COVID-19 pandemic, the Russia-Ukraine conflict, supplier capacity constraints, labor shortages, port congestion, logistical problems and other issues. Some of these disruptions have resulted in supply chain constraints affecting our business including our ability to timely produce and ship our products. The unavailability of some commodities and third-party parts and components could have a material adverse impact on our results of operations and cash flows.

Volatility in the prices of commodities and third-party parts and components or the impact of inflationary increases could increase the costs of our products and services. We may not be able to pass on these costs to our customers and this could have a material adverse impact on our results of operations and cash flows. Conversely, in the event there is deflation, we may experience pressure from our customers to reduce prices. There can be no assurance that we would be able to reduce our costs (through negotiations with suppliers or other measures) to offset any such price concessions which could adversely impact results of operations and cash flows. While we may use financial derivatives or supplier price locks to hedge against this volatility, by using these instruments we may potentially forego the benefits that might result from favorable fluctuations in prices and could experience lower margins in periods of declining commodity prices. In addition, while hedging activity may minimize near-term volatility of the commodity prices, it would not protect us from long-term commodity price increases.

Some of our purchases are from sole or limited source suppliers for reasons of cost effectiveness, uniqueness of design, or product quality. If these suppliers encounter financial or operating difficulties, we might not be able to quickly establish or qualify replacement sources of supply.

***We face significant competition in the markets that we serve.***

The markets that we serve are highly competitive. We compete worldwide with a number of other manufacturers and distributors that produce and sell similar products. There has been consolidation and new entrants (including non-traditional competitors) within our industries and there may be future consolidation and new entrants which could result in increased competition and significantly alter the dynamics of the competitive landscape in which we operate. Due to our global footprint we are competing worldwide with large companies and with smaller, local operators who may have customer, regulatory or economic advantages in the geographies in which they are located. In addition, some of our competitors may employ pricing and other strategies that are not traditional. While we understand our markets and competitive landscape, there is always the risk of disruptive technologies coming from companies that are not traditionally manufacturers or service providers of our products.

***Our growth is dependent, in part, on the timely development, commercialization and acceptance of new and enhanced products and services.***

We must timely develop and commercialize new and enhanced products and services in a rapidly changing technological and business environment in order to remain competitive in our current and future markets and in order to continue to grow our business. The development and commercialization of new products and the modification of existing products and services to meet customer demands require a significant investment of resources and an anticipation of the impact of new technologies and the ability to compete with others who may have superior resources in specific technology domains. We cannot provide any assurance that any new or enhanced product or service will be successfully commercialized in a timely manner, if ever, or, if commercialized, will result in returns greater than our investment. Investment in a product or service could divert our attention and resources from other projects that become more commercially viable in the market. We also cannot provide any assurance that any new or enhanced product or service will be accepted by our current and future markets. Failure to timely develop new and enhanced products and services that are accepted by these markets could have a material adverse impact on our competitive position, results of operations, financial condition, and cash flows.

***The capital and credit markets are important to our business.***

Instability in U.S. and global capital and credit markets, including market disruptions, limited liquidity and interest rate volatility, or reductions in the credit ratings assigned to us by independent rating agencies could reduce our access to capital markets or increase the cost of funding our short and long term credit requirements. In particular, if we are unable to access capital and credit markets on terms that are acceptable to us, we may not be able to make certain investments or fully execute our business plans and strategies.



Our suppliers and customers are also dependent upon the capital and credit markets. Limitations on the ability of customers, suppliers or financial counterparties to access credit at interest rates and on terms that are acceptable to them could lead to insolvencies of key suppliers and customers, limit or prevent customers from obtaining credit to finance purchases of our products and services and cause delays in the delivery of key products from suppliers.

***Currency exchange rate fluctuations and other related risks may adversely affect our results.***

We are exposed to a variety of market risks, including the effects of changes in currency exchange rates. See Part II Item 7A, "Quantitative and Qualitative Disclosure About Market Risk."

We have operations throughout the world that manufacture and sell products in various international markets. As a result, we are exposed to movements in exchange rates of various currencies against the U.S. dollar as well as against other currencies throughout the world.

Many of our non-U.S. operations have a functional currency other than the U.S. dollar, and their results are translated into U.S. dollars for reporting purposes. Therefore, our reported results will be higher or lower depending on the weakening or strengthening of the U.S. dollar against the respective foreign currency.

We use derivative instruments to hedge those material exposures that cannot be naturally offset. The instruments utilized are viewed as risk management tools, and are not used for trading or speculative purposes. To minimize the risk of counterparty non-performance, derivative instrument agreements are made only through major financial institutions with significant experience in such derivative instruments.

We also face risks arising from the imposition of exchange controls and currency devaluations. Exchange controls may limit our ability to convert foreign currencies into U.S. dollars or to remit dividends and other payments by our foreign subsidiaries or businesses located in or conducted within a country imposing controls. Currency devaluations result in a diminished value of funds denominated in the currency of the country instituting the devaluation.

***Changes in U.S. or foreign trade policies and other factors beyond our control may adversely impact our business and operating results***

Geopolitical tensions and trade disputes can disrupt supply chains and increase the cost of our products. This could cause our products to be more expensive for customers, which could reduce the demand for or attractiveness of such products. In addition, a geopolitical conflict in a region where we operate could disrupt our ability to conduct business operations in that region. Beyond tariffs and sanctions, countries also could adopt other measures, such as controls on imports or exports of goods, technology, or data, which could adversely affect our operations and supply chain and limit our ability to offer our products and services as intended. These kinds of restrictions could be adopted with little to no advanced notice, and we may not be able to effectively mitigate the adverse impacts from such measures. Political uncertainty surrounding trade or other international disputes also could have a negative impact on customer confidence and willingness to spend money, which could impair our future growth.

***The military conflict between Russia and Ukraine has created a humanitarian crisis, materially impacted economic activities, and may materially impact our global and regional operations.***

The global economy has been negatively impacted by the military conflict between Russia and Ukraine. Governments including the U.S., United Kingdom, and those of the European Union have imposed export controls on certain products and financial and economic sanctions on certain industry sectors and parties in Russia which has triggered retaliatory sanctions by the Russian government and its allies. The outcome and future impacts of the conflict remain highly uncertain, continue to evolve and may grow more severe the longer the military action and sanctions remain in effect. Risks associated with the Russian-Ukrainian conflict include, but are not limited to, adverse effects on political developments and on general economic conditions, including inflation and consumer spending; disruptions to our supply chains; disruptions to our information systems, including through network failures, malicious or disruptive software, or cyberattacks; trade disruptions; energy shortages or rationing that may adversely impact our manufacturing facilities and consumer spending, particularly in Europe; rising fuel and/or rising costs of producing, procuring and shipping our products; our exposure to foreign currency exchange rate fluctuations; and constraints, volatility or disruption in the financial markets.

When Russia invaded Ukraine in February 2022, we immediately halted new orders and shipments into and out of Russia and Belarus. As of December 31, 2022, we have exited all business activity within these markets. To date, the Russia-Ukraine war has not had a material adverse effect on our business or financial performance.

We have no way to predict the progress or outcome of the situation in Ukraine. Until there is a peaceful resolution, the conflict could have a material adverse effect on our operations, results of operations, financial condition, liquidity, growth prospects and business outlook.

## **Risks Related to Litigation**

### ***Material adverse legal judgments, fines, penalties or settlements could adversely affect our results of operations or financial condition.***

We are currently and may in the future become involved in legal proceedings and disputes incidental to the operation of our business or the business operations of previously-owned entities. Our business may be adversely affected by the outcome of these proceedings and other contingencies (including, without limitation, contract claims or other commercial disputes, product liability, product defects and asbestos-related matters) that cannot be predicted with certainty. Moreover, any insurance or indemnification rights that we may have may be insufficient or unavailable to protect us against the total aggregate amount of losses sustained as a result of such proceedings and contingencies. As required by generally accepted accounting principles in the United States, we establish reserves based on our assessment of contingencies. Subsequent developments in legal proceedings and other events could affect our assessment and estimates of the loss contingency recorded as a reserve and we may be required to make additional material payments, which could have a material adverse impact on our liquidity, results of operations, financial condition, and cash flows.

### ***The Aldrich and Murray Chapter 11 cases involve various risks and uncertainties that could have a material effect on us.***

Our indirect wholly-owned subsidiaries Aldrich and Murray have each filed a voluntary petition for reorganization under the Bankruptcy Code in the Bankruptcy Court. The goal of these Chapter 11 filings is to resolve equitably and permanently all current and future asbestos-related claims in a manner beneficial to claimants, Aldrich and Murray through court approval of a plan of reorganization that would create a trust pursuant to section 524(g) of the Bankruptcy Code, establish claims resolution procedures for all current and future asbestos-related claims against Aldrich and Murray and channel such claims to the trust for resolution in accordance with those procedures. Such a resolution, if achieved, would likely include a channeling injunction to enjoin asbestos claims resolved in the Chapter 11 cases from being filed or pursued against us or our affiliates. The Chapter 11 cases remain pending as of February 10, 2023.

There are a number of risks and uncertainties associated with these Chapter 11 cases, including, among others, those related to:

- the ultimate determination of the asbestos liability of Aldrich and Murray to be satisfied under a Chapter 11 plan and the ability to consummate the settlement reached with the court appointed legal representative of future asbestos claimants (the FCR);
- the outcome of negotiations with the committee representing current asbestos claimants (ACC) and the FCR and other participants in the Chapter 11 cases, including insurers, concerning, among other things, the size and structure of a potential section 524(g) trust to pay the asbestos liability of Aldrich and Murray and the means for funding that trust;
- the actions of representatives of the asbestos claimants, including the ACC's pursuit of certain causes of action against us, following the Bankruptcy Court's grant of the ACC's motion seeking standing to investigate and pursue certain causes of action at a hearing held on January 27, 2022, and other potential actions by the ACC in opposition to, or otherwise inconsistent with, the efforts by Aldrich and Murray to diligently prosecute the Chapter 11 cases and ultimately seek Bankruptcy Court approval of a plan of reorganization;
- the decisions of the Bankruptcy Court relating to numerous substantive and procedural aspects of the Chapter 11 cases, including in connection with a proceeding by Aldrich and Murray to estimate their aggregate liability for asbestos claims, following the Bankruptcy Court's grant of their motion seeking such a proceeding, and other efforts by Aldrich and Murray to diligently prosecute the Chapter 11 cases and ultimately seek Bankruptcy Court approval of a plan of reorganization, whether such decisions are in response to actions of representatives of the asbestos claimants or otherwise;
- the risk that Aldrich and Murray may be unable to obtain the necessary approvals of the Bankruptcy Court or the United States District Court for the Western District of North Carolina (the District Court) of a plan of reorganization;
- the risk that any orders approving a plan of reorganization and issuing the channeling injunction do not become final;
- the terms and conditions of any plan of reorganization that is ultimately confirmed in the Chapter 11 cases;
- delays in the confirmation or effective date of a plan of reorganization due to factors beyond the Company's control;
- the risk that the ultimate amount required under any final plan of reorganization may exceed the amounts agreed to with the FCR in the Plan;

- the risk that the insurance carriers do not support the Plan and the risk that the ACC objects to the Plan; and
- the decisions of appellate courts regarding approval of a plan of reorganization or relating to orders of the Bankruptcy Court or the District Court that may be appealed.

The ability of Aldrich and Murray to successfully reorganize and resolve their asbestos liabilities will depend on various factors, including their ability to reach agreements with representatives of the asbestos claimants on the terms of a plan of reorganization that satisfies all applicable legal requirements and to obtain the requisite court approvals of such plan, and remains subject to the risks and uncertainties described above. We cannot ensure that Aldrich and Murray can successfully reorganize, nor can we give any assurances as to the amount of the ultimate obligations under the Funding Agreements or any plan of reorganization, or the resulting impact on our financial condition, results of operations or future prospects. We also are unable to predict the timing of any of the foregoing matters or the timing for a resolution of the Chapter 11 cases, all of which could have an impact on us.

It also is possible that, in the Chapter 11 cases, various parties will be successful in bringing claims against us and other related parties, including by successfully challenging the 2020 corporate restructuring, consolidating entities and/or raising allegations that we are liable for the asbestos-related liabilities of Aldrich and Murray as set forth in certain pleadings filed by the ACC in the Chapter 11 cases. Although we believe we have no such responsibility for liabilities of Aldrich and Murray, except indirectly through our obligation to provide funding to Aldrich and Murray under the terms of the Funding Agreements, we cannot provide assurances that such claims will not be successful.

In sum, the outcome of the Chapter 11 cases is uncertain and there is uncertainty as to what extent we may have to contribute to a section 524(g) trust under the Funding Agreements.

For detailed information on the bankruptcy cases of Aldrich and Murray, see Part I, Item 1, "Business - Asbestos-Related Matters," Part I, Item 3, "Legal Proceedings", Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations - Significant Events," and Part II, Item 8, Consolidated Financial Statements, Note 1, "Description of Company," and Note 20, "Commitments and Contingencies."

### **Risks Related to Cybersecurity and Technology**

*We are subject to risks relating to our information technology systems.*

We rely extensively on information technology systems, some of which are supported by third party vendors including cloud-based systems and managed service providers, to manage and operate our business. We invest in new information technology systems designed to improve our operations. We have had failures of these systems in the past and may have failures of these systems in the future. If these systems cease to function properly, if these systems experience security breaches or disruptions or if these systems do not provide the anticipated benefits, our ability to manage our operations could be impaired, which could have a material adverse impact on our results of operations, financial condition, and cash flows.

*Security breaches or disruptions of the technology systems, infrastructure or products of the Company or our vendors could negatively impact our business and financial results.*

Our information technology systems, networks and infrastructure and technology embedded in certain of our control products have been and are vulnerable to cyber attacks and unauthorized security intrusions. From time to time, vulnerabilities in our products are discovered and updates are made available, but customers are vulnerable until those updates are applied or other mitigating actions are taken by customers to protect their systems and networks. Like other large companies, certain of our information technology systems and the systems of our vendors have been subject to computer viruses, malicious code, unauthorized access, phishing attempts, denial-of-service attacks and other cyber attacks and we expect that we and our vendors will be subject to similar attacks in the future.

The methods used to obtain unauthorized access, disable or degrade service, or sabotage information technology systems are constantly changing and evolving. Despite having instituted security policies and business continuity plans, and implementing and regularly reviewing and updating processes and procedures to protect against unauthorized access and requiring similar protections from our vendors, the ever-evolving threats mean we are continually evaluating and adapting our systems and processes and ask our vendors to do the same, and there is no guarantee that such systems and processes will be adequate to safeguard against all data security breaches or misuses of data. Hardware, software or applications we develop or obtain from third parties sometimes contain defects in design or deployment or other problems that could unexpectedly result in security breaches or disruptions. Open source software components embedded into certain software that we use has in the past contained vulnerabilities and others may be discovered in the future. Such vulnerabilities can expose our systems to malware or allow third party access to data. While these issues are not specific to our Company, we are required to take action when such vulnerabilities are identified including patching and modification to certain of our products and enterprise systems. To date, there has been no material business impact from such vulnerabilities, but we continue to monitor these issues and our responses

are ongoing. Our systems, networks and certain of our control products and those of our vendors are vulnerable to system damage, malicious attacks from hackers, employee errors or misconduct, viruses, power and utility outages, and other catastrophic events. Any of these incidents could cause significant harm to our business by negatively impacting our business operations, compromising the security of our proprietary information or the personally identifiable information of our customers, employees and business partners, exposing us to litigation or other legal actions against us or the imposition of penalties, fines, fees or liabilities. Such events could have a material adverse impact on our results of operations, financial condition and cash flows and could damage our reputation which could adversely affect our business. Our insurance coverage may not be adequate to cover all the costs related to a cybersecurity attack or disruptions resulting from such attacks. Customers are increasingly requiring cybersecurity protections and mandating cybersecurity standards in our products, and we may incur additional costs to comply with such demands.

***Data privacy and protection laws are evolving and present increasing compliance challenges.***

The regulatory environment surrounding data privacy and protection is increasingly demanding, with the frequent imposition of new and changing requirements across businesses and geographic areas. We are required to comply with complex regulations when collecting, transferring and using personal data, which increases our costs, affects our competitiveness and can expose us to substantial fines or other penalties.

***Intellectual property infringement claims of others and the inability to protect our intellectual property rights could harm our competitive position.***

Our intellectual property (IP) rights are important to our business and include numerous patents, trademarks, copyrights, trade secrets, proprietary technology, technical data, business processes, and other confidential information. Although in aggregate we consider our intellectual property rights to be valuable to our operations, we do not believe that our business is materially dependent on a single intellectual property right or any group of them. In our opinion, engineering, production skills and experience are more responsible for our market position than our patents and/or licenses.

Nonetheless, this intellectual property may be subject to challenge, infringement, invalidation or circumvention by third parties. Despite extensive security measures, our intellectual property may be subject to misappropriation through unauthorized access of our information technology systems, employee theft, or theft by private parties or foreign actors, including those affiliated with or controlled by state actors. Our business and competitive position could be harmed by such events. Our ability to protect our intellectual property rights by legal recourse or otherwise may be limited, particularly in countries where laws or enforcement practices are inadequate or undeveloped. Our inability to enforce our IP rights under any of these circumstances could have an impact on our competitive position and business.

**Risks Related to Regulatory Matters**

***Our reputation, ability to do business and results of operations could be impaired by improper conduct by any of our employees, agents or business partners.***

We are subject to regulation under a wide variety of U.S. federal and state and non-U.S. laws, regulations and policies, including laws related to anti-corruption, anti-human trafficking, anti-bribery, export and import compliance, anti-trust and money laundering, due to our global operations. We cannot provide assurance our internal controls will always protect us from the improper conduct of our employees, agents and business partners. Any violations of law or improper conduct could damage our reputation and, depending on the circumstances, subject us to, among other things, civil and criminal penalties, material fines, equitable remedies (including profit disgorgement and injunctions on future conduct), securities litigation and a general loss of investor confidence, any one of which could have a material adverse impact on our business prospects, financial condition, results of operations, cash flows, and the market value of our stock.

***Our operations are subject to regulatory risks.***

Our U.S. and non-U.S. operations are subject to a number of laws and regulations, including among others, laws related to the environment and health and safety. We have made, and will be required to continue to make, significant expenditures to comply with these laws and regulations. Any violations of applicable laws and regulations could lead to significant penalties, fines or other sanctions. Changes in current laws and regulations could require us to increase our compliance expenditures, cause us to significantly alter or discontinue offering existing products and services or cause us to develop new products and services. Altering current products and services or developing new products and services to comply with changes in the applicable laws and regulations could require significant research and development investments, increase the cost of providing the products and services and adversely affect the demand for our products and services. The U.S. federal government and various states and municipalities have enacted or may enact legislation intended to deny government contracts to U.S. companies that reincorporate outside of the U.S. or have reincorporated outside of the U.S. or may take other actions negatively impacting such companies. If we are unable to effectively respond to changes to applicable laws and regulations, interpretations of applicable

laws and regulations, or comply with existing and future laws and regulations, our competitive position, results of operations, financial condition and cash flows could be materially adversely impacted.

***Global climate change and related regulations could negatively affect our business.***

Climate change presents immediate and long-term risks to our Company and to our customers, with the risks expected to increase over time. Our products and operations are subject to and affected by environmental regulation by federal, state and local authorities in the U.S. and regulatory authorities with jurisdiction over our international operations, including with respect to the use, storage, and dependence upon refrigerants which are considered greenhouse gases. Refrigerants are essential to many of our products and there is concern regarding the global warming potential of such materials. As such, national, regional and international regulations and policies are being implemented to curtail their use. Some of these regulations could have a negative competitive impact on our company by requiring us to make costly changes to our products. As regulations reduce the use of the current class of widely used refrigerants, we are developing and selling our next generation products that utilize lower global warming potential solutions. There can be no assurance that climate change or environmental regulation or deregulation will not have a negative competitive impact on our ability to sell these products or that economic returns will match the investment that we are making in new product development. We face increasing complexity related to product design, the use of regulated materials, the associated energy consumption and efficiency related to the use of products, the transportation and shipping of products, climate change regulations, and the reuse, recycling and/or disposal of products and their components at end-of-use or useful life as we adjust to new and future requirements relating to our transition to a more circular economy. There continues to be a lack of consistent climate legislation, which creates economic and regulatory uncertainty. Such regulatory uncertainty extends to future incentives for energy efficient buildings and vehicles and costs of compliance, which may impact the demand for our products, obsolescence of our products and our results of operations.

Our climate commitment requires us to offer a full line of next generation products by 2030 without compromising safety or energy efficiency. Additionally, in 2019, we announced our 2030 commitment which targets reducing one gigaton – one billion metric tons – of carbon emissions (CO<sub>2</sub>e) from our customers' footprint by 2030. While we are committed to pursuing these sustainability objectives, there can be no assurance that we will successfully achieve our commitments. Failure to meet these commitments could result in reputational harm to our company. Changes regarding climate risk management and practices may result in higher regulatory, compliance risks and costs.

**Risks Related to Our Business Operations**

***Our business strategy includes acquiring businesses, product lines, technologies and capabilities, plants and other assets, entering into joint ventures and making investments that complement our existing businesses. We also occasionally divest businesses that we own. We may not identify acquisition or joint venture candidates or investment opportunities at the same rate as the past. Acquisitions, dispositions, joint ventures and investments that we identify could be unsuccessful or consume significant resources, which could adversely affect our operating results.***

We continue to analyze and evaluate the acquisition and divestiture of strategic businesses and product lines, technologies and capabilities, plants and other assets, joint ventures and investments with the potential to, among other things, strengthen our industry position, to enhance our existing set of product and services offerings, to increase productivity and efficiencies, to grow revenues, earnings and cash flow, to help us stay competitive or to reduce costs. There can be no assurance that we will identify or successfully complete transactions with suitable candidates in the future, that we will consummate these transactions at rates similar to the past or that completed transactions will be successful. Strategic transactions may involve significant cash expenditures, debt incurrence, operating losses and expenses that could have a material adverse effect on our business, financial condition, results of operations and cash flows. Such transactions involve numerous other risks, including:

- diversion of management time and attention from daily operations;
- difficulties integrating acquired businesses, technologies and personnel into our business, including doing so without high costs;
- difficulties in obtaining and verifying the financial statements and other business and other due diligence information of acquired businesses;
- inability to obtain required regulatory approvals and/or required financing on favorable terms;
- potential loss of key employees, key contractual relationships or key customers of either acquired businesses or our business;
- assumption of the liabilities and exposure to unforeseen or undisclosed liabilities of acquired businesses and exposure to regulatory sanctions;
- inheriting internal control deficiencies;

- dilution of interests of holders of our common shares through the issuance of equity securities or equity-linked securities; and
- in the case of joint ventures and other investments, interests that diverge from those of our partners without the ability to direct the management and operations of the joint venture or investment in the manner we believe most appropriate to achieve the expected value.

Any acquisitions, divestitures, joint ventures or investments may ultimately harm our business, financial condition, results of operations and cash flows. There are additional risks related to our Reverse Morris Trust transaction, see Part IA, Item 1A, "Risk Factors - Risks Related to the Transactions" for more information.

***Natural disasters, epidemics or other unexpected events may disrupt our operations, adversely affect our results of operations and financial condition, and may not be fully covered by insurance.***

The occurrence of one or more catastrophic events including hurricanes, fires, earthquakes, floods and other forms of severe weather, health epidemics or pandemics or other contagious outbreaks or other catastrophic events in the U.S. or in other countries in which we operate or are located could adversely affect our operations and financial performance. Natural disasters, power outages, health epidemics or pandemics or other contagious outbreaks or other unexpected events could result in physical damage to and complete or partial closure of one or more of our plants, temporary or long-term disruption of our operations by causing business interruptions, material scarcity, price volatility or supply chain disruptions. Climate change is a risk multiplier with respect to these physical disasters in both frequency and severity and may affect our global business operations as a result. Existing insurance arrangements may not provide full protection for the costs that may arise from such events, particularly if such events are catastrophic in nature or occur in combination. The occurrence of any of these events could increase our insurance and other operating costs or harm our sales in affected areas.

***Our business success depends on attracting, developing, and retaining highly qualified talent.***

The skills, experience, and industry knowledge of our employees significantly benefit our operations and performance. The market for employees and leaders with certain skills and experiences is very competitive, and difficulty attracting, developing, and retaining members of our management team and key employees could have a negative effect on our business, operating results, and financial condition. Maintaining a positive and inclusive culture and work environment, offering attractive compensation, benefits, and development opportunities, and effectively implementing processes and technology that enable our employees to work effectively and efficiently are important to our ability to attract and retain employees.

***Our business may be adversely affected by temporary work stoppages, union negotiations, labor disputes and other matters associated with our labor force.***

Certain of our employees are covered by collective bargaining agreements or works councils. We experience from time-to-time temporary work stoppages, union negotiations, labor disputes and other matters associated with our labor force and some of these events could result in significant increases in our cost of labor, impact our productivity or damage our reputation. Additionally, a work stoppage at one of our suppliers could materially and adversely affect our operations if an alternative source of supply were not readily available. Stoppages by employees of our customers could also result in reduced demand for our products.

#### **Risks Relating to Tax Matters**

***Changes in tax or other laws, regulations or treaties, changes in our status under U.S. or non-U.S. laws or adverse determinations by taxing or other governmental authorities could increase our tax burden or otherwise affect our financial condition or operating results, as well as subject our shareholders to additional taxes.***

The taxes associated with our operations and corporate structure could be impacted by changes in tax or other laws, treaties or regulations or the interpretation or enforcement thereof by the U.S. or non-U.S. tax or other governmental authorities. Even after legislation is enacted, further guidance, regulations and technical corrections pertaining to the legislation continue to be issued by the tax authorities, some of which may have retroactive application. We continue to monitor and review new guidance and regulations as they are issued, as any changes could have a material adverse effect on our financial statements. In addition, governmental authorities are actively engaged in formulating new legislative proposals. Any future legislative changes to the tax laws and judicial or regulatory interpretation thereof, the geographic mix of earnings, changes in overall profitability, and other factors could also materially impact our effective tax rate.

We continue to monitor for other tax changes, U.S. (including state and local) and non-U.S. related, which can also adversely impact our overall tax burden. From time to time, proposals have been made and/or legislation has been introduced to change the tax laws, regulations or interpretations thereof of various jurisdictions or limit tax treaty benefits that if enacted or implemented could materially increase our tax burden and/or effective tax rate and could have a material adverse impact on our financial condition and results of operations. Moreover, the Organisation for Economic Co-operation and Development (OECD) has released proposals to create an agreed set of international rules for fighting base erosion and profit shifting, including Pillar One and Pillar Two, such that tax laws in countries in which we do business could change on a prospective or retroactive basis, and any such changes could adversely impact us. On December 12, 2022, the European Union (EU) Member States agreed in principle on the introduction of a global minimum tax rate (proposed 15% minimum tax rate). On December 15, 2022, the European Council formally adopted the Council Directive on ensuring a global minimum level of taxation for multinational and large-scale domestic groups in the EU Member States (the Directive), meaning that the Directive will have to be transposed into EU Member States' national law by the end of 2023, entering into effect beginning January 1, 2024. As a consequence, our global effective tax rate could be materially impacted by such legislation, or any resulting local country legislation enacted in response to any potential global minimum tax rates.

In addition to the above, the European Commission has been very active in investigating whether various tax regimes or private tax rulings provided by a country to particular taxpayers may constitute State Aid. We cannot predict the outcome of any of these potential changes or investigations in any of the jurisdictions, but if any of the above occurs and impacts us, this could materially increase our tax burden and/or effective tax rate and could have a material adverse impact on our financial condition and results of operations.

While we monitor proposals and other developments that would materially impact our tax burden and/or effective tax rate and investigate our options, we could still be subject to increased taxation on a going forward basis no matter what action we undertake if certain legislative proposals or regulatory changes are enacted, certain tax treaties are amended and/or our interpretation of applicable tax or other laws is challenged and determined to be incorrect. In particular, any changes and/or differing interpretations of applicable tax law that have the effect of disregarding the shareholders' decision to reorganize in Ireland, limiting our ability to take advantage of tax treaties between jurisdictions, modifying or eliminating the deductibility of various currently deductible payments, or increasing the tax burden of operating or being resident in a particular country could subject us to increased taxation.

In addition, tax authorities periodically review tax returns filed by us and can raise issues regarding our filing positions, timing and amount of income or deductions, and the allocation of income among the jurisdictions in which we operate. These examinations on their own, or any subsequent litigation related to the examinations, may result in additional taxes or penalties against us. If the ultimate result of these audits differs from our original or adjusted estimates, they could have a material impact on our tax provision.

#### **Risks Related to our Reverse Morris Trust Transaction**

On the Distribution Date, we completed the Transaction with Gardner Denver, which changed its name to Ingersoll Rand after the Transaction whereby we distributed common stock of Ingersoll-Rand U.S. Holdco, Inc., which contained Ingersoll Rand Industrial, through the Distribution to the Spin-off Shareholders. Ingersoll Rand Industrial then merged with a wholly-owned subsidiary of Ingersoll Rand. Upon close of the Transaction, the Spin-off Shareholders received approximately 50.1% of the shares of Ingersoll Rand common stock on a fully-diluted basis and Gardner Denver shareholders retained approximately 49.9% of the shares of Ingersoll Rand on a fully diluted basis. As a result, Spin-off Shareholders received 0.8824 shares of Ingersoll Rand common stock with respect to each share of our stock owned as of February 24, 2020. In connection with the Transaction, we received a special cash payment of \$1.9 billion.

***If the Distribution as part of our Reverse Morris Trust Transaction is determined to be taxable for Irish tax purposes, significant Irish tax liabilities may arise for the Spin-off Shareholders.***

We received an opinion from Irish Revenue regarding certain tax matters associated with the Distribution, as well as a legal opinion from our Irish counsel Arthur Cox LLP, regarding certain Irish tax consequences of the Distribution for the Spin-off Shareholders. For the Spin-off Shareholders who are not resident or ordinarily resident in Ireland for Irish tax purposes and who do not hold their shares in connection with a trade or business carried on by such Spin-off Shareholders through an Irish branch or agency, we consider, based on both opinions taken together, that no adverse Irish tax consequences for such Spin-off Shareholders should have arisen. These opinions relied on certain facts and assumptions and certain representations. Notwithstanding the opinion from Irish Revenue, Irish Revenue could ultimately determine on audit that the Distribution is taxable for Irish tax purposes, for example, if it determines that any of these facts, assumptions or representations are not correct or have been violated. A legal opinion represents the tax adviser's best legal judgment and is not binding on Irish Revenue or the courts and Irish Revenue or the courts may not agree with the legal opinion. In addition, the legal opinion is based on current law and cannot be relied upon if current law changes with retroactive effect. If the Distribution ultimately is determined to be taxable for Irish tax purposes, we and the Spin-off Shareholders could have significant Irish tax liabilities as a result of the

Distribution, and there could be a material adverse impact on our business, financial condition, results of operations and cash flows in future reporting periods.

***If the Distribution together with certain related transactions do not qualify as tax-free under Sections 355 and 368(a) of the Code, including as a result of subsequent acquisitions of stock of the Company or Ingersoll Rand, then the Company and the Spin-off Shareholders may be required to pay substantial U.S. federal income taxes, and Ingersoll Rand may be obligated to indemnify the Company for such taxes imposed on the Company.***

At the time of the Distribution, we received an opinion from our U.S. tax counsel Paul, Weiss, Rifkind, Wharton & Garrison LLP (Paul Weiss) substantially to the effect that, for U.S. federal income tax purposes, the Distribution together with certain related transactions undertaken in anticipation of the Distribution and taking into account the merger of Ingersoll Rand Industrial with the wholly-owned subsidiary of Ingersoll Rand will qualify as a tax-free transaction under Sections 368(a), 361 and 355 of the Code, with the result that we and the Spin-off Shareholders will not recognize any gain or loss for U.S. federal income tax purposes as a result of the spin-off. The opinion of our counsel was based on, among other things, certain representations and assumptions as to factual matters made by Ingersoll Rand, Ingersoll Rand Industrial and the Company. The failure of any factual representation or assumption to be true, correct and complete in all material respects could adversely affect the validity of the opinion of counsel. An opinion of counsel represents counsel's best legal judgment, is not binding on the Internal Revenue Service (IRS) or the courts, and the IRS or the courts may not agree with the opinion. In addition, an opinion will be based on current law, and cannot be relied upon if current law changes with retroactive effect. If the Distribution, and/or related internal transactions in anticipation of the Distribution ultimately are determined to be taxable, we could incur significant U.S. federal income tax liabilities, which could cause a material adverse impact on our business, financial condition, results of operations and cash flows in future reporting periods, although if this determination resulted from certain actions taken by Ingersoll Rand Industrial or Ingersoll Rand, Ingersoll Rand would be required to bear the cost of any resultant tax liability pursuant to the terms of the Tax Matters Agreement dated February 29, 2020, among Ingersoll-Rand Plc, Ingersoll-Rand Lux International Holding Company S.à r.l, Ingersoll-Rand Services Company, Ingersoll-Rand U.S. HoldCo, Inc., and Gardner Denver Holdings, Inc. (Tax Matters Agreement).

The Distribution will be taxable to the Company pursuant to Section 355(e) of the Code if there is a 50% or greater change in ownership of either the Company or Ingersoll Rand Industrial, directly or indirectly (including through such a change in ownership of Ingersoll Rand), as part of a plan or series of related transactions that include the Distribution. A Section 355(e) change of ownership would not make the Distribution taxable to the Spin-off Shareholders, but instead may result in corporate-level taxable gain to certain of our subsidiaries. Because the Spin-off Shareholders will collectively be treated as owning more than 50% of the Ingersoll Rand common stock following the merger, the merger alone should not cause the Distribution to be taxable to our subsidiaries under Section 355(e). However, Section 355(e) might apply if other acquisitions of stock of the Company before or after the merger, or of Ingersoll Rand before or after the merger, are considered to be part of a plan or series of related transactions that include the Distribution together with certain related transactions. If Section 355(e) applied, certain of our subsidiaries might recognize a very substantial amount of taxable gain, although if this applied as a result of certain actions taken by Ingersoll Rand Industrial, Ingersoll Rand or certain specified Ingersoll Rand stockholders, Ingersoll Rand would be required to bear the cost of any resultant tax liability under Section 355(e) pursuant to the terms of the Tax Matters Agreement.

***If the merger does not qualify as a tax-free reorganization under Section 368(a) of the Code, the Spin-off Shareholders may be required to pay substantial U.S. federal income taxes.***

On the Distribution Date, we have received an opinion from Paul Weiss, and Ingersoll Rand received an opinion from their counsel Simpson Thacher & Bartlett LLP, substantially to the effect that the merger will qualify as a reorganization within the meaning of Section 368(a) of the Code with the result that U.S. holders of Ingersoll Rand Industrial common stock who received Ingersoll Rand common stock in the merger will not recognize any gain or loss for U.S. federal income tax purposes (except with respect to cash received in lieu of fractional shares of Ingersoll Rand common stock). These opinions were based upon, among other things, certain representations and assumptions as to factual matters made by Ingersoll Rand, the Company, Ingersoll Rand Industrial and the merger subsidiary used by Ingersoll Rand. The failure of any factual representation or assumption to be true, correct and complete in all material respects could adversely affect the validity of the opinions. An opinion of counsel represents counsel's best legal judgment, is not binding on the IRS or the courts, and the IRS or the courts may not agree with the opinion. In addition, the opinions are based on current law, and cannot be relied upon if current law changes with retroactive effect. If the merger were taxable, U.S. holders of the common stock of Ingersoll Rand Industrial would be considered to have made a taxable sale of their Ingersoll Rand Industrial common stock to Ingersoll Rand, and such U.S. holders of Ingersoll Rand Industrial would generally recognize taxable gain or loss on their receipt of Ingersoll Rand common stock in the merger.



## **Risks Related to Our Irish Domicile**

### ***Irish law differs from the laws in effect in the United States and may afford less protection to holders of our securities.***

The United States currently does not have a treaty with Ireland providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters. As such, there is some uncertainty as to whether the courts of Ireland would recognize or enforce judgments of U.S. courts obtained against us or our directors or officers based on U.S. federal or state civil liability laws, including the civil liability provisions of the U.S. federal or state securities laws, or hear actions against us or those persons based on those laws.

As an Irish company, we are governed by the Irish Companies Act, which differs in some material respects from laws generally applicable to U.S. corporations and shareholders, including, among others, differences relating to interested director and officer transactions, indemnification of directors and shareholder lawsuits. Likewise, the duties of directors and officers of an Irish company generally are owed to the company only. Shareholders of Irish companies generally do not have a personal right of action against directors or officers of the company and may exercise such rights of action on behalf of the company only in limited circumstances. Accordingly, holders of our securities may have more difficulty protecting their interests than would holders of securities of a corporation incorporated in a jurisdiction of the United States. In addition, Irish law does not allow for any form of legal proceedings directly equivalent to the class action available in the United States.

Irish law allows shareholders to authorize share capital which then can be issued by a board of directors without shareholder approval. Also, subject to specified exceptions, Irish law grants statutory pre-emptive rights to existing shareholders to subscribe for new issuances of shares for cash but allows shareholders to authorize the waiver of the statutory pre-emptive rights with respect to any particular allotment of shares. Under Irish law, we must have authority from our shareholders to issue any shares, including shares that are part of the Company's authorized but unissued share capital. In addition, unless otherwise authorized by its shareholders, when an Irish company issues shares for cash to new shareholders, it is required first to offer those shares on the same or more favorable terms to existing shareholders on a pro-rata basis. If we are unable to obtain these authorizations from our shareholders or are otherwise limited by the terms of our authorizations, our ability to issue shares or otherwise raise capital could be adversely affected.

### ***Dividends received by our shareholders may be subject to Irish dividend withholding tax.***

In certain circumstances, we are required to deduct Irish dividend withholding tax (currently at the rate of 25%) from dividends paid to our shareholders. In the majority of cases, shareholders resident in the United States will not be subject to Irish withholding tax, and shareholders resident in a number of other countries will not be subject to Irish withholding tax provided that they complete certain Irish dividend withholding tax forms. However, some shareholders may be subject to withholding tax, which could have an adverse impact on the price of our shares.

### ***Dividends received by our shareholders could be subject to Irish income tax.***

Dividends paid in respect of our shares will generally not be subject to Irish income tax where the beneficial owner of these dividends is exempt from dividend withholding tax, unless the beneficial owner of the dividend has some connection with Ireland other than his or her shareholding in Trane Technologies plc.

Our shareholders who receive their dividends subject to Irish dividend withholding tax will generally have no further liability to Irish income tax on the dividends unless the beneficial owner of the dividend has some connection with Ireland other than his or her shareholding in Trane Technologies plc.

## **Item 1B. UNRESOLVED STAFF COMMENTS**

None.

**Item 2. PROPERTIES**

As of December 31, 2022, we owned or leased approximately 28 million square feet of space worldwide. Manufacturing and assembly operations are conducted in 38 plants across the world. We also maintain various warehouses, offices and repair centers throughout the world. The majority of our plant facilities are owned by us with the remainder under long-term lease arrangements. We believe that our plants have been well maintained, are generally in good condition and are suitable for conducting our business.

The locations by segment of our principal plant facilities at December 31, 2022 were as follows:

Americas	EMEA	Asia Pacific
Arecibo, Puerto Rico	Barcelona, Spain	Bangkok, Thailand
Brampton, Ontario	Bari, Italy	Taicang, China
Charlotte, North Carolina	Charmes, France	Wujiang, China
Clarksville, Tennessee	Essen, Germany	Zhongshan, China
Columbia, South Carolina	Galway, Ireland	
Curitiba, Brazil	Golbey, France	
Fairlawn, New Jersey	Jettingen-Scheppach, Germany	
Fort Smith, Arkansas	King Abdullah Economic City, Saudi Arabia	
Fremont, Ohio	Kolin, Czech Republic	
Grand Rapids, Michigan	Wittenberg, Germany	
Hastings, Nebraska		
La Crosse, Wisconsin		
Lynn Haven, Florida		
Marietta, Ohio		
Monterrey, Mexico		
Newberry, South Carolina		
Pueblo, Colorado		
Rushville, Indiana		
St. Paul, Minnesota		
Trenton, New Jersey		
Tyler, Texas		
Vidalia, Georgia		
Waco, Texas		

**Item 3. LEGAL PROCEEDINGS**

In the normal course of business, we are involved in a variety of lawsuits, claims and legal proceedings, commercial and contract disputes, employment matters, product liability and product defect claims, asbestos-related claims, environmental liabilities, intellectual property disputes, and tax-related matters. In our opinion, pending legal matters are not expected to have a material adverse impact on our results of operations, financial condition, liquidity or cash flows.

The most significant litigation facing the Company is the asbestos-related bankruptcy cases of Aldrich and Murray. For detailed information on the bankruptcy cases of Aldrich and Murray, see Part I, Item 1, "Business - Asbestos-Related Matters," Part I, Item 1A, "Risk Factors - Risks Related to Litigation," Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations - Significant Events," and Part II, Item 8, Consolidated Financial Statements, Note 1, "Description of Company," and Note 20, "Commitments and Contingencies."

**Item 4. MINE SAFETY DISCLOSURES**

None.

**PART II****Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES**

Information regarding the principal market for our ordinary shares and related shareholder matters is as follows:

Our ordinary shares are traded on the New York Stock Exchange under the symbol TT. As of February 3, 2023, the approximate number of record holders of ordinary shares was 2,428.

**Issuer Purchases of Equity Securities**

The following table provides information with respect to purchases by us of our ordinary shares during the quarter ended December 31, 2022:

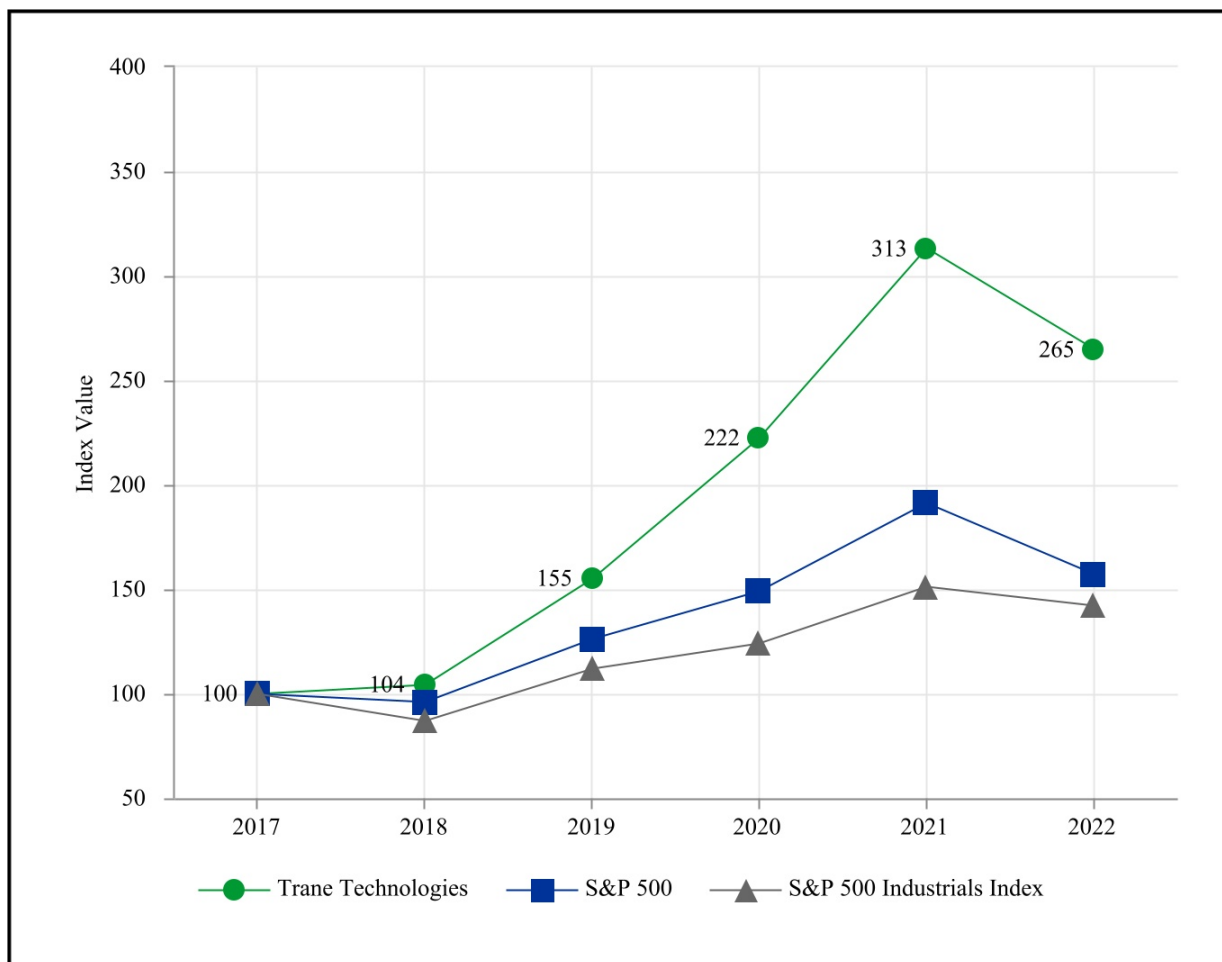
Period	Total number of shares purchased (000's) (a) (b)	Average price paid per share (a) (b)	Total number of shares purchased as part of program (000's) (a)	Approximate dollar value of shares still available to be purchased under the program (\$000's) (a)
October 1 - October 31	0.2	\$ 153.71	—	\$ 499,776
November 1 - November 30	1,536.9	173.50	1,536.9	233,111
December 1 - December 31	191.1	175.00	190.5	199,776
Total	1,728.2		1,727.4	

(a) Share repurchases are made from time to time in accordance with management's capital allocation strategy, subject to market conditions and regulatory requirements. In February 2021, our Board of Directors authorized the repurchase of up to \$2.0 billion of our ordinary shares under a new share repurchase program (2021 Authorization). During the fourth quarter of 2022, we repurchased and canceled \$300.0 million of our ordinary shares leaving approximately \$200 million remaining under the 2021 Authorization as of December 31, 2022. In February 2022, our Board of Directors authorized the repurchase of up to \$3.0 billion of our ordinary shares under a new share repurchase program (2022 Authorization) upon completion of the 2021 Authorization.

(b) We may also reacquire shares outside of the repurchase program from time to time in connection with the surrender of shares to cover taxes on vesting of share based awards. We reacquired 154 shares in October and 632 shares in December in transactions outside the repurchase programs.

**Performance Graph**

The following graph compares the cumulative total shareholder return on our ordinary shares with the cumulative total return on (i) the Standard & Poor’s 500 Stock Index and (ii) the Standard & Poor’s 500 Industrial Index for the five years ended December 31, 2022. The graph assumes an investment of \$100 in our ordinary shares (adjusted for the Transaction), the Standard & Poor’s 500 Stock Index and the Standard & Poor’s 500 Industrial Index on December 31, 2017 and assumes the reinvestment of dividends.



<b>Company/Index</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Trane Technologies	100	104	155	222	313	265
S&P 500	100	96	126	149	191	157
S&P 500 Industrials Index	100	87	112	124	151	142

Item 6. [Reserved]

**Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

*The following Management's Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements that involve risks and uncertainties. Our actual results may differ materially from the results discussed in the forward-looking statements. Factors that might cause a difference include, but are not limited to, those discussed under Item 1A. Risk Factors in this Annual Report on Form 10-K. The following section is qualified in its entirety by the more detailed information, including our financial statements and the notes thereto, which appears elsewhere in this Annual Report.*

*This section discusses 2022 and 2021 significant items affecting our consolidated operating results, financial condition and liquidity and provides a year-to-year comparison between 2022 and 2021. Discussions of 2020 significant items and year-to-year comparisons between 2021 and 2020 have been excluded in this Form 10-K and can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of our Annual Report on Form 10-K for year ended December 31, 2021.*

**Overview**

***Organizational***

Trane Technologies plc is a global climate innovator. We bring sustainable and efficient solutions to buildings, homes and transportation through our strategic brands, Trane® and Thermo King®, and our environmentally responsible portfolio of products, services and connected intelligent controls.

*2030 Sustainability Commitments*

Our commitment to sustainability extends to the environmental and social impacts of our people, operations, products and services. We have announced ambitious 2030 Sustainability Commitments, including our Gigaton Challenge to reduce customers' carbon emissions by a billion metric tons. We are one of a handful of companies whose emissions reductions targets have been validated three times by the SBTi, and one of the very few companies worldwide whose net-zero targets have also been validated. We are Leading by Example as we make progress toward carbon-neutral operations and zero waste-to-landfill across our global footprint and net positive water use in water-stressed locations. Our Opportunity for All commitment focuses on gender parity in leadership, workforce diversity reflective of our communities, and a citizenship strategy that helps underserved communities through enhanced learning environments and pathways to green and Science, Technology, Engineering and Math (STEM) careers.

*Recent Acquisitions*

On October 31, 2022, we completed the acquisition of AL-KO Air Technology (AL-KO). AL-KO brings complementary, high-performing solutions to the comprehensive Trane Commercial HVAC product and services portfolios in Europe and Asia. The results of the acquisition are reported within the EMEA and Asia Pacific segments.

On April 1, 2022, we completed a channel acquisition of a Commercial HVAC independent dealer to support our ongoing strategy to expand our distribution network and service area. The results of the channel acquisition are reported within the Americas segment.

***Significant Events***

*Reorganization of Aldrich and Murray*

On June 18, 2020 (Petition Date), our indirect wholly-owned subsidiaries, Aldrich and Murray each filed a voluntary petition for reorganization under the Bankruptcy Code. As a result of the Chapter 11 filings, all asbestos-related lawsuits against Aldrich and Murray have been stayed due to the imposition of a statutory automatic stay applicable in Chapter 11 bankruptcy cases. Only Aldrich and Murray have filed for Chapter 11 relief. Neither Aldrich's wholly-owned subsidiary, 200 Park, Murray's wholly-owned subsidiary, ClimateLabs, nor the Trane Companies are part of the Chapter 11 filings.

The goal of these Chapter 11 filings is to resolve equitably and permanently all current and future asbestos-related claims in a manner beneficial to claimants, Aldrich and Murray through court approval of a plan of reorganization that would create a trust pursuant to section 524(g) of the Bankruptcy Code, establish claims resolution procedures for all current and future asbestos-related claims against Aldrich and Murray and channel such claims to the trust for resolution in accordance with those procedures.

Aldrich and its wholly-owned subsidiary 200 Park and Murray and its wholly-owned subsidiary ClimateLabs were deconsolidated as of the Petition Date and their respective assets and liabilities were derecognized from our Consolidated Financial Statements.

During the year ended December 31, 2021, in connection with the agreement in principle reached by Aldrich and Murray with the FCR and the motion filed on September 24, 2021 to create a \$270.0 million "qualified settlement fund" within the meaning of the Treasury Regulations under Section 468B of the Internal Revenue Code (QSF), we recorded a charge of \$21.2 million to increase our Funding Agreement liability to \$270.0 million. The corresponding charge was bifurcated between *Other income/ (expense), net* of \$7.2 million relating to Murray and discontinued operations of \$14.0 million relating to Aldrich.

On January 27, 2022, the Bankruptcy Court granted the request to fund the QSF, which was funded on March 2, 2022, resulting in an operating cash outflow of \$270.0 million in our Consolidated Statement of Cash Flows, of which \$91.8 million was allocated to continuing operations and \$178.2 million was allocated to discontinued operations for the year ended December 31, 2022. At this point in the Chapter 11 cases of Aldrich and Murray, it is not possible to predict whether the Bankruptcy Court will approve the terms of the Plan, what the extent of the asbestos liability will be or how long the Chapter 11 cases will last. The Chapter 11 cases remain pending as of February 10, 2023.

For detailed information on the bankruptcy cases of Aldrich and Murray, see Part I, Item 1, "Business - Asbestos-Related Matters," Part I, Item 1A, "Risk Factors - Risks Related to Litigation," Part I, Item 3, "Legal Proceedings," and Part II, Item 8, Consolidated Financial Statements, Note 1, "Description of Company," and Note 20, "Commitments and Contingencies."

### ***Trends and Economic Events***

We are a global corporation with worldwide operations. As a global business, our operations are affected by worldwide, regional and industry-specific economic factors as well as political and social factors wherever we operate or do business. Our geographic diversity and the breadth of our product and services portfolios have helped mitigate the impact of any one industry or the economy of any single country on our consolidated operating results.

Given our broad range of products manufactured and geographic markets served, management uses a variety of factors to predict the outlook for the Company. We monitor key competitors and customers in order to gauge relative performance and the outlook for the future. We regularly perform detailed evaluations of the different market segments we are serving to proactively detect trends and to adapt our strategies accordingly, including potential triggers and actions to be taken under recessionary scenarios. In addition, we believe our backlog and order levels are indicative of future revenue and thus are a key measure of anticipated performance.

Current economic conditions remain mixed across our end markets. The COVID-19 global pandemic continues to impact both the global Heating, Ventilation and Air Conditioning (HVAC) and Transport end markets as disruptions and delays in the global supply chain and resource constraints continue to be experienced. However, despite these challenges, overall end market demand remained healthy as we continued to proactively manage global supply chain and resource constraints by working closely with our suppliers, customers and logistics providers to mitigate the impacts on our business as we continue to sell, install and service our products.

We expect market conditions to remain mixed across the geographies where we serve our customers as the impact from COVID-19 eases; however, macroeconomic events including the material cost, wage and energy inflation and tightening financial conditions, as a result of higher interest rates, could increase the likelihood of deteriorating economic conditions which could have a negative impact on our business. The extent to which the COVID-19 pandemic and other macro economic conditions continue to impact the Company's results of operations and financial condition will depend on future developments that are highly uncertain and cannot be predicted. See Part I, Item 1A, "Risk Factors - Risks Related to Economic Conditions," for more information.

Furthermore, when Russia invaded Ukraine in February 2022, we immediately halted new orders and shipments into and out of Russia and Belarus. As of December 31, 2022, we have exited all business activity within these markets. To date, the Russia-Ukraine war has not had a material adverse effect on our business or financial performance. See Part I, Item 1A Risk Factors for more information.

We believe we have a solid foundation of global brands that are highly differentiated in all of our major product lines. Our geographic and product diversity coupled with our large installed product base provides growth opportunities within our service and corresponding parts and replacement revenue streams. In addition, we are investing substantial resources to innovate and develop new products and services which we expect will drive our future growth.

## Results of Operations

### Year Ended December 31, 2022 Compared to the Year Ended December 31, 2021 - Consolidated Results

<i>Dollar amounts in millions</i>	2022	2021	Period Change	2022 % of revenues	2021 % of revenues
Net revenues	\$ 15,991.7	\$ 14,136.4	\$ 1,855.3		
Cost of goods sold	(11,026.9)	(9,666.8)	(1,360.1)	69.0%	68.4%
Gross profit	4,964.8	4,469.6	495.2	31.0%	31.6%
Selling and administrative expenses	(2,545.9)	(2,446.3)	(99.6)	15.9%	17.3%
Operating income	2,418.9	2,023.3	395.6	15.1%	14.3%
Interest expense	(223.5)	(233.7)	10.2		
Other income/(expense), net	(23.3)	1.1	(24.4)		
Earnings before income taxes	2,172.1	1,790.7	381.4		
Provision for income taxes	(375.9)	(333.5)	(42.4)		
Earnings from continuing operations	1,796.2	1,457.2	339.0		
Discontinued operations, net of tax	(21.5)	(20.6)	(0.9)		
Net earnings	\$ 1,774.7	\$ 1,436.6	\$ 338.1		

#### *Net Revenues*

*Net revenues* for the year ended December 31, 2022 increased by 13.1%, or \$1,855.3 million, compared with the same period of 2021.

The components of the period change were as follows:

Pricing	9.6 %
Volume	4.9 %
Acquisitions	0.8 %
Currency translation	(2.2)%
Total	13.1 %

The increase in *Net revenues* was primarily driven by inflation-based price increases, end customer demand within all our reportable segments and incremental revenues from acquisitions, partially offset by an unfavorable impact from foreign currency translation. Pricing and volume increases were experienced in all segments. Refer to “Results by Segment” below for a discussion of *Net revenues* by segment.

#### *Gross Profit Margin*

Gross profit margin for the year ended December 31, 2022 decreased 60 basis points to 31.0% compared to 31.6% for the same period of 2021 primarily due to significant direct material, freight and other inflation, and unfavorable impacts to productivity arising from supply chain, freight and logistics challenges, partially offset by inflation-based price increases.

#### *Selling and Administrative Expenses*

*Selling and administrative expenses* for the year ended December 31, 2022 increased by 4.1%, or \$99.6 million, compared with the same period of 2021. The increase in *Selling and administrative expenses* was primarily driven by an increase in human capital related costs as a result of investing in our people, travel costs and amortization due to acquisitions, partially offset by favorable non-cash adjustments to contingent consideration of \$46.9 million.

*Selling and administrative expenses* as a percentage of *Net revenues* for the year ended December 31, 2022 decreased 140 basis points from 17.3% to 15.9% primarily due to higher revenues year-over-year.

#### *Interest Expense*

*Interest expense* for the year ended December 31, 2022 decreased by 4.4% or \$10.2 million compared with the same period of 2021 primarily due to the repayments of \$125.0 million of 9.000% Debentures in August 2021 and \$300.0 million of 2.900% Senior notes in February 2021.

**Other Income/(Expense), Net**

The components of *Other income/(expense), net*, for the years ended December 31 were as follows:

<i>In millions</i>	2022	2021
Interest income	\$ 9.2	\$ 4.0
Foreign currency exchange loss	(17.9)	(10.7)
Other components of net periodic benefit credit/(cost)	(10.6)	(1.6)
Other activity, net	(4.0)	9.4
Other income/(expense), net	\$ (23.3)	\$ 1.1

*Other income/(expense), net* includes the results from activities other than normal business operations such as interest income and foreign currency gains and losses on transactions that are denominated in a currency other than an entity's functional currency. In addition, we include the components of net periodic benefit credit/(cost) for pension and post retirement obligations other than the service cost component. During the year ended December 31, 2022, we recorded a \$15.0 million settlement charge for a compensation related payment to a retired executive within other components of net periodic benefit credit/(cost). Other activity, net primarily includes items associated with certain legal matters, as well as asbestos-related activities of Murray. During the year ended December 31, 2021, we recorded a gain of \$12.8 million related to the release of a pension indemnification liability, partially offset by a charge of \$7.2 million to increase our Funding Agreement liability from asbestos-related activities of Murray.

**Provision for Income Taxes**

The 2022 effective tax rate was 17.3% which was lower than the U.S. Statutory rate of 21% due to a \$48.2 million reduction in valuation allowances primarily related to certain net state deferred tax assets resulting from U.S. legal entity restructurings and deferred tax assets associated with foreign tax credits as a result of an increase in the current year amount of creditable foreign source income. Additional tax benefits included in this year's effective rate are \$12.4 million, net related to the current year's effects of a prepayment of an intercompany obligation in 2021, excess tax benefits from employee share-based payments and earnings in non-U.S. jurisdictions, which in aggregate have a lower effective tax rate. These amounts were partially offset by U.S. state and local taxes and certain non-deductible employee expenses. Revenues from non-U.S. jurisdictions accounted for approximately 28% of our total 2022 revenues, such that a material portion of our pretax income was earned and taxed outside the U.S. at rates ranging from 0% to 38%. When comparing the results of multiple reporting periods, among other factors, the mix of earnings between U.S. and foreign jurisdictions can cause variability in our overall effective tax rate.

The 2021 effective tax rate was 18.6% which was lower than the U.S. Statutory rate of 21% due to a \$21.4 million reduction in valuation allowances on deferred tax assets primarily related to foreign tax credits as a result of an increase in current year foreign source income, excess tax benefits from employee share-based payments, and earnings in non-U.S. jurisdictions, which in aggregate have a lower effective tax rate. These amounts were partially offset by the recognition of a net \$11.6 million tax expense related to a prepayment of an intercompany obligation, U.S. state and local taxes and certain non-deductible employee expenses. Revenues from non-U.S. jurisdictions accounted for approximately 29.0% of our total 2021 revenues, such that a material portion of our pretax income was earned and taxed outside the U.S. at rates ranging from 0% to 38%. When comparing the results of multiple reporting periods, among other factors, the mix of earnings between U.S. and foreign jurisdictions can cause variability in our overall effective tax rate.

**Year Ended December 31, 2022 Compared to the Year Ended December 31, 2021 - Segment Results**

We operate under four regional operating segments designed to create deep customer focus and relevance in markets around the world. The Company determined that its two Europe, Middle East and Africa (EMEA) operating segments meet the aggregation criteria based on similar operating and economic characteristics, resulting in one reportable segment. Therefore, the Company has three regional reportable segments, Americas, EMEA and Asia Pacific.

- Our Americas segment innovates for customers in North America and Latin America. The Americas segment encompasses commercial heating, cooling and ventilation systems, building controls, and energy services and solutions; residential heating and cooling; and transport refrigeration systems and solutions.
- Our EMEA segment innovates for customers in the Europe, Middle East and Africa region. The EMEA segment encompasses heating, cooling and ventilation systems, services and solutions for commercial buildings, and transport refrigeration systems and solutions.
- Our Asia Pacific segment innovates for customers throughout the Asia Pacific region. The Asia Pacific segment encompasses heating, cooling and ventilation systems, services and solutions for commercial buildings and transport refrigeration systems and solutions.



Management measures segment operating performance based on net earnings excluding interest expense, income taxes, depreciation and amortization, restructuring, non-cash adjustments for contingent consideration, insurance settlement on property claim in Q3 2022, merger and acquisition-related costs, unallocated corporate expenses and discontinued operations (Segment Adjusted EBITDA). Segment Adjusted EBITDA is not defined under accounting principles generally accepted in the United States of America (GAAP) and may not be comparable to similarly-titled measures used by other companies and should not be considered a substitute for net earnings or other results reported in accordance with GAAP. We believe Segment Adjusted EBITDA provides the most relevant measure of profitability as well as earnings power and the ability to generate cash. This measure is a useful financial metric to assess our operating performance from period to period by excluding certain items that we believe are not representative of our core business and we use this measure for business planning purposes. Segment Adjusted EBITDA also provides a useful tool for assessing the comparability between periods and our ability to generate cash from operations sufficient to pay taxes, to service debt and to undertake capital expenditures because it eliminates non-cash charges such as depreciation and amortization expense.

The following discussion compares our results for each of our three reportable segments for the year ended December 31, 2022 compared to the year ended December 31, 2021.

<i>Dollar amounts in millions</i>	2022	2021	% Change
<b>Americas</b>			
Net revenues	\$ 12,640.8	\$ 10,957.1	15.4 %
Segment Adjusted EBITDA	2,326.3	2,008.8	15.8 %
Segment Adjusted EBITDA as a percentage of net revenues	18.4 %	18.3 %	
<b>EMEA</b>			
Net revenues	\$ 2,034.5	\$ 1,944.9	4.6 %
Segment Adjusted EBITDA	338.1	359.2	(5.9)%
Segment Adjusted EBITDA as a percentage of net revenues	16.6 %	18.5 %	
<b>Asia Pacific</b>			
Net revenues	\$ 1,316.4	\$ 1,234.4	6.6 %
Segment Adjusted EBITDA	248.3	228.5	8.7 %
Segment Adjusted EBITDA as a percentage of net revenues	18.9 %	18.5 %	
Total Net revenues	\$ 15,991.7	\$ 14,136.4	13.1 %
Total Segment Adjusted EBITDA	2,912.7	2,596.5	12.2 %
Total Segment Adjusted EBITDA as a percentage of net revenues	18.2 %	18.4 %	

### Americas

*Net revenues* for the year ended December 31, 2022 increased by 15.4% or \$1,683.7 million, compared with the same period of 2021.

The components of the period change were as follows:

Pricing	10.7 %
Volume	4.2 %
Acquisitions	0.7 %
Currency translation	(0.2)%
Total	15.4 %

The increase in *Net revenues* was primarily driven by inflation-based price increases, higher volumes driven by increased end-customer demand and incremental revenues from acquisitions.

Segment Adjusted EBITDA margin for the year ended December 31, 2022 increased by 10 basis points to 18.4% compared to 18.3% for the same period of 2021 primarily due to favorable pricing, volume and productivity largely offset by higher material costs, other inflation and higher costs to serve customers arising from supply chain, freight and logistics challenges.

### EMEA

*Net revenues* for the year ended December 31, 2022 increased by 4.6% or \$89.6 million, compared with the same period of 2021.

The components of the period change were as follows:

Pricing	7.1 %
Volume	7.4 %
Acquisitions	1.2 %
Currency translation	(11.1)%
Total	4.6 %

The increase in *Net revenues* was primarily driven by higher volumes driven by increased end-customer demand, inflation-based price increases and incremental revenues from acquisitions, partially offset by the unfavorable currency translation. Excluding the impact of foreign currency translation and acquisitions, *Net revenues* increased by 14.5%

Segment Adjusted EBITDA margin for the year ended December 31, 2022 decreased by 190 basis points to 16.6% compared to 18.5% for the same period of 2021 primarily due to favorable pricing, volume and productivity, more than offset by higher material costs, other inflation and higher costs to serve customers arising from supply chain, freight and logistics challenges.

### Asia Pacific

*Net revenues* for the year ended December 31, 2022 increased by 6.6% or \$82.0 million, compared with the same period of 2021.

The components of the period change were as follows:

Pricing	3.4 %
Volume	8.4 %
Acquisitions	0.7 %
Currency translation	(5.9)%
Total	6.6 %

The increase in *Net revenues* was primarily driven by higher volumes related to increased end-customer demand. Inflation-based price increases and incremental revenues from acquisitions were partially offset by an unfavorable impact from foreign currency translation. Excluding the impact of foreign currency translation and acquisitions, *Net revenues* increased by 11.8%.

Segment Adjusted EBITDA margin for the year ended December 31, 2022 increased by 40 basis points to 18.9% compared to 18.5% for the same period of 2021 primarily due to favorable pricing, volume and productivity, partially offset by higher material costs, other inflation and higher costs to serve customers arising from supply chain, freight and logistics challenges.

## Liquidity and Capital Resources

We assess our liquidity in terms of our ability to generate cash to fund our operating, investing and financing activities. In doing so, we review and analyze our current cash on hand, the number of days our sales are outstanding, inventory turns, capital expenditure commitments and income tax payments. Our cash requirements primarily consist of the following:

- Funding of working capital
- Debt service requirements
- Funding of capital expenditures
- Dividend payments
- Funding of acquisitions, joint ventures and equity investments
- Share repurchases

Our primary sources of liquidity include cash balances on hand, cash flows from operations, proceeds from debt offerings, commercial paper, and borrowing availability under our existing credit facilities. We earn a significant amount of our operating income in jurisdictions where it is deemed to be permanently reinvested. Our most prominent jurisdiction of operation is the U.S. We expect existing cash and cash equivalents available to the U.S. operations, the cash generated by our U.S. operations, our committed credit lines as well as our expected ability to access the capital and debt markets will be sufficient to fund our U.S. operating and capital needs for at least the next twelve months and thereafter for the foreseeable future. In addition, we expect existing non-U.S. cash and cash equivalents and the cash generated by our non-U.S. operations will be sufficient to fund our non-U.S. operating and capital needs for at least the next twelve months and thereafter for the foreseeable future. The maximum aggregate amount of unsecured commercial paper notes available to be issued, on a private placement basis, under the commercial paper program is \$2.0 billion, of which we had no outstanding balance as of December 31, 2022.

As of December 31, 2022, we had \$1,220.5 million of cash and cash equivalents on hand, of which \$814.5 million was held by non-U.S. subsidiaries. Cash and cash equivalents held by our non-U.S. subsidiaries are generally available for use in our U.S. operations via intercompany loans, equity infusions or via distributions from direct or indirectly owned non-U.S. subsidiaries for which we do not assert permanent reinvestment. As a result of the Tax Cuts and Jobs Act in 2017, additional repatriation opportunities to access cash and cash equivalents held by non-U.S. subsidiaries have been created. In general, repatriation of cash to the U.S. can be completed with no significant incremental U.S. tax. However, to the extent that we repatriate funds from non-U.S. subsidiaries for which we assert permanent reinvestment to fund our U.S. operations, we would be required to accrue and pay applicable non-U.S. taxes. As of December 31, 2022, we currently have no plans to repatriate funds from subsidiaries for which we assert permanent reinvestment.

Share repurchases are made from time to time in accordance with management's balanced capital allocation strategy, subject to market conditions and regulatory requirements. In February 2022, the Company's Board of Directors authorized the repurchase of up to \$3.0 billion of its ordinary shares (2022 Authorization) upon the completion of its current share repurchase program of up to \$2.0 billion of its ordinary shares which was authorized in 2021 (2021 Authorization). During the year ended December 31, 2022, we repurchased and canceled \$1,200.0 million of ordinary shares leaving approximately \$200 million remaining under the 2021 Authorization as of December 31, 2022.

We expect to pay a competitive and growing dividend. Since the launch of Trane Technologies in March 2020, we have increased our quarterly share dividend by 26%, from \$0.53 to \$0.67 per ordinary share, or \$2.12 to \$2.68 per share annualized. All four 2022 quarterly dividends were paid during the year ended December 31, 2022. In February 2023, our Board of Directors declared an increase in our quarterly share dividend by 12%, from \$0.67 to \$0.75 per ordinary share, or \$2.68 to \$3.00 per share annualized starting in the first quarter of 2023.

We continue to actively manage and strengthen our business portfolio to meet the current and future needs of our customers. We achieve this partly through engaging in research and development and sustaining activities and partly through acquisitions. Sustaining activities include costs incurred to reduce production costs, improve existing products, create custom solutions for customers and provide support to our manufacturing facilities. Our research and development and sustaining costs account for approximately two percent of annual *Net revenues*. Each year, we make investments in new product development and new technology innovation as they are key factors in achieving our strategic objectives as a leader in the climate sector. In addition, we make investments in technology and business for our operational sustainability programs. For example, during the year ended December 31, 2022, we invested in onsite solar energy generation systems at our Pueblo, Colorado and Monterrey, Mexico facilities to generate electricity to offset fossil based electricity purchased from the grid. We ramped up operations of the onsite solar system at our Zhongshan, China facility. Two key factories in China (Taicang and Zhongshan) recently entered into supply agreements to receive a significant quantity of electricity generated from 100 percent renewable sources. We also transitioned to a next generation refrigerant with low global warming potential (GWP) for transport equipment manufactured at our Arecibo, Puerto Rico facility and are actively working to transition to low GWP refrigerant on our first commercial product at our Pueblo, Colorado factory. We also completed a major step to decarbonize our Charmes, France facility by shifting from a natural gas fueled hot water heating system to Trane Technologies' latest heat pump system. This project is a dual benefit of

reducing Scope 1 carbon and serving as a heat pump system showcase for our customer engagement. These actions represent important steps to reduce our Scope 1 and Scope 2 carbon emissions and improve our customer's carbon performance over the operating life of Trane Technologies' cooling equipment. Furthermore, during the year ended December 31, 2022, we also completed implementation of processing equipment for our Tyler, Texas facility to fully achieve zero waste to landfill. These Leading by Example successes did not result in material expenditures for the year ended December 31, 2022.

In pursuing our business strategy, we routinely conduct discussions, evaluate targets and enter into agreements regarding possible acquisitions, divestitures, joint ventures and equity investments. Since 2020, we acquired several businesses, entered into joint ventures and invested in companies that complement existing products and services further enhancing our product portfolio. During the years ended December 31, 2022 and December 31, 2021, we deployed capital of approximately \$256 million and \$340 million, respectively attributable to acquisitions and equity investments.

We incur costs associated with restructuring initiatives intended to result in improved operating performance, profitability and working capital levels. Actions associated with these initiatives may include workforce reductions, improving manufacturing productivity, realignment of management structures and rationalizing certain assets. Post separation, we have reduced costs by approximately \$240 million through December 31, 2022 and expect to reduce costs by an additional \$60 million by 2023 for a total of \$300 million in total annual savings under our transformation initiatives. In order to achieve these cost savings, we anticipate to incur costs up to \$150 million through 2023. We have incurred approximately \$130 million of costs cumulatively through December 31, 2022. We believe that our existing cash flow, committed credit lines and access to the capital markets will be sufficient to fund share repurchases, dividends, research and development, sustaining activities, business portfolio changes and ongoing restructuring actions.

Certain of our subsidiaries entered into Funding Agreements with Aldrich and Murray pursuant to which those subsidiaries are obligated, among other things, to pay the costs and expenses of Aldrich and Murray during the pendency of the Chapter 11 cases to the extent distributions from their respective subsidiaries are insufficient to do so and to provide an amount for the funding for a trust established pursuant to section 524(g) of the Bankruptcy Code, to the extent that the other assets of Aldrich and Murray are insufficient to provide the requisite trust funding. During the third quarter of 2021, Aldrich and Murray filed a motion with the Bankruptcy Court to create a \$270.0 million QSF. The funds held in the QSF would be available to provide funding for the Section 524(g) Trust upon effectiveness of the Plan. On January 27, 2022, the Bankruptcy Court granted the request to fund the QSF, which was funded on March 2, 2022.

As the COVID-19 global pandemic impacts both the broader economy and our operations, we will continue to assess our liquidity needs and our ability to access capital markets. A continued worldwide disruption could materially affect economies and financial markets worldwide, resulting in an economic downturn that could affect demand for our products, our ability to obtain financing on favorable terms and otherwise adversely impact our business, financial condition and results of operations. See Part I, Item 1A, "Risk Factors - Risks Related to Economic Conditions" for more information.

## Liquidity

The following table contains several key measures of our financial condition and liquidity at the periods ended December 31:

<i>In millions</i>	2022	2021
Cash and cash equivalents	\$ 1,220.5	\$ 2,159.2
Short-term borrowings and current maturities of long-term debt	1,048.0	350.4
Long-term debt	3,788.3	4,491.7
Total debt	4,836.3	4,842.1
Total Trane Technologies plc shareholders' equity	6,088.6	6,255.9
Total equity	6,105.2	6,273.1
Debt-to-total capital ratio	44.2 %	43.6 %

## Debt and Credit Facilities

As of December 31, 2022, our short-term obligations primarily consist of current maturities of \$699.7 million of long-term debt that matures in June 2023 and \$340.8 million of fixed rate debentures that contain a put feature that the holders may exercise on each anniversary of the issuance date. If exercised, we are obligated to repay in whole or in part, at the holder's option, the outstanding principal amount (plus accrued and unpaid interest) of the debentures held by the holder. We also maintain a commercial paper program which is used for general corporate purposes. Under the program, the maximum aggregate amount of unsecured commercial paper notes available to be issued, on a private placement basis, is \$2.0 billion as of December 31, 2022. We had no commercial paper outstanding at December 31, 2022 and December 31, 2021. See Note 7, "Debt and Credit Facilities", to the Consolidated Financial Statements for additional information regarding the terms of our short-term obligations.

Our long-term obligations primarily consist of long-term debt with final maturity dates ranging between 2024 and 2049. In addition, we maintain two \$1.0 billion senior unsecured revolving credit facilities, one of which matures in June 2026 and the other which matures in April 2027. The facilities provide support for our commercial paper program and can be used for working capital and other general corporate purposes. Total commitments of \$2.0 billion were unused at December 31, 2022 and December 31, 2021. See Note 7, "Debt and Credit Facilities", to the Consolidated Financial Statements and further below in *Supplemental Guarantor Financial Information* for additional information regarding the terms of our long-term obligations and their related guarantees.

### **Cash Flows**

The following table reflects the major categories of cash flows for the years ended December 31, respectively. For additional details, please see the Consolidated Statements of Cash Flows in the Consolidated Financial Statements.

<i>In millions</i>	2022	2021
Net cash provided by continuing operating activities	\$ 1,698.7	\$ 1,594.4
Net cash used in continuing investing activities	(539.8)	(545.7)
Net cash used in continuing financing activities	(1,852.2)	(2,127.6)

### *Operating Activities*

Net cash provided by continuing operating activities for the year ended December 31, 2022 was \$1,698.7 million, of which net income provided \$2,248.8 million after adjusting for non-cash transactions. Net cash provided by continuing operating activities for the year ended December 31, 2021 was \$1,594.4 million, of which net income provided \$1,837.5 million after adjusting for non-cash transactions. The year-over-year increase in net cash provided by continuing operating activities was primarily due to higher net earnings, partially offset by higher working capital balances in the current year, the funding of the continuing operations component of the QSF for \$91.8 million and a compensation related payment to a retired executive.

### *Investing Activities*

Cash flows from investing activities represents inflows and outflows regarding the purchase and sale of assets. Primary activities associated with these items include capital expenditures, proceeds from the sale of property, plant and equipment, acquisitions, investments in joint ventures and divestitures. During the year ended December 31, 2022, net cash used in investing activities from continuing operations was \$539.8 million. The primary drivers of the usage was attributable to capital expenditures of \$291.8 million and acquisition of businesses, which totaled \$234.7 million, net of cash acquired. During the year ended December 31, 2021, net cash used in investing activities from continuing operations was \$545.7 million. The primary drivers of the usage was attributable to the acquisition of businesses, which totaled \$269.2 million, net of cash acquired, \$223.0 million of capital expenditures and other investing activities of \$68.6 million, primarily related to investment in several companies that complement existing products and services further enhancing our product portfolio.

### *Financing Activities*

Cash flows from financing activities represent inflows and outflows that account for external activities affecting equity and debt. Primary activities associated with these actions include paying dividends to shareholders, repurchasing our own shares, issuing our stock and debt transactions. During the year ended December 31, 2022, net cash used in financing activities from continuing operations was \$1,852.2 million. The primary drivers of the outflow related to the repurchase of \$1,200.2 million in ordinary shares and dividends paid to ordinary shareholders of \$620.2 million. During the year ended December 31, 2021, net cash used in financing activities from continuing operations was \$2,127.6 million. The primary driver of the outflow related to the repurchase of \$1,100.3 million in ordinary shares, dividends paid to ordinary shareholders of \$561.1 million and the repayment of long-term debt of \$432.5 million.

### Free Cash Flow

Free cash flow is a non-GAAP measure and defined as *Net cash provided by (used in) continuing operating activities* adjusted for capital expenditures, cash payments for restructuring, transformation costs, the continuing operations component of the QSF funding and payout of executive compensation less an insurance settlement on a property claim in Q3 2022. This measure is useful to management and investors because it is consistent with management's assessment of our operating cash flow performance. The most comparable GAAP measure to free cash flow is *Net cash provided by (used in) continuing operating activities*. Free cash flow may not be comparable to similarly-titled measures used by other companies and should not be considered a substitute for *Net cash provided by (used in) continuing operating activities* in accordance with GAAP.

A reconciliation of *Net cash provided by (used in) continuing operating activities* to free cash flow the years ended December 31 is as follows:

<i>In millions</i>	2022	2021
Net cash provided by (used in) continuing operating activities	\$ 1,698.7	\$ 1,594.4
Capital expenditures	(291.8)	(223.0)
Cash payments for restructuring	17.9	38.1
Transformation costs paid	9.6	21.4
QSF funding (continuing operations component)	91.8	—
Compensation related payment to a retired executive	64.3	—
Insurance settlement on property claim in Q3 2022	(25.0)	—
Free cash flow <sup>(1)</sup>	\$ 1,565.5	\$ 1,430.9

<sup>(1)</sup>Represents a non-GAAP measure.

### Pension Plans

Our investment objective in managing defined benefit plan assets is to ensure that all present and future benefit obligations are met as they come due. We seek to achieve this goal while trying to mitigate volatility in plan funded status, contribution and expense by better matching the characteristics of the plan assets to that of the plan liabilities. Our approach to asset allocation is to increase fixed income assets as the plan's funded status improves. We monitor plan funded status and asset allocation regularly in addition to investment manager performance. In addition, we monitor the impact of market conditions on our defined benefit plans on a regular basis. None of our defined benefit pension plans have experienced a significant impact on their liquidity due to market volatility. See Note 11, "Pension and Postretirement Benefits Other Than Pensions", to the Consolidated Financial Statements for additional information regarding pensions.

### Capital Resources

Based on historical performance and current expectations, we believe our cash and cash equivalents balance, the cash generated from our operations, our committed credit lines and our expected ability to access capital markets will satisfy our working capital needs, capital expenditures, dividends, share repurchases, upcoming debt maturities, and other liquidity requirements associated with our operations for the foreseeable future.

Capital expenditures were \$291.8 million, \$223.0 million and \$146.2 million for the years ended December 31, 2022, 2021 and 2020, respectively. Our investments continue to improve manufacturing productivity, reduce costs, provide environmental enhancements, upgrade information technology infrastructure and security and advanced technologies for existing facilities. The capital expenditure program for 2023 is estimated to be approximately 1.5% to 2.0% of revenues, including amounts approved in prior periods. Many of these projects are subject to review and cancellation at our option without incurring substantial charges.

For financial market risk impacting the Company, see Part II, Item 7A, "Quantitative and Qualitative Disclosure About Market Risk."

### **Capitalization**

In addition to cash on hand and operating cash flow, we maintain significant credit availability under our Commercial Paper Program. Our ability to borrow at a cost-effective rate under the Commercial Paper Program is contingent upon maintaining an investment-grade credit rating. As of December 31, 2022, our credit ratings were as follows, remaining unchanged from 2021:

	Short-term	Long-term
Moody's	P-2	Baa2
Standard and Poor's	A-2	BBB

*The credit ratings set forth above are not a recommendation to buy, sell or hold securities and may be subject to revision or withdrawal by the assigning rating organization. Each rating should be evaluated independently of any other rating.*

Our public debt does not contain financial covenants and our revolving credit lines have a debt-to-total capital covenant of 65%. As of December 31, 2022, our debt-to-total capital ratio was significantly beneath this limit.

### **Contractual Obligations**

Our contractual cash obligations include required payments of long-term debt principal and interest, purchase obligations and expected obligations under our pension and postretirement benefit plans. In addition, we have required payments of operating leases, income taxes and expected obligations under the Funding agreement, environmental and product liability matters. For additional information regarding leases, income taxes, including unrecognized tax benefits, and contingent liabilities, see Note 10 "Leases", Note 16 "Income Taxes" and Note 20 "Commitments and Contingencies", respectively, to the Consolidated Financial Statements. Our material cash requirements include the following contractual and other obligations.

#### **Debt**

At December 31, 2022, we had outstanding aggregate long-term debt principal payments of \$4,863.0 million, with \$1,048.3 million payable within 12 months. The amount payable within 12 months includes \$340.8 million of debt redeemable at the option of the holder. The scheduled maturities of these bonds range between 2027 and 2028. Future interest payments on long-term debt total \$2,186.5 million, with \$199.7 million payable within 12 months. See Note 7, "Debt and Credit Facilities", to the Consolidated Financial Statements for additional information regarding debt.

#### **Purchase Obligations**

Purchase obligations include commitments under legally enforceable contracts or purchase orders. At December 31, 2022, we had purchase obligations of \$1,239.2 million, which are primarily payable within 12 months.

#### **Pensions**

It is our objective to contribute to the pension plans to ensure adequate funds are available in the plans to make benefit payments to plan participants and beneficiaries when required. We currently expect that we will contribute approximately \$69 million to our enterprise plans worldwide in 2023. The timing and amounts of future contributions are dependent upon the funding status of the plan, which is expected to vary as a result of changes in interest rates, returns on underlying assets, and other factors. See Note 11, "Pensions and Postretirement Benefits Other Than Pensions", to the Consolidated Financial Statements for additional information regarding pensions.

#### **Postretirement Benefits Other than Pensions**

We fund postretirement benefit costs principally on a pay-as-you-go basis as medical costs are incurred by covered retiree populations. Benefit payments, which are net of expected plan participant contributions and Medicare Part D subsidy, are expected to be approximately \$35 million in 2023. See Note 11, "Pensions and Postretirement Benefits Other Than Pensions", to the Consolidated Financial Statements for additional information regarding postretirement benefits other than pensions.

### Supplemental Guarantor Financial Information

Trane Technologies plc (Plc or Parent Company) and certain of its 100% directly or indirectly owned subsidiaries provide guarantees of public debt issued by other 100% directly or indirectly owned subsidiaries of Plc. The following table shows our guarantor relationships as of December 31, 2022:

Parent, issuer or guarantors	Notes issued	Notes guaranteed
Trane Technologies plc (Plc)	None	All registered notes and debentures
Trane Technologies Irish Holdings Unlimited Company (TT Holdings)	None	All notes issued by TTFL and TTC HoldCo
Trane Technologies Lux International Holding Company S.à.r.l. (TT International)	None	All notes issued by TTFL and TTC HoldCo
Trane Technologies Global Holding Company Limited (TT Global)	None	All notes issued by TTFL and TTC HoldCo
Trane Technologies Financing Limited (TTFL)	3.550% Senior notes due 2024 3.500% Senior notes due 2026 3.800% Senior notes due 2029 4.650% Senior notes due 2044 4.500% Senior notes due 2049	All notes and debentures issued by TTC HoldCo and TTC
Trane Technologies HoldCo Inc. (TTC HoldCo)	4.250% Senior notes due 2023 3.750% Senior notes due 2028 5.750% Senior notes due 2043 4.300% Senior notes due 2048	All notes issued by TTFL
Trane Technologies Company LLC (TTC)	7.200% Debentures due 2023-2025 6.480% Debentures due 2025 Puttable debentures due 2027-2028	All notes issued by TTFL and TTC HoldCo

Each subsidiary debt issuer and guarantor is owned 100% directly or indirectly by the Parent Company. Each guarantee is full and unconditional, and provided on a joint and several basis. There are no significant restrictions of the Parent Company, or any guarantor, to obtain funds from its subsidiaries, such as provisions in debt agreements that prohibit dividend payments, loans or advances to the parent by a subsidiary. The following tables present summarized financial information for the Parent Company and subsidiary debt issuers and guarantors on a combined basis (together, "obligor group") after elimination of intercompany transactions and balances based on the Company's legal entity ownerships and guarantees outstanding at December 31, 2022. Our obligor groups as of December 31, 2022 were as follows: Obligor group 1 consists of Plc, TT Holdings, TT International, TT Global, TTFL, TTC HoldCo and TTC; Obligor group 2 consists of Plc, TTFL and TTC.

#### Summarized Statements of Earnings

<i>In millions</i>	Year ended December 31, 2022	
	Obligor group 1	Obligor group 2
Net revenues	\$ —	\$ —
Gross profit (loss)	—	—
Intercompany interest and fees	(44.2)	224.5
Earnings (loss) from continuing operations	(644.3)	(28.9)
Discontinued operations, net of tax	(14.4)	(19.5)
Net earnings (loss)	(658.7)	(48.4)
Less: Net earnings attributable to noncontrolling interests	—	—
Net earnings (loss) attributable to Trane Technologies plc	\$ (658.7)	\$ (48.4)



**Summarized Balance Sheet**

<i>In millions</i>	December 31, 2022	
	Obligor group 1	Obligor group 2
<b>ASSETS</b>		
Intercompany receivables	\$ 860.0	\$ 1,092.1
Current assets	1,011.6	1,231.7
Intercompany notes receivable	1,831.9	4,781.6
Noncurrent assets	2,582.3	5,383.1
<b>LIABILITIES</b>		
Intercompany payables	3,303.5	1,792.1
Current liabilities	4,851.8	2,611.9
Intercompany notes payable	2,400.0	2,400.0
Noncurrent liabilities	6,789.8	5,433.4

**Critical Accounting Estimates**

Management's Discussion and Analysis of Financial Condition and Results of Operations are based upon our Consolidated Financial Statements, which have been prepared in accordance with accounting principles generally accepted in the United States (GAAP). The preparation of financial statements in conformity with those accounting principles requires management to use judgment in making estimates and assumptions based on the relevant information available at the end of each period. These estimates and assumptions have a significant effect on reported amounts of assets and liabilities, revenue and expenses as well as the disclosure of contingent assets and liabilities because they result primarily from the need to make estimates and assumptions on matters that are inherently uncertain. Actual results may differ from these estimates. If updated information or actual amounts are different from previous estimates, the revisions are included in our results for the period in which they become known.

The following is a summary of certain accounting estimates and assumptions made by management that we consider critical.

- Goodwill and indefinite-lived intangible assets – We have significant goodwill and indefinite-lived intangible assets on our balance sheet related to acquisitions. These assets are tested and reviewed annually during the fourth quarter for impairment or when there is a significant change in events or circumstances that indicate that the fair value of an asset is more likely than not less than the carrying amount of the asset. In addition, an interim impairment test is completed upon a triggering event or when there is a reorganization of reporting structure or disposal of all or a portion of a reporting unit.

The determination of estimated fair value requires us to make assumptions about estimated cash flows, including profit margins, long-term forecasts, discount rates and terminal growth rates. We developed these assumptions based on the market and geographic risks unique to each reporting unit. The estimates of fair value are based on the best information available as of the date of the assessment, which primarily incorporates management assumptions about expected future cash flows.

*Annual Goodwill Impairment Test*

Impairment of goodwill is tested at the reporting unit level. The test compares the carrying amount of the reporting unit to its estimated fair value. If the estimated fair value of a reporting unit exceeds its carrying amount, goodwill of the reporting unit is not impaired. To the extent that the carrying value of the reporting unit exceeds its estimated fair value, an impairment loss would be recognized for the amount by which the reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill in that reporting unit.

As quoted market prices are not available for our reporting units, the calculation of their estimated fair value is determined using three valuation techniques: a discounted cash flow model (an income approach), a market-adjusted multiple of earnings and revenues (a market approach), and a similar transactions method (also a market approach). The discounted cash flow approach relies on our estimates of future cash flows and explicitly addresses factors such as timing, growth and margins, with due consideration given to forecasting risk. The multiple of earnings and revenues approach reflects the market's expectations for future growth and risk, with adjustments to account for differences between the guideline publicly traded companies and the subject reporting units. The similar transactions method considers prices paid in transactions that have recently occurred in our industry or in related industries. These valuation techniques are weighted 50%, 40% and 10%, respectively.

Under the income approach, we assumed a forecasted cash flow period of five years with discount rates ranging from 10.0% to 12.0% and a terminal growth rate of 3.0%. Under the guideline public company method, we used an adjusted multiple ranging from 9.0 to 17.5 of projected earnings before interest, taxes, depreciation and amortization (EBITDA) based on the market information of comparable companies. Additionally, we compared the estimated aggregate fair value of our reporting units to our overall market capitalization. For all reporting units, the excess of the estimated fair value over carrying value (expressed as a percentage of carrying value) exceeded 200%. A significant increase in the discount rate, decrease in the long-term growth rate, or substantial reductions in our end markets and volume assumptions could have a negative impact on the estimated fair value of these reporting units

#### *Other Indefinite-lived intangible assets*

Other intangible assets with indefinite useful lives are tested for impairment on an annual basis. The fair value of intangible assets with indefinite useful lives is determined on a relief from royalty methodology (income approach) which is based on the implied royalty paid, at an appropriate discount rate, to license the use of an asset rather than owning the asset. The present value of the after-tax cost savings (i.e., royalty relief) indicates the estimated fair value of the asset. Any excess of the carrying value over the estimated fair value would be recognized as an impairment loss equal to that excess.

In testing our other indefinite-lived intangible assets for impairment, we assumed forecasted revenues for a period of five years with discount rates ranging from 10.0% to 14.0%, terminal growth rates of 3.0%, and royalty rates ranging from 0.5% to 4.5%. For all indefinite-lived intangible assets, the excess of the estimated fair value over carrying value (expressed as a percentage of carrying value) exceeded 25%. A significant increase in the discount rate, decrease in the long-term growth rate, decrease in the royalty rate or substantial reductions in our end markets and volume assumptions could have a negative impact on the estimated fair values of any of our tradenames.

- Business combinations - Acquisitions that meet the definition of a business combination are recorded using the acquisition method of accounting. We include the operating results of acquired entities from their respective dates of acquisition. We recognize and measure the identifiable assets acquired, liabilities assumed, including contingent consideration relating to potential earnout provisions, and any non-controlling interest as of the acquisition date fair value. The valuation of intangible assets is determined using an income approach methodology. We use assumptions to value the intangible assets including projected future revenues, customer attrition rates, royalty rates, tax rates and discount rates. The excess, if any, of total consideration transferred in a business combination over the fair value of identifiable assets acquired, liabilities assumed, and any non-controlling interest is recognized as goodwill. Costs incurred as a result of a business combination other than costs related to the issuance of debt or equity securities are recorded in the period the costs are incurred.

#### *Contingent consideration*

We assess any contingent consideration included in the consideration paid of a business combination. The value recorded is based on estimates of future financial projections on revenue under various potential scenarios, in which a Monte Carlo simulation model runs many iterations based on comparable companies' revenue growth rates and their implied revenue volatilities. These cash flow projections are discounted with a risk adjusted rate. Each quarter until such contingent amounts are earned, the fair value of the liability is remeasured at each reporting period and adjusted as a component of operating expenses based on changes to the underlying assumptions. The estimates used to determine the fair value of the contingent consideration liability are subject to significant judgment, specifically revenue growth rates, implied revenue volatilities and discount rates.

- Asbestos matters – Prior to the Petition Date, certain of our wholly-owned subsidiaries and former companies were named as defendants in asbestos-related lawsuits in state and federal courts. We recorded a liability for our actual and anticipated future claims as well as an asset for anticipated insurance settlements. We performed a detailed analysis and projected an estimated range of the total liability for pending and unasserted future asbestos-related claims. We recorded the liability at the low end of the range as we believed that no amount within the range is a better estimate than any other amount. Our key assumptions underlying the estimated asbestos-related liabilities included the number of people occupationally exposed and likely to develop asbestos-related diseases such as mesothelioma and lung cancer, the number of people likely to file an asbestos-related personal injury claim against us, the average settlement and resolution of each claim and the percentage of claims resolved with no payment. Asbestos-related defense costs were excluded from the asbestos claims liability and were recorded separately as services were incurred. None of our existing or previously-owned businesses were a producer or manufacturer of asbestos. We recorded certain income and expenses associated with our asbestos liabilities and corresponding insurance recoveries within *Discontinued operations, net of tax*, as they related to previously divested businesses, except for amounts associated with asbestos liabilities and corresponding insurance recoveries of Murray and its predecessors, which were recorded within continuing operations.

- Revenue recognition – Revenue is recognized when control of a good or service promised in a contract (i.e., performance obligation) is transferred to a customer. Control is obtained when a customer has the ability to direct the use of and obtain substantially all of the remaining benefits from that good or service. A majority of our revenues are recognized at a point-in-time as control is transferred at a distinct point in time per the terms of a contract. However, a portion of our revenues are recognized over time as the customer simultaneously receives control as we perform work under a contract. For these arrangements, the cost-to-cost input method is used as it best depicts the transfer of control to the customer that occurs as we incur costs.

The transaction price allocated to performance obligations reflects our expectations about the consideration we will be entitled to receive from a customer. To determine the transaction price, variable and non-cash consideration are assessed as well as whether a significant financing component exists. We include variable consideration in the estimated transaction price when it is probable that significant reversal of revenue recognized would not occur when the uncertainty associated with variable consideration is subsequently resolved. We consider historical data in determining our best estimates of variable consideration, and the related accruals are recorded using the expected value method.

We enter into sales arrangements that contain multiple goods and services. For these arrangements, each good or service is evaluated to determine whether it represents a distinct performance obligation and whether the sales price for each obligation is representative of standalone selling price. If available, we utilize observable prices for goods or services sold separately to similar customers in similar circumstances to evaluate relative standalone selling price. List prices are used if they are determined to be representative of standalone selling prices. Where necessary, we ensure that the total transaction price is then allocated to the distinct performance obligations based on the determination of their relative standalone selling price at the inception of the arrangement.

We recognize revenue for delivered goods or services when the delivered good or service is distinct, control of the good or service has transferred to the customer, and only customary refund or return rights related to the goods or services exist. For extended warranties and long-term service agreements, revenue for these distinct performance obligations are recognized over time on a straight-line basis over the respective contract term.

- Income taxes – Deferred tax assets and liabilities are determined based on temporary differences between financial reporting and tax bases of assets and liabilities, applying enacted tax rates expected to be in effect for the year in which the differences are expected to reverse. We recognize future tax benefits, such as net operating losses and tax credits, to the extent that realizing these benefits is considered in our judgment to be more likely than not. We regularly review the recoverability of our deferred tax assets considering our historic profitability, projected future taxable income, timing of the reversals of existing temporary differences and the feasibility of our tax planning strategies. Where appropriate, we record a valuation allowance with respect to a future tax benefit.

The provision for income taxes involves a significant amount of management judgment regarding interpretation of relevant facts and laws in the jurisdictions in which we operate. Future changes in applicable laws, projected levels of taxable income, and tax planning could change the effective tax rate and tax balances recorded by us. In addition, tax authorities periodically review income tax returns filed by us and can raise issues regarding our filing positions, timing and amount of income or deductions, and the allocation of income among the jurisdictions in which we operate. A significant period of time may elapse between the filing of an income tax return and the ultimate resolution of an issue raised by a revenue authority with respect to that return. We believe that we have adequately provided for any reasonably foreseeable resolution of these matters. We will adjust our estimate if significant events so dictate. To the extent that the ultimate results differ from our original or adjusted estimates, the effect will be recorded in the provision for income taxes in the period that the matter is finally resolved.

- Employee benefit plans – We provide a range of benefits to eligible employees and retirees, including pensions, postretirement and postemployment benefits. Determining the cost associated with such benefits is dependent on various actuarial assumptions including discount rates, expected return on plan assets, compensation increases, mortality, turnover rates and healthcare cost trend rates. Actuarial valuations are performed to determine expense in accordance with GAAP. Actual results may differ from the actuarial assumptions and are generally accumulated and amortized into earnings over future periods. We review our actuarial assumptions at each measurement date and make modifications to the assumptions based on current rates and trends, if appropriate. The discount rate, the rate of compensation increase and the expected long-term rates of return on plan assets are determined as of each measurement date. We believe that the assumptions utilized in recording our obligations under our plans are reasonable based on input from our actuaries, outside investment advisors and information as to assumptions used by plan sponsors.

Changes in any of the assumptions can have an impact on the net periodic pension cost or postretirement benefit cost. Estimated sensitivities to the expected 2023 net periodic pension cost of a 0.25% rate decline in the two basic assumptions are as follows: the decline in the discount rate would increase expense by \$0.4 million and the decline in the estimated return on assets would increase expense by \$4.9 million. A 0.25% rate decrease in the discount rate for postretirement benefits would increase expected 2023 net periodic postretirement benefit cost by \$0.3 million.

### **Recent Accounting Pronouncements**

See Note 2, "Summary of Significant Accounting Policies" to the Consolidated Financial Statements for a discussion of recent accounting pronouncements.

### **Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK**

We are exposed to fluctuations in currency exchange rates, interest rates and commodity prices which could impact our results of operations and financial condition.

#### **Foreign Currency Exposures**

We have operations throughout the world that manufacture and sell products in various international markets. As a result, we are exposed to movements in exchange rates of various currencies against the U.S. dollar as well as against other currencies throughout the world.

Many of our non-U.S. operations have a functional currency other than the U.S. dollar, and their results are translated into U.S. dollars for reporting purposes. Therefore, our reported results will be higher or lower depending on the weakening or strengthening of the U.S. dollar against the respective foreign currency. Our largest concentration of revenues from non-U.S. operations as of December 31, 2022 are in Euros and Chinese Yuan. A hypothetical 10% unfavorable change in the average exchange rate used to translate *Net revenues* for the year ended December 31, 2022 from either Euros or Chinese Yuan-based operations into U.S. dollars would result in a decline of approximately \$140 million and \$60 million, respectively.

We use derivative instruments to hedge those material exposures that cannot be naturally offset. The instruments utilized are viewed as risk management tools, primarily involve little complexity and are not used for trading or speculative purposes. To minimize the risk of counterparty non-performance, derivative instrument agreements are made only through major financial institutions with significant experience in such derivative instruments.

We evaluate our exposure to changes in currency exchange rates on our foreign currency derivatives using a sensitivity analysis. The sensitivity analysis is a measurement of the potential loss in fair value based on a percentage change in exchange rates. Based on the currency derivative instruments in place at December 31, 2022, a hypothetical change in fair value of those derivative instruments assuming a 10% adverse change in exchange rates would result in an unrealized loss of approximately \$7.5 million, as compared with \$18.1 million at December 31, 2021. These amounts, when realized, would be offset by changes in the fair value of the underlying transactions.

#### **Commodity Price Exposures**

We are exposed to volatility in the prices of commodities used in some of our products and we use commodity hedge contracts in the financial derivatives market and fixed price purchase contracts to manage this exposure. Commodity risks are systematically managed pursuant to policy guidelines. As a cash flow hedge, gains and losses resulting from the hedging instruments mitigate a portion of our exposures to changes in commodity prices. The maturities of the commodity hedge contracts coincide with the expected purchase of the commodities. Based on the commodity derivative instruments in place at December 31, 2022, a hypothetical change in fair value of those derivative instruments assuming a 10% decrease in commodity prices would result in an unrealized loss of approximately \$9.0 million, as compared with \$7.5 million at December 31, 2021. These amounts, when realized, would be offset by changes in the fair value of the underlying commodity purchases.

#### **Interest Rate Exposure**

Our debt portfolio mainly consists of fixed-rate instruments, and therefore any fluctuation in market interest rates is not expected to have a material effect on our results of operations.

**Item 8. FINANCIAL STATEMENTS**

- (a) The following Consolidated Financial Statements and the report thereon of PricewaterhouseCoopers LLP dated February 10, 2023, are presented in this Annual Report on Form 10-K beginning on page F-1.

Consolidated Financial Statements:

Report of Independent Registered Public Accounting Firm  
Consolidated Statements of Earnings for the years ended December 31, 2022, 2021 and 2020  
Consolidated Statements of Comprehensive Income for the years ended December 31, 2022, 2021 and 2020  
Consolidated Balance Sheets at December 31, 2022 and 2021  
Consolidated Statements of Equity for the years ended December 31, 2022, 2021 and 2020  
Consolidated Statements of Cash Flows for the years ended December 31, 2022, 2021 and 2020  
Notes to Consolidated Financial Statements

**Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

None.

**Item 9A. CONTROLS AND PROCEDURES**

**(a) *Evaluation of Disclosure Controls and Procedures***

The Company's management, including its Chief Executive Officer and Chief Financial Officer, have conducted an evaluation of the effectiveness of the Company's disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act)), as of the end of the period covered by this Annual Report on Form 10-K. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded as of December 31, 2022, that the Company's disclosure controls and procedures were effective in ensuring that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act has been recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, and that such information has been accumulated and communicated to the Company's management including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

**(b) *Management's Report on Internal Control Over Financial Reporting***

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting as such term is defined under Exchange Act Rules 13a-15(f) and 15d-15(f). Internal control over financial reporting is a process designed by, or under the supervision of, the Chief Executive Officer and Chief Financial Officer and effected by the Company's Board of Directors to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies and procedures may deteriorate.

Management has assessed the effectiveness of internal control over financial reporting as of December 31, 2022. In making its assessment, management has utilized the criteria set forth by the Committee of Sponsoring Organizations (COSO) of the Treadway Commission in Internal Control - Integrated Framework (2013). Management concluded that based on its assessment, the Company's internal control over financial reporting was effective as of December 31, 2022.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2022 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

**(c) *Changes in Internal Control Over Financial Reporting***

There were no changes in internal control over financial reporting (as defined by Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarter ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

**Item 9B. OTHER INFORMATION**

None.

**Item 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS**

Not Applicable.

### PART III

**Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

The information regarding our executive officers is included in Part I under the caption “Executive Officers of Registrant.”

The other information required by this item is incorporated herein by reference to the information contained under the headings “Item 1. Election of Directors”, “Delinquent Section 16(a) Reports” and “Corporate Governance” in our definitive proxy statement for the 2023 annual general meeting of shareholders (2023 Proxy Statement).

**Item 11. EXECUTIVE COMPENSATION**

The other information required by this item is incorporated herein by reference to the information contained under the headings “Compensation Discussion and Analysis,” “Compensation of Directors,” “Executive Compensation,” “Human Resources and Compensation Committee Report” and “Human Resources and Compensation Committee Interlocks and Insider Participation” in our 2023 Proxy Statement.

**Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

The other information required by this item is incorporated herein by reference to the information contained under the headings “Security Ownership of Certain Beneficial Owners and Management” and “Equity Compensation Plan Information” in our 2023 Proxy Statement.

**Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

The other information required by this item is incorporated herein by reference to the information contained under the headings “Corporate Governance” and “Certain Relationships and Related Person Transactions” in our 2023 Proxy Statement.

**Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

The information required by this item is incorporated herein by reference to the information contained under the caption “Fees of the Independent Auditors” in our 2023 Proxy Statement.

**PART IV**

**Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES**

- (a) 1. Financial Statements  
See Item 8.
- 2. Financial Statement Schedules  
Schedules have been omitted because the required information is not applicable or because the required information is included elsewhere in this Annual Report on Form 10-K.
- 3. Exhibits  
The exhibits listed on the accompanying index to exhibits are filed as part of this Annual Report on Form 10-K.

**TRANE TECHNOLOGIES PLC**  
**INDEX TO EXHIBITS**  
**(Item 15(a))**

**Description**

Pursuant to the rules and regulations of the Securities and Exchange Commission (“SEC”), Trane Technologies plc (the “Company”) has filed certain agreements as exhibits to this Annual Report on Form 10-K. These agreements may contain representations and warranties by the parties. These representations and warranties have been made solely for the benefit of the other party or parties to such agreements and (i) may have been qualified by disclosures made to such other party or parties, (ii) were made only as of the date of such agreements or such other date(s) as may be specified in such agreements and are subject to more recent developments, which may not be fully reflected in our public disclosure, (iii) may reflect the allocation of risk among the parties to such agreements and (iv) may apply materiality standards different from what may be viewed as material to investors. Accordingly, these representations and warranties may not describe our actual state of affairs at the date hereof and should not be relied upon.

On July 1, 2009, Ingersoll-Rand Company Limited, a Bermuda company, completed a reorganization to change the jurisdiction of incorporation of the parent company from Bermuda to Ireland. As a result, Ingersoll-Rand plc replaced Ingersoll-Rand Company Limited as the ultimate parent company effective July 1, 2009. All references related to the Company prior to July 1, 2009 relate to Ingersoll-Rand Company Limited. On March 2, 2020, Ingersoll-Rand plc changed its name to Trane Technologies plc.

(a) Exhibits

<u>Exhibit No.</u>	<u>Description</u>	<u>Method of Filing</u>
2.1	<a href="#">Agreement and Plan of Merger, dated as of April 30, 2019, by and among the Company, Gardner Denver Holdings, Inc., Ingersoll-Rand U.S. HoldCo, Inc. and Charm Merger Sub Inc.</a>	Incorporated by reference to Exhibit 2.1 to the Company’s Form 8-K (File No. 001-34400) filed with the SEC on May 6, 2019.
2.2	<a href="#">Separation and Distribution Agreement, dated as of April 30, 2019, by and between Ingersoll-Rand plc and Ingersoll-Rand U.S. HoldCo, Inc.</a>	Incorporated by reference to Exhibit 2.2 to the Company’s Form 8-K (File No. 001-34400) filed with the SEC on May 6, 2019.
3.1	<a href="#">Constitution of the Company, as amended and restated on June 2, 2016</a>	Incorporated by reference to Exhibit 3.1 to the Company’s Form 8-K (File No. 001-34400) filed with the SEC on June 7, 2016.
3.2	<a href="#">Amendment to the Constitution of the Company dated March 2, 2020</a>	Incorporated by reference to Exhibit 3.2 to the Company’s 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
	The Company and its subsidiaries are parties to several long-term debt instruments under which, in each case, the total amount of securities authorized does not exceed 10% of the total assets of the Company and its subsidiaries on a consolidated basis.	Pursuant to paragraph 4 (iii)(A) of Item 601 (b) of Regulation S-K, the Company agrees to furnish a copy of such instruments to the Securities and Exchange Commission upon request.
4.1	<a href="#">Indenture, dated as of June 20, 2013, by and among Ingersoll-Rand Global Holding Company Limited, as issuer, Ingersoll-Rand plc, Ingersoll-Rand Company Limited and Ingersoll-Rand International Holding Limited, as guarantors and The Bank of New York Mellon, as Trustee.</a>	Incorporated by reference to Exhibit 4.1 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on June 26, 2013.
4.2	<a href="#">First Supplemental Indenture, dated as of June 20, 2013, by and among Ingersoll-Rand Global Holding Company Limited, as issuer, Ingersoll-Rand plc, Ingersoll-Rand Company Limited and Ingersoll-Rand International Holding Limited, as guarantors and The Bank of New York Mellon, as Trustee, relating to the 2.875% Senior Notes due 2019.</a>	Incorporated by reference to Exhibit 4.2 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on June 26, 2013.



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<u>Exhibit No.</u>	<u>Description</u>	<u>Method of Filing</u>
4.3	<a href="#"><u>Second Supplemental Indenture, dated as of June 20, 2013, by and among Ingersoll-Rand Global Holding Company Limited, as issuer, Ingersoll-Rand plc, Ingersoll-Rand Company Limited and Ingersoll-Rand International Holding Limited, as guarantors and The Bank of New York Mellon, as Trustee, relating to the 4.250% Senior Notes due 2023.</u></a>	Incorporated by reference to Exhibit 4.3 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on June 26, 2013.
4.4	<a href="#"><u>Third Supplemental Indenture, dated as of June 20, 2013, by and among Ingersoll-Rand Global Holding Company Limited, as issuer, Ingersoll-Rand plc, Ingersoll-Rand Company Limited and Ingersoll-Rand International Holding Limited, as guarantors and The Bank of New York Mellon, as Trustee, relating to the 5.750% Senior Notes due 2043.</u></a>	Incorporated by reference to Exhibit 4.4 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on June 26, 2013.
4.5	<a href="#"><u>Fourth Supplemental Indenture, dated as of November 20, 2013, among Ingersoll-Rand Global Holding Company Limited, a Bermuda company, Ingersoll-Rand Company Limited, a Bermuda company, Ingersoll-Rand International Holding Limited, a Bermuda company, Ingersoll-Rand plc, an Irish public limited company, Ingersoll-Rand Company, a New Jersey corporation, and The Bank of New York Mellon, as Trustee, to the Indenture dated as of June 20, 2013.</u></a>	Incorporated by reference to Exhibit 4.1 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on November 26, 2013.
4.6	<a href="#"><u>Fifth Supplemental Indenture, dated as of October 28, 2014, by and among Ingersoll-Rand Global Holding Company Limited, as issuer, Ingersoll-Rand Company, as co-obligor, Ingersoll-Rand plc, Ingersoll-Rand Company Limited, Ingersoll-Rand International Holding Limited, Ingersoll-Rand Luxembourg Finance S.A., as guarantors, and The Bank of New York Mellon, as Trustee, to an Indenture, dated as of June 20, 2013.</u></a>	Incorporated by reference to Exhibit 4.5 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on October 29, 2014.
4.7	<a href="#"><u>Sixth Supplemental Indenture, dated as of December 18, 2015, by and among Ingersoll-Rand Global Holding Company Limited, as issuer, Ingersoll-Rand Company, as co-obligor, Ingersoll-Rand plc, Ingersoll-Rand International Holding Limited, Ingersoll-Rand Luxembourg Finance S.A., and Ingersoll-Rand Lux International Holding Company S.à.r.l. as guarantors, and The Bank of New York Mellon, as Trustee, to an Indenture, dated as of June 20, 2013.</u></a>	Incorporated by reference to Exhibit 4.21 to the Company's Form 10-K for the fiscal year ended 2015 (File No. 001-34400) filed with the SEC on February 12, 2016.
4.8	<a href="#"><u>Seventh Supplemental Indenture, dated as of April 5, 2016, by and among Ingersoll-Rand Global Holding company Limited, as issuer, Ingersoll-Rand Company, as co-obligor, Ingersoll-Rand plc, Ingersoll-Rand International Holding Limited, Ingersoll-Rand Luxembourg Finance S.A., Ingersoll-Rand Lux International Holding Company S.à.r.l., and Ingersoll-Rand Irish Holdings Unlimited Company, as guarantors, and The Bank of New York Mellon, as Trustee, to an indenture, dated as of June 20, 2013.</u></a>	Incorporated by reference to Exhibit 4.19 to the Company's Form 10-K for the fiscal year ended 2016 (File No. 001-34400) filed with the SEC on February 13, 2017.

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<u>Exhibit No.</u>	<u>Description</u>	<u>Method of Filing</u>
4.9	<a href="#"><u>Eighth Supplemental Indenture, dated as of May 1, 2020, by and among Ingersoll-Rand Global Holding Company Limited, Ingersoll-Rand Company, Trane Technologies plc, Trane Technologies Luxembourg Finance S.A., Trane Technologies Lux International Holding Company S.à.r.l., Trane Technologies Irish Holdings Unlimited Company, Trane Technologies HoldCo Inc., and The Bank of New York Mellon, as Trustee, to an indenture dated as of June 20, 2013.</u></a>	Incorporated by reference to Exhibit 4.9 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
4.10	<a href="#"><u>Ninth Supplemental Indenture, dated as of May 1, 2020, by and among Ingersoll-Rand Global Holding Company Limited, Ingersoll-Rand Company, Trane Technologies plc, Trane Technologies Luxembourg Finance S.A., Trane Technologies Lux International Holding Company S.à.r.l., Trane Technologies Irish Holdings Unlimited Company, Trane Technologies HoldCo Inc., and The Bank of New York Mellon, as Trustee, to an indenture dated as of June 20, 2013.</u></a>	Incorporated by reference to Exhibit 4.10 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
4.11	<a href="#"><u>Tenth Supplemental Indenture, dated as of May 1, 2020, by and among Trane Technologies HoldCo Inc., Ingersoll-Rand Global Holding Company Limited, Ingersoll-Rand Company, Trane Technologies plc, Trane Technologies Luxembourg Finance S.A., Trane Technologies Lux International Holding Company S.à.r.l., Trane Technologies Irish Holdings Unlimited Company, Trane Technologies Company LLC, and The Bank of New York Mellon, as Trustee, to an indenture dated as of June 20, 2013.</u></a>	Incorporated by reference to Exhibit 4.11 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
4.12	<a href="#"><u>Eleventh Supplemental Indenture, dated as of May 1, 2020, by and among Trane Technologies HoldCo Inc., Ingersoll-Rand Global Holding Company Limited, Ingersoll-Rand Company, Trane Technologies plc, Trane Technologies Luxembourg Finance S.A., Trane Technologies Lux International Holding Company S.à.r.l., Trane Technologies Irish Holdings Unlimited Company, Trane Technologies Company LLC, and The Bank of New York Mellon, as Trustee, to an indenture dated as of June 20, 2013.</u></a>	Incorporated by reference to Exhibit 4.12 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
4.13	<a href="#"><u>Twelfth Supplemental Indenture, dated as of April 30, 2021, by and among Trane Technologies HoldCo Inc., Trane Technologies Company LLC, Trane Technologies Global Holding Company Limited, Trane Technologies plc, Trane Technologies Lux International Holding Company S.à.r.l., Trane Technologies Irish Holdings Unlimited Company and Trane Technologies Financing Limited and The Bank of New York Mellon, as Trustee.</u></a>	Incorporated by reference to Exhibit 4.13 to the Company's 2021 Form 10-K (File No. 001-34400) filed with the SEC on February 7, 2022.
4.14	<a href="#"><u>Indenture, dated as of October 28, 2014, by and among Ingersoll-Rand Luxembourg Finance S.A., as issuer, and Ingersoll-Rand plc, Ingersoll-Rand Company Limited, Ingersoll-Rand International Holding Limited, Ingersoll-Rand Company and Ingersoll-Rand Global Holding Company Limited, as guarantors, and The Bank of New York Mellon, as Trustee.</u></a>	Incorporated by reference to Exhibit 4.1 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on October 29, 2014

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<u>Exhibit No.</u>	<u>Description</u>	<u>Method of Filing</u>
4.15	<a href="#">First Supplemental Indenture, dated as of October 28, 2014, by and among Ingersoll-Rand Luxembourg Finance S.A., as issuer, and Ingersoll-Rand plc, Ingersoll-Rand Company Limited, Ingersoll-Rand International Holding Limited, Ingersoll-Rand Company and Ingersoll-Rand Global Holding Company Limited, as guarantors, and The Bank of New York Mellon, as Trustee, relating to the 2.625% Senior Notes due 2020.</a>	Incorporated by reference to Exhibit 4.2 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on October 29, 2014.
4.16	<a href="#">Second Supplemental Indenture, dated as of October 28, 2014, by and among Ingersoll-Rand Luxembourg Finance S.A., as issuer, and Ingersoll-Rand plc, Ingersoll-Rand Company Limited, Ingersoll-Rand International Holding Limited, Ingersoll-Rand Company and Ingersoll-Rand Global Holding Company Limited, as guarantors, and The Bank of New York Mellon, as Trustee, relating to the 3.550% Senior Notes due 2024.</a>	Incorporated by reference to Exhibit 4.3 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on October 29, 2014.
4.17	<a href="#">Third Supplemental Indenture, dated as of October 28, 2014, by and among Ingersoll-Rand Luxembourg Finance S.A., as issuer, and Ingersoll-Rand plc, Ingersoll-Rand Company Limited, Ingersoll-Rand International Holding Limited, Ingersoll-Rand Company and Ingersoll-Rand Global Holding Company Limited, as guarantors, and The Bank of New York Mellon, as Trustee, relating to the 4.650% Senior Notes due 2044.</a>	Incorporated by reference to Exhibit 4.4 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on October 29, 2014.
4.18	<a href="#">Fourth Supplemental Indenture, dated as of December 18, 2015, by and among Ingersoll-Rand Luxembourg Finance S.A., as issuer, and Ingersoll-Rand plc, Ingersoll-Rand International Holding Limited, Ingersoll-Rand Company, Ingersoll-Rand Global Holding Company Limited, and Ingersoll-Rand Lux International Holding Company S.à.r.l. as guarantors, and The Bank of New York Mellon, as Trustee.</a>	Incorporated by reference to Exhibit 4.27 to the Company's Form 10-K for the fiscal year ended 2015 (File No. 001-34400) filed with the SEC on February 12, 2016.
4.19	<a href="#">Fifth Supplemental Indenture, dated as of April 5, 2016, by and among Ingersoll-Rand Luxembourg Finance S.A., as Issuer, and Ingersoll-Rand plc, Ingersoll-Rand Company Limited, Ingersoll-Rand Company, Ingersoll-Rand International Holding Limited, Ingersoll-Rand Lux International Holding Company S.à.r.l., Ingersoll-Rand Irish Holdings Unlimited Company, as guarantors, and The Bank of New York Mellon, as Trustee.</a>	Incorporated by reference to Exhibit 4.25 to the Company's Form 10-K for the fiscal year ended 2016 (File No. 001-34400) filed with the SEC on February 13, 2017.
4.20	<a href="#">Sixth Supplemental Indenture, dated as of May 1, 2020, by and among Trane Technologies Luxembourg Finance S.A., Trane Technologies plc, Ingersoll-Rand Global Holding Company Limited, Ingersoll-Rand Company, Trane Technologies Irish Holdings Unlimited Company, Trane Technologies HoldCo Inc., and the Bank of New York Mellon, as Trustee.</a>	Incorporated by reference to Exhibit 4.19 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
4.21	<a href="#">Seventh Supplemental Indenture, dated as of May 1, 2020, by and among Trane Technologies Luxembourg Finance S.A., Trane Technologies plc, Ingersoll-Rand Global Holding Company Limited, Trane Technologies Irish Holdings Unlimited Company, Trane Technologies HoldCo Inc., Trane Technologies Company LLC, and the Bank of New York Mellon, as Trustee.</a>	Incorporated by reference to Exhibit 4.20 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.

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<u>Exhibit No.</u>	<u>Description</u>	<u>Method of Filing</u>
4.22	<a href="#">Eighth Supplemental Indenture, dated as of May 1, 2020, by and among Trane Technologies Luxembourg Finance S.A., Trane Technologies plc, Ingersoll-Rand Global Holding Company Limited, Trane Technologies Lux International Holding Company S.à.r.l., Trane Technologies Irish Holdings Unlimited Company, Trane Technologies HoldCo Inc., Trane Technologies Company LLC, and the Bank of New York Mellon, as Trustee.</a>	Incorporated by reference to Exhibit 4.21 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
4.23	<a href="#">Ninth Supplemental Indenture, dated as of May 1, 2020, by and among Trane Technologies Luxembourg Finance S.A., Trane Technologies plc, Ingersoll-Rand Global Holding Company Limited, Trane Technologies Lux International Holding Company S.à.r.l., Trane Technologies Irish Holdings Unlimited Company, Trane Technologies HoldCo Inc., Trane Technologies Company LLC, and the Bank of New York Mellon, as Trustee.</a>	Incorporated by reference to Exhibit 4.22 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
4.24	<a href="#">Tenth Supplemental Indenture dated as of April 30, 2021, by and among Trane Technologies Financing Limited, Trane Technologies Global Holding Company Limited, Trane Technologies plc, Trane Technologies Lux International Holding Company S.à.r.l., Trane Technologies Irish Holdings Unlimited Company, Trane Technologies HoldCo Inc., and Trane Technologies Company LLC and The Bank of New York Mellon, as Trustee.</a>	Incorporated by reference to Exhibit 4.24 to the Company's 2021 Form 10-K (File No. 001-34400) filed with the SEC on February 7, 2022.
4.25	<a href="#">Indenture, dated as of February 21, 2018, by and among Ingersoll-Rand Global Holding Company Limited, as issuer, Ingersoll-Rand plc, Ingersoll-Rand Luxembourg Finance S.A., Ingersoll-Rand Lux International Holding Company S.à.r.l., Ingersoll-Rand Irish Holdings Unlimited Company and Ingersoll-Rand Company, as guarantors, and Wells Fargo Bank, National Association, as Trustee.</a>	Incorporated by reference to Exhibit 4.1 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on February 26, 2018.
4.26	<a href="#">First Supplemental Indenture, dated as of February 21, 2018, by and among Ingersoll-Rand Global Holding Company Limited, as issuer, Ingersoll-Rand plc, Ingersoll-Rand Luxembourg Finance S.A., Ingersoll-Rand Lux International Holding Company S.à.r.l., Ingersoll-Rand Irish Holdings Unlimited Company and Ingersoll-Rand Company, as guarantors, and Wells Fargo Bank, National Association, as Trustee, relating to the 2.900% Senior Notes due 2021.</a>	Incorporated by reference to Exhibit 4.2 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on February 26, 2018.
4.27	<a href="#">Second Supplemental Indenture, dated as of February 21, 2018, by and among Ingersoll-Rand Global Holding Company Limited, as issuer, Ingersoll-Rand plc, Ingersoll-Rand Luxembourg Finance S.A., Ingersoll-Rand Lux International Holding Company S.à.r.l., Ingersoll-Rand Irish Holdings Unlimited Company and Ingersoll-Rand Company, as guarantors, and Wells Fargo Bank, National Association, as Trustee, relating to the 3.750% Senior Notes due 2028.</a>	Incorporated by reference to Exhibit 4.4 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on February 26, 2018.

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<u>Exhibit No.</u>	<u>Description</u>	<u>Method of Filing</u>
4.28	<a href="#"><u>Third Supplemental Indenture, dated as of February 21, 2018, by and among Ingersoll-Rand Global Holding Company Limited, as issuer, Ingersoll-Rand plc, Ingersoll-Rand Luxembourg Finance S.A., Ingersoll-Rand Lux International Holding Company S.à r.l., Ingersoll-Rand Irish Holdings Unlimited Company and Ingersoll-Rand Company, as guarantors, and Wells Fargo Bank, National Association, as Trustee, relating to the 4.300% Senior Notes due 2048.</u></a>	Incorporated by reference to Exhibit 4.6 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on February 26, 2018.
4.29	<a href="#"><u>Fourth Supplemental Indenture, dated as of March 21, 2019, by and among Ingersoll-Rand Global Holding Company Limited, as issuer, Ingersoll-Rand plc, Ingersoll-Rand Luxembourg Finance S.A., Ingersoll-Rand Lux International Holding Company S.à r.l., Ingersoll-Rand Irish Holdings Unlimited Company and Ingersoll-Rand Company, as guarantors, and Wells Fargo Bank, National Association, as Trustee, relating to the 3.500% Senior Notes due 2026.</u></a>	Incorporated by reference to Exhibit 4.1 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on March 26, 2019.
4.30	<a href="#"><u>Fifth Supplemental Indenture, dated as of March 21, 2019, by and among Ingersoll-Rand Global Holding Company Limited, as issuer, Ingersoll-Rand plc, Ingersoll-Rand Luxembourg Finance S.A., Ingersoll-Rand Lux International Holding Company S.à r.l., Ingersoll-Rand Irish Holdings Unlimited Company and Ingersoll-Rand Company, as guarantors, and Wells Fargo Bank, National Association, as Trustee, relating to the 3.800% Senior Notes due 2029.</u></a>	Incorporated by reference to Exhibit 4.3 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on March 26, 2019.
4.31	<a href="#"><u>Sixth Supplemental Indenture, dated as of March 21, 2019, by and among Ingersoll-Rand Global Holding Company Limited, as issuer, Ingersoll-Rand plc, Ingersoll-Rand Luxembourg Finance S.A., Ingersoll-Rand Lux International Holding Company S.à r.l., Ingersoll-Rand Irish Holdings Unlimited Company and Ingersoll-Rand Company, as guarantors, and Wells Fargo Bank, National Association, as Trustee, relating to the 4.500% Senior Notes due 2049.</u></a>	Incorporated by reference to Exhibit 4.5 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on March 26, 2019.
4.32	<a href="#"><u>Seventh Supplemental Indenture, dated as of May 1, 2020, by and among Ingersoll-Rand Global Holding Company Limited, Trane Technologies Luxembourg Finance S.A., Trane Technologies plc, Ingersoll-Rand Company, Trane Technologies Lux International Holding Company S.à r.l., Trane Technologies Irish Holdings Unlimited Company, Trane Technologies HoldCo Inc. and Wells Fargo Bank, National Association, as Trustee.</u></a>	Incorporated by reference to Exhibit 4.30 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
4.33	<a href="#"><u>Eighth Supplemental Indenture, dated as of May 1, 2020, by and among Ingersoll-Rand Global Holding Company Limited, Trane Technologies Luxembourg Finance S.A., Trane Technologies plc, Trane Technologies Lux International Holding Company S.à r.l., Trane Technologies Irish Holdings Unlimited Company, Trane Technologies HoldCo Inc., Trane Technologies Company LLC and Wells Fargo Bank, National Association, as Trustee.</u></a>	Incorporated by reference to Exhibit 4.31 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.

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<u>Exhibit No.</u>	<u>Description</u>	<u>Method of Filing</u>
4.34	<a href="#">Ninth Supplemental Indenture, dated as of May 1, 2020, by and among Ingersoll-Rand Global Holding Company Limited, Trane Technologies Luxembourg Finance S.A., Trane Technologies plc, Trane Technologies Lux International Holding Company S.à r.l., Trane Technologies Irish Holdings Unlimited Company, Trane Technologies HoldCo Inc., Trane Technologies Company LLC and Wells Fargo Bank, National Association, as Trustee.</a>	Incorporated by reference to Exhibit 4.32 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
4.35	<a href="#">Tenth Supplemental Indenture, dated as of May 1, 2020, by and among Ingersoll-Rand Global Holding Company Limited, Trane Technologies Luxembourg Finance S.A., Trane Technologies plc, Trane Technologies Lux International Holding Company S.à r.l., Trane Technologies Irish Holdings Unlimited Company, Trane Technologies HoldCo Inc., Trane Technologies Company LLC and Wells Fargo Bank, National Association, as Trustee.</a>	Incorporated by reference to Exhibit 4.33 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
4.36	<a href="#">Eleventh Supplemental Indenture dated as of April 30, 2021, by and among Trane Technologies Financing Limited, Trane Technologies Global Holding Company Limited, Trane Technologies plc, Trane Technologies Lux International Holding Company S.à r.l., Trane Technologies Irish Holdings Unlimited Company, Trane Technologies HoldCo Inc. and Trane Technologies Company LLC and Wells Fargo Bank, National Association.</a>	Incorporated by reference to Exhibit 4.36 to the Company's 2021 Form 10-K (File No. 001-34400) filed with the SEC on February 7, 2022.
4.37	<a href="#">Description of Registrant's Securities</a>	Filed herewith.
10.1*	<a href="#">Form of Global Stock Option Award Agreement (February 2021).</a>	Incorporated by reference to Exhibit 10.1 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
10.2*	<a href="#">Form of Global Restricted Stock Unit Award Agreement (February 2021).</a>	Incorporated by reference to Exhibit 10.2 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
10.3*	<a href="#">Form of Global Performance Stock Unit Award Agreement (February 2021).</a>	Incorporated by reference to Exhibit 10.3 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
10.4	<a href="#">Credit Agreement dated June 18, 2021 among Trane Technologies Holdco Inc., Trane Technologies Global Holding Company Limited and Trane Technologies Financing Limited, Trane Technologies plc, Trane Technologies Lux International Holding Company S.à r.l., Trane Technologies Irish Holdings Unlimited Company, Trane Technologies Company LLC, JPMorgan Chase Bank, N.A., as Administrative Agent, Citibank, N.A., as Syndication Agent, J.P. Morgan Securities LLC and BNP Paribas, as Sustainability Structuring Agents, Deutsche Bank Securities Inc., Goldman Sachs Bank USA, MUFG Bank, Ltd. and U.S. Bank National Association as Documentation Agents, and JPMorgan Chase Bank, N.A., Citibank, N.A., BofA Securities, Inc., BNP Securities Corp. and Mizuho Bank, Ltd., as joint lead arrangers and joint bookrunners, and certain lending institutions from time to time parties thereto.</a>	Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on June 24, 2021.

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<u>Exhibit No.</u>	<u>Description</u>	<u>Method of Filing</u>
10.5	<a href="#">First Amendment dated as of June 30, 2022, to the Credit Agreement dated as of June 18, 2021, among Trane Technologies Holdco Inc, Trane Technologies Global Holding Company Limited, Trane Technologies Financing Limited and JPMorgan Chase Bank N.A. as Administrative Agent.</a>	Incorporated by reference to Exhibit 10.3 to the Company's Q2 2022 Form 10-Q (File No. 001-34400) filed with the SEC on August 3, 2022.
10.6	<a href="#">Credit Agreement dated April 25, 2022 among Trane Technologies Holdco Inc., Trane Technologies Global Holding Company Limited and Trane Technologies Financing Limited, Trane Technologies plc, Trane Technologies Lux International Holding Company S.à r.l., Trane Technologies Irish Holdings Unlimited Company, Trane Technologies Company LLC, JPMorgan Chase Bank, N.A., as Administrative Agent, Citibank, N.A., as Syndication Agent, J.P. Morgan Securities LLC and BNP Paribas, as Sustainability Structuring Agents, Bank of America, N.A., BNP Paribas, Deutsche Bank Securities Inc., Goldman Sachs Bank USA, MUFG Bank, Ltd. and U.S. Bank, N.A., as Documentation Agents, and JPMorgan Chase Bank, N.A., Citibank, N.A., BofA Securities, Inc., BNP Securities Corp. and Mizuho Bank, Ltd., as joint lead arrangers and joint bookrunners, and certain lending institutions from time to time parties thereto.</a>	Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on April 28, 2022.
10.7	<a href="#">Deed Poll Indemnity of Trane Technologies plc dated August 2, 2022</a>	Incorporated by reference to Exhibit 10.1 to the Company's Q2 2022 Form 10-Q (File No. 001-34400) filed with the SEC on August 3, 2022.
10.8	<a href="#">Deed Poll Indemnity of Trane Technologies Lux International Holding company S.à r.l. dated August 2, 2022</a>	Incorporated by reference to Exhibit 10.2 to the Company's Q2 2022 Form 10-Q (File No. 001-34400) filed with the SEC on August 3, 2022.
10.9*	<a href="#">Trane Technologies Incentive Stock Plan of 2013 (amended and restated as of March 2, 2020).</a>	Incorporated by reference to Exhibit 10.9 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
10.10*	<a href="#">Trane Technologies Incentive Stock Plan of 2018 (amended and restated as of March 2, 2020).</a>	Incorporated by reference to Exhibit 10.10 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
10.11*	<a href="#">Trane Technologies Executive Deferred Compensation Plan (as amended and restated effective May 4, 2020).</a>	Incorporated by reference to Exhibit 10.11 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
10.12*	<a href="#">Trane Technologies Executive Deferred Compensation Plan II (as amended and restated effective May 4, 2020).</a>	Incorporated by reference to Exhibit 10.13 to the Company's 2021 Form 10-K (File No. 001-34400) filed with the SEC on February 7, 2022.
10.13*	<a href="#">Trane Technologies Director Deferred Compensation and Stock Award Plan (as amended and restated effective March 2, 2020).</a>	Incorporated by reference to Exhibit 10.13 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
10.14*	<a href="#">Trane Technologies Director Deferred Compensation and Stock Award Plan II (as amended and restated effective March 2, 2020).</a>	Incorporated by reference to Exhibit 10.14 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
10.15*	<a href="#">Trane Technologies Supplemental Employee Savings Plan (amended and restated effective May 4, 2020).</a>	Incorporated by reference to Exhibit 10.15 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.

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<u>Exhibit No.</u>	<u>Description</u>	<u>Method of Filing</u>
10.16*	<a href="#">Trane Technologies Supplemental Employee Savings Plan II (effective January 1, 2005 and amended and restated through May 4, 2020).</a>	Incorporated by reference to Exhibit 10.16 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
10.17*	<a href="#">Trane Inc. Deferred Compensation Plan (as amended and restated as of May 4, 2020, except where otherwise stated).</a>	Incorporated by reference to Exhibit 10.17 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
10.18*	<a href="#">Trane Technologies Supplemental Pension Plan (Amended and Restated Effective May 4, 2020).</a>	Incorporated by reference to Exhibit 10.18 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
10.19*	<a href="#">Trane Technologies Supplemental Pension Plan II (Amended and Restated Effective May 4, 2020).</a>	Incorporated by reference to Exhibit 10.19 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
10.20*	<a href="#">Trane Technologies Elected Officers Supplemental Plan (Effective January 1, 2005 and Amended and Restated effective May 4, 2020).</a>	Incorporated by reference to Exhibit 10.20 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
10.21*	<a href="#">Trane Technologies Key Management Supplemental Program (Effective January 1, 2005 and Amended and Restated effective May 4, 2020).</a>	Incorporated by reference to Exhibit 10.22 to the Company's 2021 Form 10-K (File No. 001-34400) filed with the SEC on February 7, 2022.
10.22*	<a href="#">Description of Annual Incentive Matrix Program.</a>	Incorporated by reference to Exhibit 10.23 to the Company's 2021 Form 10-K (File No. 001-34400) filed with the SEC on February 7, 2022.
10.23*	<a href="#">Amendment One to the Trane Technologies Key Management Supplemental Program (effective October 11, 2022).</a>	Filed herewith.
10.24*	<a href="#">Trane Inc. Deferred Compensation Plan (as Amended and Restated as of May 4, 2020).</a>	Filed herewith
10.25*	<a href="#">Form of Tier 1 Change in Control Agreement (New Officers on or after May 19, 2009).</a>	Incorporated by reference to Exhibit 10.32 to the Company's Form 10-Q for the period ended June 30, 2009 (File No. 001-34400) filed with the SEC on August 6, 2009.
10.26*	<a href="#">Form of Tier 2 Change in Control Agreement (New Officers on or after May 19, 2009).</a>	Incorporated by reference to Exhibit 10.33 to the Company's Form 10-Q for the period ended June 30, 2009 (File No. 001-34400) filed with the SEC on August 6, 2009.
10.27*	<a href="#">Amended and Restated Major Restructuring Severance Plan (as amended and restated effective May 4, 2020).</a>	Incorporated by reference to Exhibit 10.27 to the Company's 2020 Form 10-K (File No. 001-34400) filed with the SEC on February 9, 2021.
10.28*	<a href="#">David S. Regnery Letter, dated as of September 1, 2017.</a>	Incorporated by reference to Exhibit 10.44 to the Company's Form 10-K for the year ended December 31, 2018 (File No. 001-34400) filed with the SEC on February 12, 2019.
10.29*	<a href="#">David S. Regnery Letter, dated as of December 9, 2019.</a>	Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on December 11, 2019.
10.30*	<a href="#">David S. Regnery Letter, dated as of June 3, 2021.</a>	Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on June 4, 2021.
10.31*	<a href="#">Christopher J. Kuehn Letter, dated as of December 10, 2019.</a>	Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on December 10, 2019.
10.32*	<a href="#">Paul A. Camuti Letter, dated December 5, 2019.</a>	Incorporated by reference to Exhibit 10.42 to the Company's 2021 Form 10-K (File No. 001-34400) filed with the SEC on February 7, 2022.



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<u>Exhibit No.</u>	<u>Description</u>	<u>Method of Filing</u>
10.33*	<a href="#">Mark Majocha Offer Letter dated October 12, 2022</a>	Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K (File No. 001-34400) filed with the SEC on October 14, 2022.
21	<a href="#">List of Subsidiaries of Trane Technologies plc.</a>	Filed herewith.
22.1	<a href="#">List of Guarantors and Subsidiary Issuers of Guaranteed Securities.</a>	Filed herewith.
23.1	<a href="#">Consent of Independent Registered Public Accounting Firm.</a>	Filed herewith.
31.1	<a href="#">Certification of Chief Executive Officer Pursuant to Rule 13a-14(a) or Rule 15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</a>	Filed herewith.
31.2	<a href="#">Certification of Chief Financial Officer Pursuant to Rule 13a-14(a) or Rule 15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</a>	Filed herewith.
32	<a href="#">Certifications of Chief Executive Officer and Chief Financial Officer Pursuant to Rule 13a-14(b) or Rule 15d-14(b) and 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</a>	Furnished herewith.
101	The following materials from the Company's Annual Report on Form 10-K for the year ended December 31, 2022, formatted in iXBRL (Inline Extensible Business Reporting Language): (i) the Consolidated Statements of Earnings, (ii) the Consolidated Statements of Comprehensive Income, (iii) the Consolidated Balance Sheets, (iv) the Consolidated Statements of Equity, (v) the Consolidated Statements of Cash Flows, and (vi) Notes to Consolidated Financial Statements.	Furnished herewith.
104	Cover Page Interactive Data File (embedded within the iXBRL document and contained in Exhibit 101).	Filed herewith.

\* Management contract or compensatory plan or arrangement.

**Item 16. FORM 10-K SUMMARY**

Not applicable.



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Pursuant to the requirement of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
<u>/s/ David S. Regnery</u> (David S. Regnery)	Chair of the Board and Chief Executive Officer (Principal Executive Officer)	February 10, 2023
<u>/s/ Christopher J. Kuehn</u> (Christopher J. Kuehn)	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 10, 2023
<u>/s/ Mark A. Majocha</u> (Mark A. Majocha)	Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 10, 2023
<u>/s/ Kirk E. Arnold</u> (Kirk E. Arnold)	Director	February 10, 2023
<u>/s/ Ann C. Berzin</u> (Ann C. Berzin)	Director	February 10, 2023
<u>/s/ April Miller Boise</u> (April Miller Boise)	Director	February 10, 2023
<u>/s/ John Bruton</u> (John Bruton)	Director	February 10, 2023
<u>/s/ Jared L. Cohon</u> (Jared L. Cohon)	Director	February 10, 2023
<u>/s/ Gary D. Forsee</u> (Gary D. Forsee)	Director	February 10, 2023
<u>/s/ Mark R. George</u> (Mark R. George)	Director	February 10, 2023
<u>/s/ Linda P. Hudson</u> (Linda P. Hudson)	Director	February 10, 2023
<u>/s/ Myles P. Lee</u> (Myles P. Lee)	Director	February 10, 2023
<u>/s/ Melissa N. Schaeffer</u> (Melissa N. Schaeffer)	Director	February 10, 2023
<u>/s/ John P. Surma</u> (John P. Surma)	Director	February 10, 2023
<u>/s/ Tony L. White</u> (Tony L. White)	Director	February 10, 2023

**TRANE TECHNOLOGIES PLC**  
**Index to Consolidated Financial Statements**

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## Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Trane Technologies plc

### ***Opinions on the Financial Statements and Internal Control over Financial Reporting***

We have audited the accompanying consolidated balance sheets of Trane Technologies plc and its subsidiaries (the "Company") as of December 31, 2022 and 2021 and the related consolidated statements of earnings, of comprehensive income, of equity and of cash flows for each of the three years in the period ended December 31, 2022, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

### ***Basis for Opinions***

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

### ***Definition and Limitations of Internal Control over Financial Reporting***

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

***Critical Audit Matters***

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

***Revenue Recognition from Contracts with Customers***

As described in Notes 2 and 12 to the consolidated financial statements, the Company recognized \$16.0 billion of consolidated revenue for the year ended December 31, 2022. Revenue is recognized when control of a good or service promised in a contract (i.e., performance obligation) is transferred to a customer. Control is obtained when a customer has the ability to direct the use of and obtain substantially all of the remaining benefits from that good or service. A majority of the Company's revenue is recognized at a point-in-time as control is transferred at a distinct point in time per the terms of a contract. However, a portion of the Company's revenue is recognized over-time as the customer simultaneously receives control as the Company performs work under a contract. For these arrangements, management uses the cost-to-cost input method as it best depicts the transfer of control to the customer that occurs as the Company incurs costs. The transaction price allocated to performance obligations reflects the Company's expectations about the consideration it will be entitled to receive from a customer. To determine the transaction price, variable and non-cash consideration are assessed as well as whether a significant financing component exists.

The principal considerations for our determination that performing procedures relating to revenue recognition from contracts with customers is a critical audit matter are the high degree of auditor effort in performing procedures and evaluating audit evidence related to the Company's revenue recognition of point-in-time and over-time contracts with customers.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the revenue recognition process on the Company's point-in-time and over-time contracts with customers. These procedures also included, among others (i) evaluating revenue transactions on a sample basis by obtaining and inspecting evidence of an arrangement with a customer, evidence of goods delivered or services provided and evidence of consideration received in exchange for transferring those goods or services, and (ii) evaluating the completeness and accuracy of data provided by management.

/s/ PricewaterhouseCoopers LLP  
Charlotte, North Carolina  
February 10, 2023

We have served as the Company's auditor since at least 1906. We have not been able to determine the specific year we began serving as auditor of the Company.

## Trane Technologies plc

### Consolidated Statements of Earnings

*In millions, except per share amounts*

For the years ended December 31,

	2022	2021	2020
Net revenues			
Products	\$ 10,930.8	\$ 9,498.8	\$ 8,372.5
Services	5,060.9	4,637.6	4,082.2
	<u>15,991.7</u>	<u>14,136.4</u>	<u>12,454.7</u>
Costs and expenses			
Cost of products sold	(7,935.2)	(6,843.1)	(6,146.3)
Cost of services sold	(3,091.7)	(2,823.7)	(2,505.0)
Selling and administrative expenses	(2,545.9)	(2,446.3)	(2,270.6)
Operating income	2,418.9	2,023.3	1,532.8
Interest expense	(223.5)	(233.7)	(248.7)
Other income/(expense), net	(23.3)	1.1	4.1
Earnings before income taxes	2,172.1	1,790.7	1,288.2
Provision for income taxes	(375.9)	(333.5)	(296.8)
Earnings from continuing operations	1,796.2	1,457.2	991.4
Discontinued operations, net of tax	(21.5)	(20.6)	(121.4)
Net earnings	1,774.7	1,436.6	870.0
Less: Net earnings from continuing operations attributable to noncontrolling interests	(18.2)	(13.2)	(14.2)
Less: Net earnings from discontinuing operations attributable to noncontrolling interests	—	—	(0.9)
Net earnings attributable to Trane Technologies plc	<u>\$ 1,756.5</u>	<u>\$ 1,423.4</u>	<u>\$ 854.9</u>
<b>Amounts attributable to Trane Technologies plc ordinary shareholders:</b>			
Continuing operations	\$ 1,778.0	\$ 1,444.0	\$ 977.2
Discontinued operations	(21.5)	(20.6)	(122.3)
Net earnings	<u>\$ 1,756.5</u>	<u>\$ 1,423.4</u>	<u>\$ 854.9</u>
<b>Earnings (loss) per share attributable to Trane Technologies plc ordinary shareholders:</b>			
Basic:			
Continuing operations	\$ 7.65	\$ 6.05	\$ 4.07
Discontinued operations	(0.10)	(0.09)	(0.51)
Net earnings	<u>\$ 7.55</u>	<u>\$ 5.96</u>	<u>\$ 3.56</u>
Diluted:			
Continuing operations	\$ 7.57	\$ 5.96	\$ 4.02
Discontinued operations	(0.09)	(0.09)	(0.50)
Net earnings	<u>\$ 7.48</u>	<u>\$ 5.87</u>	<u>\$ 3.52</u>

*See accompanying notes to Consolidated Financial Statements.*

## Trane Technologies plc

### Consolidated Statements of Comprehensive Income

*In millions*

For the years ended December 31,	2022	2021	2020
Net earnings	\$ 1,774.7	\$ 1,436.6	\$ 870.0
Other comprehensive income (loss):			
Currency translation	(202.7)	(122.7)	261.5
Cash flow hedges			
Unrealized net gains (losses) arising during period	(24.3)	1.6	3.3
Net (gains) losses reclassified into earnings	10.2	(6.4)	1.9
Tax (expense) benefit	2.5	1.1	—
Total cash flow hedges, net of tax	(11.6)	(3.7)	5.2
Pension and OPEB adjustments:			
Prior service costs for the period	(3.3)	0.3	(1.9)
Net actuarial gains (losses) for the period	54.2	111.4	(52.5)
Amortization reclassified into earnings	21.6	38.6	43.4
Net curtailment and settlement (gains) losses reclassified to earnings	15.0	8.0	(1.8)
Currency translation and other	12.7	5.2	(10.4)
Tax (expense) benefit	(16.1)	(43.7)	(0.7)
Total pension and OPEB adjustments, net of tax	84.1	119.8	(23.9)
Other comprehensive income (loss), net of tax	(130.2)	(6.6)	242.8
Comprehensive income, net of tax	\$ 1,644.5	\$ 1,430.0	\$ 1,112.8
Less: Comprehensive income attributable to noncontrolling interests	(16.6)	(12.7)	(17.8)
<b>Comprehensive income attributable to Trane Technologies plc</b>	<b>\$ 1,627.9</b>	<b>\$ 1,417.3</b>	<b>\$ 1,095.0</b>

*See accompanying notes to Consolidated Financial Statements.*



## Trane Technologies plc

### Consolidated Balance Sheets

In millions, except share amounts

December 31,	2022	2021
<b>ASSETS</b>		
<b>Current assets:</b>		
Cash and cash equivalents	\$ 1,220.5	\$ 2,159.2
Accounts and notes receivable, net	2,780.1	2,429.4
Inventories	1,993.8	1,530.8
Other current assets	384.8	351.5
Total current assets	6,379.2	6,470.9
Property, plant and equipment, net	1,536.1	1,398.8
Goodwill	5,503.7	5,504.8
Intangible assets, net	3,264.0	3,305.6
Other noncurrent assets	1,398.6	1,379.7
Total assets	\$ 18,081.6	\$ 18,059.8
<b>LIABILITIES AND EQUITY</b>		
<b>Current liabilities:</b>		
Accounts payable	\$ 2,091.6	\$ 1,787.3
Accrued compensation and benefits	541.2	544.8
Accrued expenses and other current liabilities	2,006.0	2,069.9
Short-term borrowings and current maturities of long-term debt	1,048.0	350.4
Total current liabilities	5,686.8	4,752.4
Long-term debt	3,788.3	4,491.7
Postemployment and other benefit liabilities	667.0	810.9
Deferred and noncurrent income taxes	680.1	581.5
Other noncurrent liabilities	1,154.2	1,150.2
Total liabilities	11,976.4	11,786.7
<b>Equity:</b>		
Trane Technologies plc shareholders' equity		
Ordinary shares, \$1.00 par value (253,328,263 and 259,695,768 shares issued at December 31, 2022 and 2021, respectively)	253.3	259.7
Ordinary shares held in treasury, at cost (24,500,868 and 24,500,935 shares at December 31, 2022 and 2021, respectively)	(1,719.4)	(1,719.4)
Retained earnings	8,320.9	8,353.2
Accumulated other comprehensive income (loss)	(766.2)	(637.6)
Total Trane Technologies plc shareholders' equity	6,088.6	6,255.9
Noncontrolling interest	16.6	17.2
Total equity	6,105.2	6,273.1
Total liabilities and equity	\$ 18,081.6	\$ 18,059.8

See accompanying notes to Consolidated Financial Statements.

**Trane Technologies plc**  
**Consolidated Statements of Equity**

<i>In millions, except per share amounts</i>	Trane Technologies plc shareholders' equity							
	Total equity	Ordinary shares		Ordinary shares held in treasury, at cost	Capital in excess of par value	Retained earnings	Accumulated other comprehensive income (loss)	Noncontrolling Interest
		Amount at par value	Shares					
Balance at December 31, 2019	\$ 7,312.4	\$ 262.8	262.8	\$ (1,719.4)	\$ —	\$ 9,730.8	\$ (1,006.6)	\$ 44.8
Net earnings	870.0	—	—	—	—	854.9	—	15.1
Other comprehensive income (loss)	242.8	—	—	—	—	—	240.1	2.7
Shares issued under incentive stock plans	64.5	2.3	2.3	—	62.2	—	—	—
Repurchase of ordinary shares	(250.0)	(1.8)	(1.8)	—	(135.6)	(112.6)	—	—
Share-based compensation	66.3	—	—	—	69.5	(3.2)	—	—
Dividends declared to noncontrolling interest	(18.3)	—	—	—	—	—	—	(18.3)
Investment by joint venture partner	7.0	—	—	—	3.9	—	—	3.1
Cash dividends declared (\$2.12 per share)	(507.7)	—	—	—	—	(507.7)	—	—
Separation of Ingersoll Rand Industrial	(1,359.9)	—	—	—	—	(1,466.9)	135.0	(28.0)
Balance at December 31, 2020	\$ 6,427.1	\$ 263.3	263.3	\$ (1,719.4)	\$ —	\$ 8,495.3	\$ (631.5)	\$ 19.4
Net earnings	1,436.6	—	—	—	—	1,423.4	—	13.2
Other comprehensive income (loss)	(6.6)	—	—	—	—	—	(6.1)	(0.5)
Shares issued under incentive stock plans	78.3	2.3	2.3	—	76.0	—	—	—
Repurchase of ordinary shares	(1,100.3)	(5.9)	(5.9)	—	(142.5)	(951.9)	—	—
Share-based compensation	63.6	—	—	—	66.4	(2.8)	—	—
Dividends declared to noncontrolling interest	(14.9)	—	—	—	—	—	—	(14.9)
Cash dividends declared (\$2.36 per share)	(561.8)	—	—	—	—	(561.8)	—	—
Separation of Ingersoll Rand Industrial	(49.0)	—	—	—	—	(49.0)	—	—
Other	0.1	—	—	—	0.1	—	—	—
Balance at December 31, 2021	\$ 6,273.1	\$ 259.7	259.7	\$ (1,719.4)	\$ —	\$ 8,353.2	\$ (637.6)	\$ 17.2
Net earnings	1,774.7	—	—	—	—	1,756.5	—	18.2
Other comprehensive income (loss)	(130.2)	—	—	—	—	—	(128.6)	(1.6)
Shares issued under incentive stock plans	2.6	1.1	1.1	—	1.5	—	—	—
Repurchase of ordinary shares	(1,200.2)	(7.5)	(7.5)	—	(45.4)	(1,147.3)	—	—
Share-based compensation	54.3	—	—	—	56.2	(1.9)	—	—
Dividends declared to noncontrolling interest	(14.5)	—	—	—	—	—	—	(14.5)
Acquisition of noncontrolling interest	(15.1)	—	—	—	(12.4)	—	—	(2.7)
Cash dividends declared (\$2.68 per share)	(620.7)	—	—	—	—	(620.7)	—	—
Separation of Ingersoll Rand Industrial	(18.9)	—	—	—	—	(18.9)	—	—
Other	0.1	—	—	—	0.1	—	—	—
Balance at December 31, 2022	\$ 6,105.2	\$ 253.3	253.3	\$ (1,719.4)	\$ —	\$ 8,320.9	\$ (766.2)	\$ 16.6

See accompanying notes to Consolidated Financial Statements.

## Trane Technologies plc

### Consolidated Statements of Cash Flows

In millions

For the years ended December 31,

	2022	2021	2020
<b>Cash flows from operating activities:</b>			
Net earnings	\$ 1,774.7	\$ 1,436.6	\$ 870.0
Discontinued operations, net of tax	21.5	20.6	121.4
Adjustments for non-cash transactions:			
Depreciation and amortization	323.6	299.4	294.3
Pension and other postretirement benefits	55.6	50.8	68.8
Stock settled share-based compensation	56.3	66.5	69.5
Other non-cash items, net	17.1	(36.4)	(1.5)
Changes in other assets and liabilities, net of the effects of acquisitions:			
Accounts and notes receivable	(345.4)	(265.4)	5.9
Inventories	(466.7)	(348.8)	109.0
Other current and noncurrent assets	(116.8)	(153.8)	29.7
Accounts payable	317.9	275.3	75.8
Other current and noncurrent liabilities	60.9	249.6	123.3
Net cash provided by (used in) continuing operating activities	1,698.7	1,594.4	1,766.2
Net cash provided by (used in) discontinued operating activities	(194.7)	(6.1)	(331.2)
Net cash provided by (used in) operating activities	1,504.0	1,588.3	1,435.0
<b>Cash flows from investing activities:</b>			
Capital expenditures	(291.8)	(223.0)	(146.2)
Acquisitions and equity method investments, net of cash acquired	(234.7)	(269.2)	(182.8)
Proceeds from sale of property, plant and equipment	9.7	15.1	0.1
Deconsolidation of certain entities under Chapter 11	—	—	(10.8)
Other investing activities, net	(23.0)	(68.6)	1.2
Net cash provided by (used in) continuing investing activities	(539.8)	(545.7)	(338.5)
Net cash provided by (used in) discontinued investing activities	(0.6)	—	(37.7)
Net cash provided by (used in) investing activities	(540.4)	(545.7)	(376.2)
<b>Cash flows from financing activities:</b>			
Payments of long-term debt	(9.6)	(432.5)	(307.5)
Debt issuance costs	(2.1)	(2.7)	(3.6)
Dividends paid to ordinary shareholders	(620.2)	(561.1)	(507.3)
Dividends paid to noncontrolling interests	(14.5)	(14.9)	(18.3)
Proceeds (payments) from shares issued under incentive plans, net	2.6	78.3	64.5
Repurchase of ordinary shares	(1,200.2)	(1,100.3)	(250.0)
Receipt of / (Settlement related to) special cash payment	(6.2)	(49.5)	1,900.0
Other financing activities, net	(2.0)	(44.9)	6.5
Net cash provided by (used in) financing activities	(1,852.2)	(2,127.6)	884.3
<b>Effect of exchange rate changes on cash and cash equivalents</b>	<b>(50.1)</b>	<b>(45.7)</b>	<b>68.2</b>
Net increase (decrease) in cash and cash equivalents	(938.7)	(1,130.7)	2,011.3
Cash and cash equivalents – beginning of period	2,159.2	3,289.9	1,278.6
Cash and cash equivalents – end of period	\$ 1,220.5	\$ 2,159.2	\$ 3,289.9
<b>Cash paid during the year for:</b>			
Interest	\$ 218.0	\$ 234.9	\$ 243.5
Income taxes, net of refunds	\$ 321.3	\$ 356.9	\$ 151.6

See accompanying notes to Consolidated Financial Statements.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

### NOTE 1. DESCRIPTION OF COMPANY

Trane Technologies plc, a public limited company, incorporated in Ireland in 2009, and its consolidated subsidiaries (collectively we, our, the Company) is a global climate innovator. The Company brings sustainable and efficient solutions to buildings, homes and transportation through the Company's strategic brands, Trane® and Thermo King®, and its environmentally responsible portfolio of products, services and connected intelligent controls. The Company generates revenue and cash primarily through the design, manufacture, sales and service of solutions for Heating, Ventilation and Air Conditioning (HVAC), transport refrigeration, and custom refrigeration solutions. As an industry leader with an extensive global install base, the Company's growth strategy includes expanding recurring revenue through services and rental options. The Company's unique business operating system, uplifting culture and highly engaged team around the world are also central to its earnings and cash flow growth.

#### *Completion of Reverse Morris Trust Transaction*

On February 29, 2020 (Distribution Date), the Company completed its Reverse Morris Trust transaction (the Transaction) with Gardner Denver Holdings, Inc. (Gardner Denver) whereby the Company separated its former Industrial segment (Ingersoll Rand Industrial) through a pro rata distribution to shareholders of record as of February 24, 2020 (Spin-off Shareholders). Ingersoll Rand Industrial then merged into a wholly-owned subsidiary of Gardner Denver, which changed its name to Ingersoll Rand Inc. (Ingersoll Rand). Upon close of the Transaction, the Spin-off Shareholders received 50.1% of the shares of Ingersoll Rand common stock on a fully-diluted basis and Gardner Denver shareholders retained 49.9% of the shares of Ingersoll Rand on a fully diluted basis. As a result, the Spin-off Shareholders received .8824 shares of Ingersoll Rand common stock with respect to each share owned as of February 24, 2020. In connection with the Transaction, the Company received a special cash payment of \$1.9 billion.

During the year ended December 31, 2022, the Company recorded a reduction to *Retained earnings* of \$18.9 million primarily related to tax matters associated with Ingersoll Rand Industrial and the settlement of certain items related to the Transaction. During the year ended December 31, 2021, the Company paid Ingersoll Rand \$49.5 million to settle certain items related to the Transaction. This payment was related to working capital, cash and indebtedness amounts as of the Distribution Date, as well as funding levels related to pension plans, non-qualified deferred compensation plans and retiree health benefits. The Company recorded the settlement as a reduction to *Retained earnings* during the first quarter of 2021.

#### *Discontinued Operations*

After the Distribution Date, the Company does not beneficially own any Ingersoll Rand Industrial shares of common stock and no longer consolidates Ingersoll Rand Industrial in its financial statements. The historical results of Ingersoll Rand Industrial are presented as a discontinued operation in the Consolidated Statements of Earnings and Consolidated Statements of Cash Flows.

#### *Reorganization of Aldrich and Murray*

On May 1, 2020, certain subsidiaries of the Company underwent an internal corporate restructuring that was effectuated through a series of transactions (2020 Corporate Restructuring). As a result, Aldrich Pump LLC (Aldrich) and Murray Boiler LLC (Murray), indirect wholly-owned subsidiaries of Trane Technologies plc, became solely responsible for the asbestos-related liabilities, and the beneficiaries of the asbestos-related insurance assets, of Trane Technologies Company LLC and Trane U.S. Inc, respectively. On a consolidated basis, the 2020 Corporate Restructuring did not have an impact on the Consolidated Financial Statements. In connection with the 2020 Corporate Restructuring, certain subsidiaries of the Company entered into funding agreements with Aldrich and Murray (collectively the Funding Agreements), pursuant to which those subsidiaries are obligated, among other things, to pay the costs and expenses of Aldrich and Murray during the pendency of the Chapter 11 cases to the extent distributions from their respective subsidiaries are insufficient to do so and to provide an amount for the funding for a trust established pursuant to section 524(g) of the Bankruptcy Code, to the extent that the other assets of Aldrich and Murray are insufficient to provide the requisite trust funding.

On June 18, 2020 (Petition Date), Aldrich and Murray filed voluntary petitions for relief under Chapter 11 of Title 11 of the United States Code (the Bankruptcy Code) in the United States Bankruptcy Court for the Western District of North Carolina (the Bankruptcy Court) to resolve equitably and permanently all current and future asbestos related claims in a manner beneficial to claimants, Aldrich and Murray. As a result of the Chapter 11 filings, all asbestos-related lawsuits against Aldrich and Murray have been stayed due to the imposition of a statutory automatic stay applicable in Chapter 11 bankruptcy cases. Only Aldrich and Murray have filed for Chapter 11 relief. Neither Aldrich's wholly-owned subsidiary, 200 Park, Inc. (200 Park), Murray's wholly-owned subsidiary, ClimateLabs LLC (ClimateLabs), Trane Technologies plc nor its other subsidiaries (the Trane Companies) are part of the Chapter 11 filings. The Trane Companies are expected to continue to operate as usual, with no disruption to their employees, suppliers, or customers globally. However, as of the Petition Date, Aldrich and its

wholly-owned subsidiary 200 Park and Murray and its wholly-owned subsidiary ClimateLabs were deconsolidated and their respective assets and liabilities were derecognized from the Company's Consolidated Financial Statements. Refer to Note 20, "Commitments and Contingencies," for more information regarding the Chapter 11 bankruptcy and asbestos-related matters.

## NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A summary of significant accounting policies used in the preparation of the accompanying Consolidated Financial Statements follows:

**Basis of Presentation:** The accompanying Consolidated Financial Statements reflect the consolidated operations of the Company and have been prepared in accordance with U.S. Generally Accepted Accounting Principles (GAAP) as defined by the Financial Accounting Standards Board (FASB) within the FASB Accounting Standards Codification (ASC). Intercompany accounts and transactions have been eliminated. The results of operations and cash flows of all discontinued operations have been separately reported as discontinued operations for all periods presented.

The Consolidated Financial Statements include all majority-owned subsidiaries of the Company. A noncontrolling interest in a subsidiary is considered an ownership interest in a majority-owned subsidiary that is not attributable to the parent. The Company includes *Noncontrolling interest* as a component of *Total equity* in the Consolidated Balance Sheets and the *Net earnings attributable to noncontrolling interests* are presented as an adjustment from *Net earnings* used to arrive at *Net earnings attributable to Trane Technologies plc* in the Consolidated Statements of Earnings.

**Use of Estimates:** The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosures of contingent assets and liabilities at the date of the financial statements as well as the reported amounts of revenues and expenses during the reporting period. Estimates are based on several factors including the facts and circumstances available at the time the estimates are made, historical experience, risk of loss, general economic conditions and trends, and the assessment of the probable future outcome. Actual results could differ from those estimates. Estimates and assumptions are reviewed periodically, and the effects of changes, if any, are reflected in the Consolidated Statements of Earnings in the period that they are determined.

**Currency Translation:** Assets and liabilities of non-U.S. subsidiaries, where the functional currency is not the U.S. dollar, have been translated at year-end exchange rates, and income and expense accounts have been translated using average exchange rates throughout the year. Adjustments resulting from the process of translating an entity's financial statements into the U.S. dollar have been recorded in the equity section of the Consolidated Balance Sheets within *Accumulated other comprehensive income (loss)*. Transactions that are denominated in a currency other than an entity's functional currency are subject to changes in exchange rates with the resulting gains and losses recorded within *Other income/(expense), net*.

**Cash and Cash Equivalents:** Cash and cash equivalents include cash on hand, demand deposits and all highly liquid investments with original maturities at the time of purchase of three months or less. The Company maintains amounts on deposit at various financial institutions, which may at times exceed federally insured limits. However, management periodically evaluates the credit-worthiness of those institutions and has not experienced any losses on such deposits.

**Allowance for Credit Losses:** The Company maintains an allowance for credit losses which represents the best estimate of expected loss inherent in the Company's accounts receivable portfolio. This estimate is based upon a two-step policy that results in the total recorded allowance for credit losses. The first step is to record a portfolio reserve based on the aging of the outstanding accounts receivable portfolio and the Company's historical experience with the Company's end markets, customer base and products. The second step is to create a specific reserve for significant accounts as to which the customer's ability to satisfy their financial obligation to the Company is in doubt due to circumstances such as bankruptcy, deteriorating operating results or financial position. In these circumstances, management uses its judgment to record an allowance based on the best estimate of expected loss, factoring in such considerations as the market value of collateral, if applicable. Actual results could differ from those estimates. These estimates and assumptions are reviewed periodically, and the effects of changes, if any, are reflected in the Consolidated Statements of Earnings in the period that they are determined. The Company's allowance for credit losses was \$43.7 million and \$39.9 million as of December 31, 2022 and 2021, respectively.

**Inventories:** Depending on the business, U.S. inventories are stated at the lower of cost or market using the last-in, first-out (LIFO) method or the lower of cost and net realizable value (NRV) using the first-in, first-out (FIFO) method. Non-U.S. inventories are stated at the lower of cost and NRV using the FIFO method. At December 31, 2022 and 2021, approximately 58% and 54%, respectively, of all inventory utilized the LIFO method.

**Property, Plant and Equipment:** Property, plant and equipment are stated at cost, less accumulated depreciation. Assets placed in service are recorded at cost and depreciated using the straight-line method over the estimated useful life of the asset except for leasehold improvements, which are depreciated over the shorter of their economic useful life or their lease term. The range of useful lives used to depreciate property, plant and equipment is as follows:

Buildings	10	to	50	years
Machinery and equipment	2	to	12	years
Software	2	to	7	years

Major expenditures for replacements and significant improvements that increase asset values and extend useful lives are also capitalized. Capitalized costs are amortized over their estimated useful lives using the straight-line method. Repairs and maintenance expenditures that do not extend the useful life of the asset are charged to expense as incurred. The carrying amounts of assets that are sold or retired and the related accumulated depreciation are removed from the accounts in the year of disposal, and any resulting gain or loss is reflected within current earnings.

The Company assesses the recoverability of the carrying value of its property, plant and equipment whenever events or changes in circumstances indicate that the carrying amount of the asset group may not be recoverable. Recoverability is measured by a comparison of the carrying amount of an asset group to the future net undiscounted cash flows expected to be generated by the asset group. If the undiscounted cash flows are less than the carrying amount of the asset group, an impairment loss is recognized for the amount by which the carrying value of the asset group exceeds the fair value of the asset group.

**Goodwill and Intangible Assets:** The Company records as goodwill the excess of the purchase price over the fair value of the net assets acquired in a business combination. Measurement period adjustments may be recorded once a final valuation has been performed. Goodwill and other indefinite-lived intangible assets are tested and reviewed annually for impairment during the fourth quarter or whenever there is a significant change in events or circumstances that indicate that the fair value of the asset is more likely than not less than the carrying amount of the asset. In addition, an interim impairment test is completed upon a triggering event or when there is a reorganization of reporting structure or disposal of all or a portion of a reporting unit.

Impairment of goodwill is tested at the reporting unit level. The test compares the carrying amount of the reporting unit to its estimated fair value. If the estimated fair value of a reporting unit exceeds its carrying amount, goodwill of the reporting unit is not impaired. To the extent that the carrying value of the reporting unit exceeds its estimated fair value, an impairment loss would be recognized for the amount by which the reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill in that reporting unit.

Intangible assets such as customer-related intangible assets and other intangible assets with finite useful lives are amortized on a straight-line basis over their estimated economic lives. The weighted-average useful lives approximate the following:

Customer relationships	16 years
Other	7 years

The Company assesses the recoverability of the carrying value of its intangible assets with finite useful lives whenever events or changes in circumstances indicate that the carrying amount of the asset group may not be recoverable. Recoverability is measured by a comparison of the carrying amount of an asset group to the future net undiscounted cash flows expected to be generated by the asset group. If the undiscounted cash flows are less than the carrying amount of the asset group, an impairment loss is recognized for the amount by which the carrying value of the asset group exceeds the fair value of the asset group.

**Business Combinations:** Acquisitions that meet the definition of a business combination are recorded using the acquisition method of accounting. The Company includes the operating results of acquired entities from their respective dates of acquisition. The Company recognizes and measures the identifiable assets acquired, liabilities assumed, including contingent consideration relating to earnout provisions, and any non-controlling interest as of the acquisition date fair value. The excess, if any, of total consideration transferred in a business combination over the fair value of identifiable assets acquired, liabilities assumed and any non-controlling interest is recognized as goodwill. Costs incurred as a result of a business combination other than costs related to the issuance of debt or equity securities are recorded in the period the costs are incurred. Additionally, at each reporting period, contingent consideration is remeasured to fair value, with changes recorded in *Selling and administrative expenses* in the Consolidated Statements of Earnings.

**Equity Investments:** Partially-owned equity affiliates generally represent 20-50% ownership interests in equity investments where the Company demonstrates significant influence, but does not have a controlling financial interest. Partially-owned equity affiliates are accounted for under the equity method.

The Company invests in companies that complement existing products and services further enhancing its product portfolio. The Company records equity investments for which it does not have significant influence and without a readily determinable fair

value at cost with adjustments for observable changes in price or impairment as permitted by the measurement alternative. Investments for which the measurement alternative has been elected are assessed for impairment upon a triggering event. Equity investments without a readily determinable fair value were \$121.0 million and \$115.6 million for the years ended December 31, 2022 and December 31, 2021, respectively.

**Employee Benefit Plans:** The Company provides a range of benefits, including pensions, postretirement and postemployment benefits to eligible current and former employees. Determining the cost associated with such benefits is dependent on various actuarial assumptions, including discount rates, expected return on plan assets, compensation increases, mortality, turnover rates, and healthcare cost trend rates. Actuaries perform the required calculations to determine expense in accordance with GAAP. Actual results may differ from the actuarial assumptions and are generally accumulated into *Accumulated other comprehensive income (loss)* and amortized into *Net earnings* over future periods. The Company reviews its actuarial assumptions at each measurement date and makes modifications to the assumptions based on current rates and trends, if appropriate.

**Loss Contingencies:** Liabilities are recorded for various contingencies arising in the normal course of business. The Company has recorded reserves in the financial statements related to these matters, which are developed using input derived from actuarial estimates and historical and anticipated experience data depending on the nature of the reserve, and in certain instances with consultation of legal counsel, internal and external consultants and engineers. Subject to the uncertainties inherent in estimating future costs for these types of liabilities, the Company believes its estimated reserves are reasonable and does not believe the final determination of the liabilities with respect to these matters would have a material effect on the financial condition, results of operations, liquidity or cash flows of the Company for any year.

**Environmental Costs:** The Company is subject to laws and regulations relating to protecting the environment. Environmental expenditures relating to current operations are expensed or capitalized as appropriate. Expenditures relating to existing conditions caused by past operations, which do not contribute to current or future revenues, are expensed. Liabilities for remediation costs are recorded when they are probable and can be reasonably estimated, generally no later than the completion of feasibility studies or the Company's commitment to a plan of action. The assessment of this liability, which is calculated based on existing remediation technology, does not reflect any offset for possible recoveries from insurance companies, and is not discounted.

**Asbestos Matters:** Prior to the Petition Date, certain of the Company's wholly-owned subsidiaries and former companies were named as defendants in asbestos-related lawsuits in state and federal courts. The Company recorded a liability for actual and anticipated future claims as well as an asset for anticipated insurance settlements. Asbestos-related defense costs were excluded from the asbestos claims liability and were recorded separately as services were incurred. None of the Company's existing or previously-owned businesses were a producer or manufacturer of asbestos. The Company recorded certain income and expenses associated with asbestos liabilities and corresponding insurance recoveries within *Discontinued operations, net of tax*, as they related to previously divested businesses, except for amounts associated with the predecessor of Murray's asbestos liabilities and corresponding insurance recoveries, which were recorded within continuing operations.

**Product Warranties:** Standard product warranty accruals are recorded at the time of sale and are estimated based upon product warranty terms and historical experience. The Company assesses the adequacy of its liabilities and will make adjustments as necessary based on known or anticipated warranty claims, or as new information becomes available. The Company's extended warranty liability represents the deferred revenue associated with its extended warranty contracts and is amortized into revenue on a straight-line basis over the life of the contract, unless another method is more representative of the costs incurred. The Company assesses the adequacy of its liability by evaluating the expected costs under its existing contracts to ensure these expected costs do not exceed the extended warranty liability.

**Income Taxes:** Deferred tax assets and liabilities are determined based on temporary differences between financial reporting and tax bases of assets and liabilities, applying enacted tax rates expected to be in effect for the year in which the differences are expected to reverse. The Company recognizes future tax benefits, such as net operating losses and tax credits, to the extent that realizing these benefits is considered in its judgment to be more likely than not. The Company regularly reviews the recoverability of its deferred tax assets considering its historic profitability, projected future taxable income, timing of the reversals of existing temporary differences and the feasibility of its tax planning strategies. Where appropriate, the Company records a valuation allowance with respect to a future tax benefit.

**Revenue Recognition:** Revenue is recognized when control of a good or service promised in a contract (i.e., performance obligation) is transferred to a customer. Control is obtained when a customer has the ability to direct the use of and obtain substantially all of the remaining benefits from that good or service. A majority of the Company's revenue is recognized at a point-in-time as control is transferred at a distinct point in time per the terms of a contract. However, a portion of the Company's revenue is recognized over-time as the customer simultaneously receives control as the Company performs work under a contract. For these arrangements, the cost-to-cost input method is used as it best depicts the transfer of control to the

customer that occurs as the Company incurs costs. See Note 12, "Revenue" to the Consolidated Financial Statements for additional information regarding revenue recognition.

**Research and Development Costs:** The Company conducts research and development activities focused on product and system sustainability improvements such as increasing energy efficiency, developing products that allow for use of lower global warming potential refrigerants, reducing material content in products, and designing products for circularity. These expenditures are expensed when incurred. For the years ended December 31, 2022, 2021 and 2020, these expenditures amounted to \$211.2 million, \$193.5 million and \$165.0 million, respectively.

### **Recent Accounting Pronouncements**

The FASB ASC is the sole source of authoritative GAAP other than the Securities and Exchange Commission (SEC) issued rules and regulations that apply only to SEC registrants. The FASB issues an Accounting Standard Update (ASU) to communicate changes to the codification. The Company considers the applicability and impact of all ASU's. ASU's not listed below were assessed and determined to be either not applicable or are not expected to have a material impact on the consolidated financial statements.

#### ***Recently Adopted Accounting Pronouncements***

In November 2021, the FASB issued ASU 2021-10, "Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance" (ASU 2021-10), which requires additional disclosures regarding government grants and cash contributions. The additional disclosures required by this update include information about the nature of the transactions and the related accounting policy used to account for the transaction, the financial statement line items affected by the transactions and the amounts applicable to each financial statement line item and significant terms and conditions of the transactions, including commitments and contingencies. ASU 2021-10 is effective for annual periods beginning after December 15, 2021 with early adoption permitted. The Company adopted this standard on January 1, 2022 with no material impact on its financial statements.

In October 2021, the FASB issued ASU 2021-08, "Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers" (ASU 2021-08), which requires contract assets and contract liabilities acquired in a business combination to be recognized and measured by the acquirer on the acquisition date in accordance with ASC 606, "Revenue from Contracts with Customers" (ASC 606). ASU 2021-08 is effective for fiscal years beginning after December 15, 2022 including interim periods therein with early adoption permitted. The Company early adopted this standard during the fourth quarter of 2021 and applied it retrospectively to all business combinations for which the acquisition date occurred on or after January 1, 2021 resulting in no material impact on its financial statements.

In December 2019, the FASB issued ASU 2019-12, "Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes" (ASU 2019-12), which simplifies certain aspects of income tax accounting guidance in ASC 740, reducing the complexity of its application. Certain exceptions to ASC 740 presented within the ASU include: intraperiod tax allocation, deferred tax liabilities related to outside basis differences, year-to-date loss in interim periods, among others. ASU 2019-12 is effective for annual reporting periods beginning after December 15, 2020 including interim periods therein with early adoption permitted. The Company adopted this standard on January 1, 2021 with no material impact on its financial statements.

In October 2020, the FASB issued ASU 2020-09, "Debt (Topic 470): Amendments to SEC Paragraphs Pursuant to SEC Release No. 33-10762" (ASU 2020-09), which amends Topic 470 and certain other topics to conform to disclosure rules on guaranteed debt offerings in SEC Release No.33-10762. The SEC adopted amendments to the financial disclosure requirements for guarantors and issuers of guaranteed securities registered or being registered in Rule 3-10 of Regulations S-X, and affiliates whose securities registered or being registered in Rule 3-16 of Regulation S-X. The amended rules aim to improve disclosure, reduce compliance burdens for issuers and increase investor protection. ASU 2020-09 is effective on January 4, 2021, pursuant to SEC Release No. 33-10762 with early application permitted. The Company early adopted this standard during the first quarter of 2020 and elected to disclose summarized financial information of the issuers and guarantors on a combined basis within Management's Discussion and Analysis of Financial Condition and Results of Operations.

In August 2018, the FASB issued ASU 2018-15, "Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract" (ASU 2018-15), which aligns the requirements for capitalizing implementation costs in a cloud-computing arrangement service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. In addition, the guidance also clarifies the presentation requirements for reporting such costs in the financial statements. ASU 2018-15 is effective for annual reporting periods beginning after December 15, 2019 with early adoption permitted. The Company adopted this standard on January 1, 2020 on a prospective basis with no material impact on its financial statements.



In June 2016, the FASB issued ASU 2016-13, which changes the impairment model for most financial assets and certain other instruments from an incurred loss model to an expected loss model. In addition, the guidance also requires incremental disclosures regarding allowances and credit quality indicators. ASU 2016-13 was adopted using the modified-retrospective approach and is effective in fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, with early adoption permitted. The Company adopted this standard on January 1, 2020 with no material impact on its financial statements.

#### ***Recently Issued Accounting Pronouncements***

In September 2022, the FASB issued ASU 2022-04, “Liabilities - Supplier Finance Program (Subtopic 405-50): Disclosure of Supplier Program Finance Obligations”, which requires that a company that enters into a supplier finance program disclose sufficient information about the program to allow a user of financial statements to understand the program’s nature, activity during the period, changes from period to period, and potential magnitude. To achieve that objective, the company should disclose qualitative and quantitative information about its supplier finance programs. ASU 2022-04 is effective for fiscal periods beginning after December 15, 2022, including interim periods within those fiscal years, with early adoption permitted. This ASU is effective for fiscal years beginning after December 15, 2022, except for the amendment on roll forward information which is effective for fiscal years beginning after December 15, 2023. The Company does not expect the adoption of ASU 2022-04 to have a material impact to its consolidated financial statements.

#### **NOTE 3. INVENTORIES**

At December 31, the major classes of inventory were as follows:

<i>In millions</i>	2022	2021
Raw materials	\$ 509.6	\$ 404.6
Work-in-process	333.8	215.9
Finished goods	1,280.3	982.9
	<u>2,123.7</u>	<u>1,603.4</u>
LIFO reserve	(129.9)	(72.6)
Total	\$ 1,993.8	\$ 1,530.8

The Company performs periodic assessments to determine the existence of obsolete, slow-moving and non-saleable inventories and records necessary provisions to reduce such inventories to the lower of cost and NRV. Reserve balances, primarily related to obsolete and slow-moving inventories, were \$94.3 million and \$79.0 million at December 31, 2022 and December 31, 2021, respectively.

#### **NOTE 4. PROPERTY, PLANT AND EQUIPMENT**

At December 31, the major classes of property, plant and equipment were as follows:

<i>In millions</i>	2022	2021
Land	\$ 36.8	\$ 35.1
Buildings	737.7	708.0
Machinery and equipment	1,996.8	1,824.9
Software	677.3	648.1
	<u>3,448.6</u>	<u>3,216.1</u>
Accumulated depreciation	(1,912.5)	(1,817.3)
Total	\$ 1,536.1	\$ 1,398.8

Depreciation expense for the years ended December 31, 2022, 2021 and 2020 was \$176.5 million, \$170.5 million and \$172.8 million, which include amounts for software amortization of \$42.1 million, \$45.7 million and \$50.2 million, respectively.

**NOTE 5. GOODWILL**

The changes in the carrying amount of goodwill are as follows:

<i>In millions</i>	Americas	EMEA	Asia Pacific	Total
Net balance as of December 31, 2020	\$ 3,980.0	\$ 793.5	\$ 569.3	\$ 5,342.8
Acquisitions <sup>(1)</sup>	206.3	4.6	—	210.9
Currency translation	(1.1)	(57.3)	9.5	(48.9)
Net balance as of December 31, 2021	4,185.2	740.8	578.8	5,504.8
Acquisitions <sup>(1)</sup>	45.3	23.9	27.1	96.3
Currency translation	(3.7)	(49.8)	(43.9)	(97.4)
Net balance as of December 31, 2022	\$ 4,226.8	\$ 714.9	\$ 562.0	\$ 5,503.7

<sup>(1)</sup> Refer to Note 17, "Acquisitions and Divestitures" for more information regarding acquisitions.

The net goodwill balances at December 31, 2022, 2021 and 2020 include \$2,496.0 million of accumulated impairment, primarily related to the Americas segment. The accumulated impairment relates entirely to a charge recorded in 2008.

**NOTE 6. INTANGIBLE ASSETS**

The following table sets forth the gross amount and related accumulated amortization of the Company's intangible assets at December 31:

<i>In millions</i>	2022			2021		
	Gross carrying amount	Accumulated amortization	Net carrying amount	Gross carrying amount	Accumulated amortization	Net carrying amount
Customer relationships	\$ 2,183.7	\$ (1,592.1)	\$ 591.6	\$ 2,110.8	\$ (1,475.3)	\$ 635.5
Other	261.7	(213.4)	48.3	245.5	(201.3)	44.2
Total finite-lived intangible assets	\$ 2,445.4	\$ (1,805.5)	\$ 639.9	\$ 2,356.3	\$ (1,676.6)	\$ 679.7
Trademarks (indefinite-lived)	2,624.1	—	2,624.1	2,625.9	—	2,625.9
Total	\$ 5,069.5	\$ (1,805.5)	\$ 3,264.0	\$ 4,982.2	\$ (1,676.6)	\$ 3,305.6

Intangible asset amortization expense for 2022, 2021 and 2020 was \$142.7 million, \$123.6 million and \$115.7 million, respectively.

Future estimated amortization expense on existing intangible assets in the next five years as of December 31, 2022 amounts to approximately:

<i>In millions</i>	
2023	\$ 143.0
2024	141.0
2025	110.0
2026	57.0
2027	31.0

**NOTE 7. DEBT AND CREDIT FACILITIES**

At December 31, *Short-term borrowings and current maturities of long-term debt* consisted of the following:

<i>In millions</i>	2022	2021
Debentures with put feature	\$ 340.8	\$ 342.9
4.250% Senior notes due 2023	699.7	—
Other current maturities of long-term debt	7.5	7.5
Total	\$ 1,048.0	\$ 350.4

The Company's short-term obligations primarily consist of debentures with put features and current maturities of long-term debt. The weighted-average interest rate for *Short-term borrowings and current maturities of long-term debt* at December 31, 2022 and 2021 was 4.9% and 6.3%, respectively.

***Commercial Paper Program***

The Company uses borrowings under its commercial paper program for general corporate purposes. The maximum aggregate amount of unsecured commercial paper notes available to be issued, on a private placement basis, under the commercial paper program is \$2.0 billion as of December 31, 2022. Under the commercial paper program, the Company may issue notes from time to time through Trane Technologies HoldCo Inc. or Trane Technologies Financing Limited. Each of Trane Technologies plc, Trane Technologies Irish Holdings Unlimited Company, Trane Technologies Lux International Holding Company S.à.r.l., Trane Technologies Global Holding Company Limited, Trane Technologies Company LLC, Trane Technologies HoldCo Inc. and Trane Technologies Financing Limited provided irrevocable and unconditional guarantees for any notes issued under the commercial paper program. The Company had no outstanding balance under its commercial paper program as of December 31, 2022 and December 31, 2021.

***Debentures with Put Feature***

At December 31, 2022 and December 31, 2021, the Company had \$340.8 million and \$342.9 million, respectively, of fixed rate debentures outstanding which contain a put feature that the holders may exercise on each anniversary of the issuance date. If exercised, the Company is obligated to repay in whole or in part, at the holder's option, the outstanding principal amount of the debentures plus accrued interest. If these options are not exercised, the final contractual maturity dates would range between 2027 and 2028. Holders of these debentures had the option to exercise the put feature on each of the outstanding debentures in 2022, subject to the notice requirement. No material exercises were made in 2022 or 2021.

At December 31, *long-term debt* excluding current maturities consisted of:

<i>In millions</i>	2022	2021
4.250% Senior notes due 2023	\$ —	\$ 699.1
7.200% Debentures due 2023-2025	14.9	22.4
3.550% Senior notes due 2024	498.7	498.0
6.480% Debentures due 2025	149.7	149.7
3.500% Senior notes due 2026	398.4	397.8
3.750% Senior notes due 2028	546.8	546.2
3.800% Senior notes due 2029	745.8	745.0
5.750% Senior notes due 2043	495.2	495.0
4.650% Senior notes due 2044	296.4	296.3
4.300% Senior notes due 2048	296.4	296.3
4.500% Senior notes due 2049	346.0	345.9
Total	\$ 3,788.3	\$ 4,491.7

Scheduled maturities of *long-term debt*, including current maturities, as of December 31, 2022 are as follows:

<i>In millions</i>		
2023	\$	1,048.0
2024		506.2
2025		157.2
2026		398.4
2027		—
Thereafter		2,726.5
Total	\$	4,836.3

#### ***Other Credit Facilities***

On April 25, 2022, the Company entered into a new \$1.0 billion senior unsecured revolving credit facility which matures in April 2027 (2027 Credit Facility) and terminated its \$1.0 billion credit facility that would have expired in April 2023. As a result, the Company maintains two \$1.0 billion senior unsecured revolving credit facilities, one of which matures in June 2026 (2026 Credit Facility) and the other which matures in April 2027 (collectively, the Facilities) through its wholly-owned subsidiaries, Trane Technologies HoldCo Inc., Trane Technologies Global Holding Company Limited and Trane Technologies Financing Limited (collectively, the Borrowers). On June 30, 2022, the Company amended its 2026 Credit Facility to include a Secured Overnight Financing Rate (SOFR) borrowing index provision and to eliminate the London Interbank Offer Rate (LIBOR) index provision. These provisions are consistent with the 2027 Credit Facility. Additionally, both Facilities include Environmental, Social, and Governance (ESG) metrics related to two of the Company's sustainability commitments: a reduction in greenhouse gas intensity and an increase in the percentage of women in management. The Company's annual performance against these ESG metrics may result in price adjustments to the commitment fee and applicable interest rate.

The Facilities provide support for the Company's commercial paper program and can be used for working capital and other general corporate purposes. Trane Technologies plc, Trane Technologies Irish Holdings Unlimited Company, Trane Technologies Lux International Holding Company S.à.r.l. and Trane Technologies Company LLC each provide irrevocable and unconditional guarantees for these Facilities. In addition, each Borrower will guarantee the obligations under the Facilities of the other Borrowers. Total commitments of \$2.0 billion were unused at December 31, 2022 and December 31, 2021.

#### ***Fair Value of Debt***

The fair value of the Company's debt instruments at December 31, 2022 and December 31, 2021 was \$4.6 billion and \$5.6 billion, respectively. The Company measures the fair value of its debt instruments for disclosure purposes based upon observable market prices quoted on public exchanges for similar assets. These fair value inputs are considered Level 2 within the fair value hierarchy. See Note 9, "Fair Value Measurements" for information on the fair value hierarchy.

**NOTE 8. FINANCIAL INSTRUMENTS**

In the normal course of business, the Company is exposed to certain risks arising from business operations and economic factors. These fluctuations can increase the cost of financing, investing and operating the business. The Company uses various financial instruments, including derivative instruments, to manage the risks associated with interest rate, commodity price and foreign currency exposures. These financial instruments are not used for trading or speculative purposes. The Company recognizes all derivatives on the Consolidated Balance Sheets at their fair value as either assets or liabilities.

On the date a derivative contract is entered into, the Company designates the derivative instrument as a cash flow hedge of a forecasted transaction or as an undesignated derivative. The Company formally documents its hedge relationships, including identification of the derivative instruments and the hedged items, as well as its risk management objectives and strategies for undertaking the hedge transaction. This process includes linking derivative instruments that are designated as hedges to specific assets, liabilities or forecasted transactions.

The Company assesses at inception and at least quarterly thereafter, whether the derivatives used in cash flow hedging transactions are highly effective in offsetting the changes in the cash flows of the hedged item. To the extent the derivative is deemed to be a highly effective hedge, the fair market value changes of the instrument are recorded to *Accumulated other comprehensive income (loss)* (AOCI). If the hedging relationship ceases to be highly effective, or it becomes probable that a forecasted transaction is no longer expected to occur, the hedging relationship will be undesignated and any future gains and losses on the derivative instrument will be recorded in *Net earnings*.

The fair values of derivative instruments included within the Consolidated Balance Sheets as of December 31 were as follows:

<i>In millions</i>	Derivative assets		Derivative liabilities	
	2022	2021	2022	2021
Derivatives designated as hedges:				
Currency derivatives	\$ 2.0	\$ 0.1	\$ 1.6	\$ 2.7
Commodity derivatives	2.3	4.9	8.8	0.2
Derivatives not designated as hedges:				
Currency derivatives	0.8	10.5	1.5	14.0
Total derivatives	\$ 5.1	\$ 15.5	\$ 11.9	\$ 16.9

Asset and liability derivatives included in the table above are recorded within *Other current assets* and *Accrued expenses and other current liabilities*, respectively.

***Currency Derivative Instruments***

The notional amount of the Company's currency derivatives was approximately \$350 million and \$500 million at December 31, 2022 and 2021, respectively. At December 31, 2022 and 2021, a net gain of \$0.3 million and net loss of \$2.2 million, net of tax, respectively, was included in AOCI related to the fair value of the Company's currency derivatives designated as accounting hedges. The amount expected to be reclassified into *Net earnings* over the next twelve months is a gain of \$0.3 million. The actual amounts that will be reclassified to *Net earnings* may vary from this amount as a result of changes in market conditions. Gains and losses associated with the Company's currency derivatives not designated as hedges are recorded in *Net earnings* as changes in fair value occur. At December 31, 2022, the maximum term of the Company's currency derivatives was approximately 12 months.

***Commodity Derivative Instruments***

At December 31, 2022 and 2021, a net loss of \$4.9 million and a net gain of \$3.5 million, net of tax, was included in AOCI related to the fair market value of the Company's commodity derivatives designated as accounting hedges. A change in fair value of commodity derivative instruments deemed highly effective is included in AOCI and is reclassified to *Cost of goods sold* in the period the purchase of the commodity impacts *Net earnings*. The amount expected to be reclassified into *Net earnings* over the next twelve months is a net loss of \$4.9 million. The actual amounts that will be reclassified to *Net earnings* may vary from this amount as a result of changes in market conditions. At December 31, 2022, the maximum term of the Company's commodity derivatives was 12 months.

The Company had the following outstanding contracts to hedge forecasted commodity purchases:

Commodity	Volume Outstanding as of	
	December 31, 2022	December 31, 2021
Aluminum	23,088 metric tons	16,488 metric tons
Copper	6,241,625 pounds	4,035,000 pounds

#### Other Derivative Instruments

Prior to 2015, the Company utilized forward-starting interest rate swaps and interest rate locks to manage interest rate exposure in periods prior to the anticipated issuance of certain fixed-rate debt. These instruments were designated as cash flow hedges and had a notional amount of \$1,250.0 million. Consequently, when the contracts were settled upon the issuance of the underlying debt, any realized gains or losses in the fair values of the instruments were deferred into AOCI. These deferred gains or losses are subsequently recognized in *Interest expense* over the term of the related notes. The net unrecognized gain in AOCI was \$4.0 million and \$4.7 million at December 31, 2022 and at December 31, 2021. The net deferred gain at December 31, 2022 will continue to be amortized over the term of notes with maturities ranging from 2023 to 2044. The amount expected to be amortized over the next twelve months is a net gain of \$0.3 million. The Company has no forward-starting interest rate swaps or interest rate lock contracts outstanding at December 31, 2022 or 2021.

The following table represents the amounts associated with derivatives designated as hedges affecting *Net earnings* and AOCI for the years ended December 31:

In millions	Amount of gain (loss) recognized in AOCI			Location of gain (loss) reclassified from AOCI and recognized into Net earnings	Amount of gain (loss) reclassified from AOCI and recognized into Net earnings		
	2022	2021	2020		2022	2021	2020
Currency derivatives - continuing <sup>(1)</sup>	\$ (7.2)	\$ (4.1)	\$ 3.3	Cost of goods sold	\$ (9.2)	\$ 3.7	\$ (2.6)
Commodity derivatives	(17.1)	5.7	—	Cost of goods sold	(1.1)	2.0	—
Interest rate swaps & locks	—	—	—	Interest expense	0.7	0.7	0.7
Total	\$ (24.3)	\$ 1.6	\$ 3.3		\$ (9.6)	\$ 6.4	\$ (1.9)

<sup>(1)</sup> Amounts excluded from effectiveness testing and recognized into *Cost of goods sold* based on changes in fair value and amortization was a loss of \$0.6 million, \$0.7 million and \$2.1 million for the years ended December 31, 2022, 2021 and 2020, respectively.

The following table represents the amounts associated with derivatives not designated as hedges affecting *Net earnings* for the years ended December 31:

In millions	Location of gain (loss) recognized in Net earnings	Amount of gain (loss) recognized in Net earnings		
		2022	2021	2020
Currency derivatives - continuing	Other income (expense), net	\$ (8.0)	\$ 7.9	\$ 7.5
Currency derivatives - discontinued	Discontinued operations	—	—	(0.4)
Total		\$ (8.0)	\$ 7.9	\$ 7.1

The gains and losses associated with the Company's undesignated currency derivatives are materially offset in *Net earnings* by changes in the fair value of the underlying transactions.

#### Concentration of Credit Risk

The counterparties to the Company's forward contracts consist of a number of investment grade major international financial institutions. The Company could be exposed to losses in the event of nonperformance by the counterparties. However, the credit ratings and the concentration of risk in these financial institutions are monitored on a continuous basis and present no significant credit risk to the Company.

**NOTE 9. FAIR VALUE MEASUREMENTS**

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy that prioritizes information used in developing assumptions when pricing an asset or liability is as follows:

- *Level 1:* Observable inputs such as quoted prices in active markets;
- *Level 2:* Inputs, other than quoted prices in active markets, that are observable either directly or indirectly; and
- *Level 3:* Unobservable inputs where there is little or no market data, which requires the reporting entity to develop its own assumptions.

Observable market data is required to be used in making fair value measurements when available. When inputs used to measure fair value fall within different levels of the hierarchy, the level within which the fair value measurement is categorized is based on the lowest level input that is significant to the fair value measurement.

The following table presents the Company's fair value hierarchy for those assets and liabilities measured at fair value on a recurring basis as of December 31, 2022:

<i>In millions</i>	Fair Value	Fair value measurements		
		Level 1	Level 2	Level 3
<i>Assets:</i>				
Derivative instruments	\$ 5.1	\$ —	\$ 5.1	\$ —
<i>Liabilities:</i>				
Derivative instruments	11.9	—	11.9	—
Contingent consideration	49.3	—	—	49.3

The following table presents the Company's fair value hierarchy for those assets and liabilities measured at fair value on a recurring basis as of December 31, 2021:

<i>In Millions</i>	Fair Value	Fair value measurements		
		Level 1	Level 2	Level 3
<i>Assets:</i>				
Derivative instruments	\$ 15.5	\$ —	\$ 15.5	\$ —
<i>Liabilities:</i>				
Derivative instruments	16.9	—	16.9	—
Contingent consideration	96.2	—	—	96.2

Derivative instruments include forward foreign currency contracts and instruments related to non-functional currency balance sheet exposures. The fair value of the derivative instruments are determined based on a pricing model that uses spot rates and forward prices from actively quoted currency markets that are readily accessible and observable. The fair value of the commodity derivatives is valued under a market approach using publicized prices, where applicable, or dealer quotes.

On October 15, 2021, the Company acquired 100% of Farrar Scientific Corporation's (Farrar Scientific) assets. In connection with the acquisition, the Company agreed to contingent consideration of up to \$115.0 million to be paid in 2025, tied to the attainment of key financial targets during the period January 1, 2022 through December 31, 2024. This additional payment, to the extent earned, will be payable in cash. The fair value of the contingent consideration is determined using the Monte Carlo simulation model based on projections of revenues for Farrar Scientific during the period of January 1, 2022 through December 31, 2024, implied revenue volatility and a risk adjusted discount rate. Each quarter, the Company is required to remeasure the fair value of the liability as assumptions change and such non-cash adjustments are recorded in *Selling and administrative expenses* in the Consolidated Statements of Earnings.

Contingent consideration related to acquisitions are measured at fair value each reporting period using Level 3 unobservable inputs. The changes in the fair value of the Company's Level 3 liabilities during the years ended December 31, 2022 and 2021 are as follows:

<i>In millions</i>	2022	2021
Balance at beginning of period	\$ 96.2	\$ —
Fair value of contingent consideration recorded in connection with acquisition	—	98.7
Change in fair value of contingent consideration	(46.9)	(2.5)
Balance at end of period	\$ 49.3	\$ 96.2

The following inputs and assumptions were used in the Monte Carlo simulation model to estimate the fair value of the contingent consideration at December 31, 2022 and 2021:

	2022	2021
Discount rate	12.00 %	8.00 %
Volatility	20.00 %	20.00 %

Refer to Note 17, "Acquisitions and Divestitures" for more information regarding the contingent consideration.

The carrying values of cash and cash equivalents, accounts receivable and accounts payable are a reasonable estimate of their fair value due to the short-term nature of these instruments. There have been no transfers between levels of the fair value hierarchy.

#### NOTE 10. LEASES

The Company's lease portfolio includes various contracts for real estate, vehicles, information technology and other equipment. At contract inception, the Company determines a lease exists if the contract conveys the right to control an identified asset for a period of time in exchange for consideration. Control is considered to exist when the lessee has the right to obtain substantially all of the economic benefits from the use of an identified asset as well as the right to direct the use of that asset. If a contract is considered to be a lease, the Company recognizes a lease liability based on the present value of the future lease payments, with an offsetting entry to recognize a right-of-use asset. Options to extend or terminate a lease are included when it is reasonably certain an option will be exercised. As a majority of the Company's leases do not provide an implicit rate within the lease, an incremental borrowing rate is used which is based on information available at the commencement date.

The following table includes a summary of the Company's lease portfolio and Balance Sheet classification:

<i>In millions</i>	Classification	December 31, 2022	December 31, 2021
<b>Assets</b>			
Operating lease right-of-use assets <sup>(1)</sup>	Other noncurrent assets	\$ 462.5	\$ 436.8
<b>Liabilities</b>			
Operating lease current	Other current liabilities	155.8	147.3
Operating lease noncurrent	Other noncurrent liabilities	313.5	296.0
Weighted average remaining lease term		3.9 years	3.9 years
Weighted average discount rate		3.0 %	2.3 %

<sup>(1)</sup> Prepaid lease payments and lease incentives are recorded as part of the right-of-use asset. The net impact was \$6.8 million and \$6.5 million at December 31, 2022 and December 31, 2021, respectively.



The Company accounts for each separate lease component of a contract and its associated non-lease component as a single lease component. In addition, the Company utilizes a portfolio approach for the vehicle, information technology and equipment asset classes as the application of the lease model to the portfolio would not differ materially from the application of the lease model to the individual leases within the portfolio.

The following table includes lease costs and related cash flow information for the years ended December 31:

<i>In millions</i>	2022	2021
Operating lease expense	\$ 179.4	\$ 168.3
Variable lease expense	28.2	24.5
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	179.0	167.9
Right-of-use assets obtained in exchange for new operating lease liabilities	177.0	163.2

Operating lease expense is recognized on a straight-line basis over the lease term. In addition, the Company has certain leases that contain variable lease payments which are based on an index, a rate referenced in the lease or on the actual usage of the leased asset. These payments are not included in the right-of-use asset or lease liability and are expensed as incurred as variable lease expense.

Maturities of lease obligations were as follows:

<i>In millions</i>	December 31, 2022
Operating leases:	
2023	\$ 168.9
2024	129.4
2025	87.4
2026	61.4
2027	31.2
After 2027	30.3
Total lease payments	\$ 508.6
Less: Interest	(39.3)
Present value of lease liabilities	\$ 469.3

#### **NOTE 11. PENSIONS AND POSTRETIREMENT BENEFITS OTHER THAN PENSIONS**

The Company sponsors several U.S. defined benefit and defined contribution plans covering substantially all of the Company's U.S. employees. Additionally, the Company has many non-U.S. defined benefit and defined contribution plans covering eligible non-U.S. employees. Postretirement benefits other than pensions (OPEB) provide healthcare benefits, and in some instances, life insurance benefits for certain eligible employees.

##### ***Pension Plans***

The non-contributory defined benefit pension plans covering non-collectively bargained U.S. employees provide benefits on a final average pay formula while plans for most collectively bargained U.S. employees provide benefits on a flat dollar benefit formula or a percentage of pay formula. The non-U.S. pension plans generally provide benefits based on earnings and years of service. The Company also maintains additional other supplemental plans for officers and other key or highly compensated employees.

The following table details information regarding the Company's pension plans at December 31:

<i>In millions</i>	2022	2021
<b>Change in benefit obligations:</b>		
Benefit obligation at beginning of year	\$ 3,394.5	\$ 3,662.8
Service cost	47.5	50.9
Interest cost	70.3	58.6
Employee contributions	0.9	0.9
Amendments	—	(0.3)
Actuarial (gains) losses <sup>(1)</sup>	(810.3)	(121.9)
Benefits paid	(243.1)	(200.6)
Currency translation	(59.6)	(28.4)
Curtailments, settlements and special termination benefits	(5.0)	(20.0)
Other, including expenses paid	(9.1)	(7.5)
Benefit obligation at end of year	<u>\$ 2,386.1</u>	<u>\$ 3,394.5</u>
<b>Change in plan assets:</b>		
Fair value at beginning of year	\$ 2,993.8	\$ 3,114.6
Actual return on assets	(706.7)	73.5
Company contributions	90.5	55.9
Employee contributions	0.9	0.9
Benefits paid	(243.1)	(200.6)
Currency translation	(62.6)	(21.8)
Settlements	(5.0)	(20.5)
Other, including expenses paid	(16.2)	(8.2)
Fair value of assets end of year	<u>\$ 2,051.6</u>	<u>\$ 2,993.8</u>
Net unfunded liability	<u>\$ (334.5)</u>	<u>\$ (400.7)</u>
<b>Amounts included in the balance sheet:</b>		
Other noncurrent assets	\$ 61.0	\$ 82.2
Accrued compensation and benefits	(27.3)	(56.4)
Postemployment and other benefit liabilities	(368.2)	(426.5)
Net amount recognized	<u>\$ (334.5)</u>	<u>\$ (400.7)</u>

<sup>(1)</sup> Actuarial (gains) losses primarily resulted from changes in discount rates.

It is the Company's objective to contribute to the pension plans to ensure adequate funds, and no less than required by law, are available in the plans to make benefit payments to plan participants and beneficiaries when required. However, certain plans are not or cannot be funded due to either legal, accounting, or tax requirements in certain jurisdictions. As of December 31, 2022, approximately seven percent of the Company's projected benefit obligation relates to plans that cannot be funded.

The pretax amounts recognized in *Accumulated other comprehensive income (loss)* were as follows:

<i>In millions</i>	Prior service benefit (cost)	Net actuarial gains (losses)	Total
December 31, 2021	\$ (26.3)	\$ (559.8)	\$ (586.1)
Current year changes recorded to AOCI	—	0.5	0.5
Amortization reclassified to earnings	3.9	23.3	27.2
Settlements/curtailments reclassified to earnings	—	15.0	15.0
Currency translation and other	1.5	11.2	12.7
December 31, 2022	<u>\$ (20.9)</u>	<u>\$ (509.8)</u>	<u>\$ (530.7)</u>

Weighted-average assumptions used to determine the benefit obligation at December 31 were as follows:

	2022	2021
Discount rate:		
U.S. plans	5.51 %	2.88 %
Non-U.S. plans	4.63 %	1.74 %
Rate of compensation increase:		
U.S. plans	4.00 %	4.00 %
Non-U.S. plans	4.25 %	4.00 %

The accumulated benefit obligation for all defined benefit pension plans was \$2,343.2 million and \$3,311.0 million at December 31, 2022 and 2021, respectively. The projected benefit obligation, accumulated benefit obligation, and fair value of plan assets for pension plans with accumulated benefit obligations more than plan assets were \$1,850.0 million, \$1,847.0 million and \$1,585.6 million, respectively, as of December 31, 2022, and \$2,906.5 million, \$2,831.5 million and \$2,424.6 million, respectively, as of December 31, 2021.

Pension benefit payments are expected to be paid as follows:

<i>In millions</i>	
2023	\$ 202.7
2024	192.9
2025	178.1
2026	180.8
2027	190.4
2028-2032	873.5

The components of the Company's net periodic pension benefit costs for the years ended December 31 include the following:

<i>In millions</i>	2022	2021	2020
Service cost	\$ 47.5	\$ 50.9	\$ 58.3
Interest cost	70.3	58.6	83.8
Expected return on plan assets	(103.8)	(106.2)	(121.1)
Net amortization of:			
Prior service costs (benefits)	3.9	5.0	5.3
Plan net actuarial (gains) losses	23.3	35.6	43.7
Net periodic pension benefit cost	41.2	43.9	70.0
Net curtailment, settlement, and special termination benefits (gains) losses	15.0	8.0	(1.8)
Net periodic pension benefit cost after net curtailment and settlement (gains) losses	\$ 56.2	\$ 51.9	\$ 68.2
Amounts recorded in continuing operations:			
Operating income	\$ 43.2	\$ 47.1	\$ 51.7
Other income/(expense), net	9.2	(0.9)	11.7
Amounts recorded in discontinued operations	3.8	5.7	4.8
Total	\$ 56.2	\$ 51.9	\$ 68.2

Pension benefit cost for 2023 is projected to be approximately \$54 million.

Weighted-average assumptions used to determine net periodic pension cost for the years ended December 31 were as follows:

	2022	2021	2020
Discount rate:			
U.S. plans			
Service cost	3.06 %	2.75 %	3.36 %
Interest cost	2.36 %	1.82 %	2.78 %
Non-U.S. plans			
Service cost	2.07 %	1.56 %	1.87 %
Interest cost	1.62 %	1.09 %	1.51 %
Rate of compensation increase:			
U.S. plans	4.00 %	4.00 %	4.00 %
Non-U.S. plans	4.00 %	4.00 %	3.75 %
Expected return on plan assets:			
U.S. plans	4.00 %	4.00 %	4.75 %
Non-U.S. plans	2.50 %	2.25 %	2.75 %

The expected long-term rate of return on plan assets reflects the average rate of returns expected on the funds invested or to be invested to provide for the benefits included in the projected benefit obligation. The expected long-term rate of return on plan assets is based on what is achievable given the plan's investment policy, the types of assets held and target asset allocations. The expected long-term rate of return is determined as of the measurement date. The Company reviews each plan and its historical returns and target asset allocations to determine the appropriate expected long-term rate of return on plan assets to be used.

The Company's objective in managing its defined benefit plan assets is to ensure that all present and future benefit obligations are met as they come due. It seeks to achieve this goal while trying to mitigate volatility in plan funded status, contribution, and expense by better matching the characteristics of the plan assets to that of the plan liabilities. The Company utilizes a dynamic approach to asset allocation whereby a plan's allocation to fixed income assets increases as the plan's funded status improves. The Company monitors plan funded status and asset allocation regularly in addition to investment manager performance.

The fair values of the Company's pension plan assets at December 31, 2022 by asset category were as follows:

<i>In millions</i>	Fair value measurements			Net asset value	Total fair value
	Level 1	Level 2	Level 3		
Cash and cash equivalents	\$ 3.3	\$ 50.6	\$ —	\$ —	\$ 53.9
Equity investments:					
Registered mutual funds – equity specialty	—	—	—	68.0	68.0
Commingled funds – equity specialty	—	—	—	244.5	244.5
	—	—	—	312.5	312.5
Fixed income investments:					
U.S. government and agency obligations	—	323.6	—	—	323.6
Corporate and non-U.S. bonds <sup>(a)</sup>	—	1,065.7	—	—	1,065.7
Asset-backed and mortgage-backed securities	—	12.5	—	—	12.5
Registered mutual funds – fixed income specialty	—	—	—	105.0	105.0
Commingled funds – fixed income specialty	—	—	—	61.7	61.7
Other fixed income <sup>(b)</sup>	—	—	29.3	—	29.3
	—	1,401.8	29.3	166.7	1,597.8
Derivatives	—	(1.5)	—	—	(1.5)
Real estate <sup>(c)</sup>	—	—	0.9	—	0.9
Other <sup>(d)</sup>	—	—	79.6	—	79.6
Total assets at fair value	\$ 3.3	\$ 1,450.9	\$ 109.8	\$ 479.2	\$ 2,043.2
Receivables and payables, net					8.4
Net assets available for benefits					\$ 2,051.6

The fair values of the Company's pension plan assets at December 31, 2021 by asset category were as follows:

<i>In millions</i>	Fair value measurements			Net asset value	Total fair value
	Level 1	Level 2	Level 3		
Cash and cash equivalents	\$ 1.6	\$ 50.5	\$ —	\$ —	\$ 52.1
Equity investments:					
Registered mutual funds – equity specialty	—	—	—	107.5	107.5
Commingled funds – equity specialty	—	—	—	362.5	362.5
	—	—	—	470.0	470.0
Fixed income investments:					
U.S. government and agency obligations	—	551.4	—	—	551.4
Corporate and non-U.S. bonds <sup>(a)</sup>	—	1,453.6	—	—	1,453.6
Asset-backed and mortgage-backed securities	—	63.7	—	—	63.7
Registered mutual funds – fixed income specialty	—	—	—	191.4	191.4
Commingled funds – fixed income specialty	—	—	—	77.7	77.7
Other fixed income <sup>(b)</sup>	—	—	32.0	—	32.0
	—	2,068.7	32.0	269.1	2,369.8
Derivatives	—	(0.5)	—	—	(0.5)
Real estate <sup>(c)</sup>	—	—	2.1	—	2.1
Other <sup>(d)</sup>	—	—	106.1	—	106.1
Total assets at fair value	\$ 1.6	\$ 2,118.7	\$ 140.2	\$ 739.1	\$ 2,999.6
Receivables and payables, net					(5.8)
Net assets available for benefits					\$ 2,993.8

(a) This class includes state and municipal bonds.

(b) This class includes group annuity and guaranteed interest contracts.

(c) This class includes a private equity fund that invests in real estate.

(d) This investment comprises the Company's non-significant, non-US pension plan assets. It primarily includes insurance contracts.

Cash equivalents are valued using a market approach with inputs including quoted market prices for either identical or similar instruments. Fixed income securities are valued through a market approach with inputs including, but not limited to, benchmark yields, reported trades, broker quotes and issuer spreads. Commingled funds are valued at their daily net asset value (NAV) per share or the equivalent. NAV per share or the equivalent is used for fair value purposes as a practical expedient. NAVs are calculated by the investment manager or sponsor of the fund. Private real estate fund values are reported by the fund manager and are based on valuation or appraisal of the underlying investments. Refer to Note 9, "Fair Value Measurements" for additional information related to the fair value hierarchy. There have been no significant transfers between levels of the fair value hierarchy.

The Company made required and discretionary contributions to its pension plans of \$90.5 million in 2022, \$55.9 million in 2021, and \$99.7 million in 2020 and currently projects that it will contribute approximately \$69 million to its plans worldwide in 2023. The contribution in 2020 included \$24.4 million to fund Ingersoll Rand Industrial plans prior to the completion of the Transaction. The Company's policy allows it to fund an amount, which could be in excess of or less than the pension cost expensed, subject to the limitations imposed by current tax regulations. However, the Company anticipates funding the plans in 2023 in accordance with contributions required by funding regulations or the laws of each jurisdiction.

Most of the Company's U.S. employees are covered by defined contribution plans. Employer contributions are determined based on criteria specific to the individual plans and amounted to approximately \$138 million, \$126 million and \$111 million in 2022, 2021 and 2020, respectively. The Company's contributions relating to non-U.S. defined contribution plans and other non-U.S. benefit plans were \$33.8 million, \$34.9 million and \$19.2 million in 2022, 2021 and 2020, respectively.

***Multiemployer Pension Plans***

The Company also participates in a number of multiemployer defined benefit pension plans related to collectively bargained U.S. employees of Trane. The Company's contributions are determined by the terms of the related collective-bargaining agreements. These multiemployer plans pose different risks to the Company than single-employer plans, including:

1. The Company's contributions to multiemployer plans may be used to provide benefits to all participating employees of the plan, including employees of other employers.
2. In the event that another participating employer ceases contributions to a plan, the Company, together with other remaining participating employers, may be responsible for any unfunded obligations of the employer that ceased making contributions.
3. If the Company chooses to withdraw from any of the multiemployer plans or if a partial withdrawal occurs, the Company may be required to pay a withdrawal liability, based on the underfunded status of the plan.

As of December 31, 2022, the Company does not participate in any multiemployer plans that are individually significant.

***Postretirement Benefits Other Than Pensions***

The Company sponsors several postretirement plans that provide for healthcare benefits, and in some instances, life insurance benefits that cover certain eligible employees. These plans are unfunded and have no plan assets, but are instead funded by the Company on a pay-as-you-go basis in the form of direct benefit payments. Generally, postretirement health benefits are contributory with contributions adjusted annually. Life insurance plans for retirees are primarily non-contributory.

The following table details changes in the Company's postretirement plan benefit obligations for the years ended December 31:

<i>In millions</i>	2022	2021
Benefit obligation at beginning of year	\$ 342.2	\$ 389.1
Service cost	1.8	2.1
Interest cost	6.9	5.5
Plan participants' contributions	5.7	5.6
Actuarial (gains) losses <sup>(1)</sup>	(53.7)	(22.2)
Benefits paid, net of Medicare Part D subsidy <sup>(2)</sup>	(39.8)	(37.8)
Amendments	3.3	—
Other	—	(0.1)
<b>Benefit obligations at end of year</b>	<b>\$ 266.4</b>	<b>\$ 342.2</b>

<sup>(1)</sup> Actuarial (gains) losses primarily resulted from changes in discount rates.

<sup>(2)</sup> Amounts are net of Medicare Part D subsidy of \$0.4 million and \$0.5 million in 2022 and 2021, respectively.

The benefit plan obligations are reflected in the Consolidated Balance Sheets as follows:

<i>In millions</i>	December 31, 2022	December 31, 2021
Accrued compensation and benefits	\$ (34.2)	\$ (33.8)
Postemployment and other benefit liabilities	(232.2)	(308.4)
Total	\$ (266.4)	\$ (342.2)

The pre-tax amounts recognized in *Accumulated other comprehensive income (loss)* were as follows:

<i>In millions</i>	Prior service benefit (cost)	Net actuarial gains (losses)	Total
Balance at December 31, 2021	\$ —	\$ 72.4	\$ 72.4
Current year changes recorded to AOCI	(3.3)	53.7	50.4
Amortization reclassified to earnings	—	(5.6)	(5.6)
Balance at December 31, 2022	\$ (3.3)	\$ 120.5	\$ 117.2

The components of net periodic postretirement benefit cost for the years ended December 31 were as follows:

<i>In millions</i>	2022	2021	2020
Service cost	\$ 1.8	\$ 2.1	\$ 2.4
Interest cost	6.9	5.5	9.7
Net amortization of net actuarial (gains) losses	(5.6)	(2.0)	(5.6)
Net periodic postretirement benefit cost	\$ 3.1	\$ 5.6	\$ 6.5
Amounts recorded in continuing operations:			
Operating income	\$ 1.8	\$ 2.1	\$ 2.4
Other income/(expense), net	1.4	2.5	3.0
Amounts recorded in discontinued operations	(0.1)	1.0	1.1
Total	\$ 3.1	\$ 5.6	\$ 6.5

Postretirement cost for 2023 is projected to be approximately \$2 million. The amount expected to be recognized in net periodic postretirement benefits cost in 2023 for net actuarial gains is approximately \$13 million.

Weighted-average assumptions used to determine net periodic benefit cost for the years ended December 31 were as follows:

	2022	2021	2020
Discount rate:			
Benefit obligations at December 31	5.51 %	2.73 %	2.25 %
Net periodic benefit cost			
Service cost	2.82 %	2.40 %	3.18 %
Interest cost	2.33 %	1.84 %	2.73 %
Assumed health-care cost trend rates at December 31:			
Current year medical inflation	6.50 %	6.25 %	6.50 %
Ultimate inflation rate	5.00 %	4.75 %	4.75 %
Year that the rate reaches the ultimate trend rate	2028	2028	2028

Benefit payments for postretirement benefits, which are net of expected plan participant contributions and Medicare Part D subsidy, are expected to be paid as follows:

<i>In millions</i>		
2023	\$	35.1
2024		30.0
2025		28.6
2026		27.2
2027		25.6
2028 — 2032		106.1

## NOTE 12. REVENUE

### *Performance Obligations*

A performance obligation is a distinct good, service or a bundle of goods and services promised in a contract. The Company identifies performance obligations at the inception of a contract and allocates the transaction price to individual performance obligations to faithfully depict the Company's performance in transferring control of the promised goods or services to the customer.

The following are the primary performance obligations identified by the Company:

*Equipment.* The Company principally generates revenue from the sale of equipment to customers and recognizes revenue at a point in time when control transfers to the customer. Transfer of control is generally determined based on the shipping terms of the contract.

*Contracting and installation.* The Company enters into various construction-type contracts to design, deliver and build integrated solutions to meet customer specifications. These transactions provide services that range from the development and installation of new HVAC systems to the design and integration of critical building systems to optimize energy efficiency and overall performance. These contracts have a typical term of less than one year and are considered a single performance obligation as multiple combined goods and services promised in the contract represent a single output delivered to the customer. Revenues associated with contracting and installation contracts are recognized over time with progress towards completion measured using the cost-to-cost input method as the basis to recognize revenue and an estimated profit. To-date efforts for work performed corresponds with and faithfully depicts transfer of control to the customer.

*Services and maintenance.* The Company provides various levels of preventative and/or repair and maintenance type service agreements for its customers. The typical length of a contract is 12 months but can be as long as 60 months. Revenues associated with these performance obligations are primarily recognized over time on a straight-line basis over the life of the contract as the customer simultaneously receives and consumes the benefit provided by the Company. However, if historical evidence indicates that the cost of providing these services on a straight-line basis is not appropriate, revenue is recognized over the contract period in proportion to the costs expected to be incurred while performing the service. Revenues for certain repair services that do not meet the criteria for over time revenue recognition and sales of parts are recognized at a point in time.

*Extended warranties.* The Company enters into various warranty contracts with customers related to its products. A standard warranty generally warrants that a product is free from defects in workmanship and materials under normal use and conditions for a certain period of time. The Company's standard warranty is not considered a distinct performance obligation as it does not provide services to customers beyond assurance that the covered product is free of initial defects. An extended warranty provides a customer with additional time that the Company is liable for covered incidents associated with its products. Extended warranties are purchased separately and can last up to five years. As a result, they are considered separate performance obligations for the Company. Revenue associated with these performance obligations is primarily recognized over time on a straight-line basis over the life of the contract as the customer simultaneously receives and consumes the benefit provided by the Company. However, if historical evidence indicates that the cost of providing these services on a straight-line basis is not appropriate, revenue is recognized over the contract period in proportion to the costs expected to be incurred while performing the service. Refer to Note 20, "Commitments and Contingencies," for more information related to product warranties.

The transaction price allocated to performance obligations reflects the Company's expectations about the consideration it will be entitled to receive from a customer. To determine the transaction price, variable and non-cash consideration are assessed as well as whether a significant financing component exists. The Company includes variable consideration in the estimated transaction price when it is probable that significant reversal of revenue recognized would not occur when the uncertainty associated with variable consideration is subsequently resolved. The Company considers historical data in determining its best estimates of variable consideration, and the related accruals are recorded using the expected value method.



For projects financed through energy savings, the Company provides financial guarantees for in-process work and financial commitments with end dates varying from the current fiscal year through the completion of such transactions that could be triggered in the event of nonperformance. Additionally, the Company has performance guarantees related to completed energy savings contracts that are provided under the maintenance portion of contracting and installation agreements. These performance guarantees represent variable consideration and are estimated as part of the overall transaction price. As of December 31, 2022, the Company has outstanding performance guarantees of approximately \$1 billion related to these energy savings contracts that extend from 2023-2048. Since 1995, the Company has recognized approximately \$1 million in adjustments to the transaction price as a result of these performance guarantees.

The Company enters into sales arrangements that contain multiple goods and services. For these arrangements, each good or service is evaluated to determine whether it represents a distinct performance obligation and whether the sales price for each obligation is representative of standalone selling price. If available, the Company utilizes observable prices for goods or services sold separately to similar customers in similar circumstances to evaluate relative standalone selling price. List prices are used if they are determined to be representative of standalone selling prices. Where necessary, the Company ensures that the total transaction price is then allocated to the distinct performance obligations based on the determination of their relative standalone selling price at the inception of the arrangement.

The Company recognizes revenue for delivered goods or services when the delivered good or service is distinct, control of the good or service has transferred to the customer, and only customary refund or return rights related to the goods or services exist. The Company excludes from revenues taxes it collects from a customer that are assessed by a government authority.

### ***Disaggregated Revenue***

*Net revenues* by geography and major type of good or service for the years ended at December 31 were as follows:

<i>In millions</i>	2022	2021	2020
<b>Americas</b>			
Equipment	\$ 8,575.1	\$ 7,319.8	\$ 6,479.0
Services	4,065.7	3,637.3	3,206.9
Total Americas	\$ 12,640.8	\$ 10,957.1	\$ 9,685.9
<b>EMEA</b>			
Equipment	\$ 1,420.9	\$ 1,328.0	\$ 1,119.9
Services	613.6	616.9	528.2
Total EMEA	\$ 2,034.5	\$ 1,944.9	\$ 1,648.1
<b>Asia Pacific</b>			
Equipment	\$ 934.8	\$ 851.0	\$ 773.6
Services	381.6	383.4	347.1
Total Asia Pacific	\$ 1,316.4	\$ 1,234.4	\$ 1,120.7
Total Net revenues	\$ 15,991.7	\$ 14,136.4	\$ 12,454.7

Revenue from goods and services transferred to customers at a point in time accounted for approximately 82%, 82% and 81% of the Company's revenue for the years ended December 31, 2022, 2021 and 2020, respectively.

### ***Contract Balances***

The opening and closing balances of contract assets and contract liabilities arising from contracts with customers for the period ended December 31, 2022 and December 31, 2021 were as follows:

<i>In millions</i>	Location on Consolidated Balance Sheet	2022	2021
Contract assets - current	<i>Other current assets</i>	\$ 201.2	\$ 164.8
Contract assets - noncurrent	<i>Other noncurrent assets</i>	239.6	218.5
Contract liabilities - current	<i>Accrued expenses and other current liabilities</i>	1,010.6	805.4
Contract liabilities - noncurrent	<i>Other noncurrent liabilities</i>	471.4	446.6

The timing of revenue recognition, billings and cash collections results in accounts receivable, contract assets, and customer advances and deposits (contract liabilities) on the Consolidated Balance Sheet. In general, the Company receives payments from customers based on a billing schedule established in its contracts. Contract assets relate to the conditional right to

consideration for any completed performance under the contract when costs are incurred in excess of billings under the percentage-of-completion methodology. Accounts receivable are recorded when the right to consideration becomes unconditional. Contract liabilities relate to payments received in advance of performance under the contract or when the Company has a right to consideration that is unconditional before it transfers a good or service to the customer. Contract liabilities are recognized as revenue as (or when) the Company performs under the contract. During the years ended December 31, 2022 and 2021, changes in contract asset and liability balances were not materially impacted by any other factors.

Approximately 55% of the contract liability balance at December 31, 2021 was recognized as revenue during the year ended December 31, 2022. Additionally, approximately 32% of the contract liability balance at December 31, 2022 was classified as noncurrent and not expected to be recognized as revenue in the next 12 months.

### NOTE 13. EQUITY

The authorized share capital of Trane Technologies plc is 1,185,040,000 shares, consisting of (1) 1,175,000,000 ordinary shares, par value \$1.00 per share, (2) 40,000 ordinary shares, par value EUR 1.00 and (3) 10,000,000 preference shares, par value \$0.001 per share. There were no Euro-denominated ordinary shares or preference shares outstanding at December 31, 2022 or 2021.

The changes in ordinary shares and treasury shares for the year ended December 31, 2022 were as follows:

<i>In millions</i>	Ordinary shares issued	Ordinary shares held in treasury
December 31, 2021	259.7	24.5
Shares issued under incentive plans	1.1	
Repurchase of ordinary shares	(7.5)	
December 31, 2022	253.3	24.5

Share repurchases are made from time to time in accordance with management's capital allocation strategy, subject to market conditions and regulatory requirements. Shares acquired and canceled upon repurchase are accounted for as a reduction of *Ordinary Shares* and *Capital in excess of par value*, or *Retained earnings* to the extent *Capital in excess of par value* is exhausted. Shares acquired and held in treasury are presented separately on the balance sheet as a reduction to *Equity* and recognized at cost.

In February 2022, the Company's Board of Directors authorized the repurchase of up to \$3.0 billion of its ordinary shares (2022 Authorization) upon the completion of its current share repurchase program of up to \$2.0 billion of its ordinary shares which was authorized in 2021 (2021 Authorization). During the year ended December 31, 2022, the Company repurchased and canceled approximately \$1,200.0 million of its ordinary shares leaving approximately \$200 million remaining under the 2021 Authorization as of December 31, 2022.

#### *Accumulated Other Comprehensive Income (Loss)*

The changes in *Accumulated other comprehensive income (loss)* were as follows:

<i>In millions</i>	Derivative Instruments	Pension and OPEB Items	Foreign Currency Translation	Total
December 31, 2020	\$ 10.8	\$ (416.5)	\$ (225.8)	\$ (631.5)
Other comprehensive income (loss) attributable to Trane Technologies plc	(3.7)	118.6	(121.0)	(6.1)
December 31, 2021	\$ 7.1	\$ (297.9)	\$ (346.8)	\$ (637.6)
Other comprehensive income (loss) attributable to Trane Technologies plc	(11.6)	83.8	(200.8)	(128.6)
December 31, 2022	\$ (4.5)	\$ (214.1)	\$ (547.6)	\$ (766.2)

The amounts of *Other comprehensive income (loss) attributable to noncontrolling interests* for 2022, 2021 and 2020 were \$(1.9) million, \$(1.7) million and \$2.7 million, respectively, related to currency translation. Additionally, *Other comprehensive income (loss) attributable to noncontrolling interests* for 2022 and 2021 includes \$0.3 million and \$1.2 million, respectively, related to pension and postretirement obligation adjustments.

**NOTE 14. SHARE-BASED COMPENSATION**

The Company accounts for share-based compensation plans under the fair-value based method. Fair value is measured once at the date of grant and is not adjusted for subsequent changes. The Company's share-based compensation plans include programs for stock options, restricted stock units (RSUs), performance share units (PSUs), and deferred compensation. Under the Company's incentive share plan, the total number of ordinary shares authorized by the shareholders is 23.0 million, of which 13.0 million remains available as of December 31, 2022 for future incentive awards.

In connection with the completion of the Transaction, the provisions of the Company's existing share-based compensation plans required adjustment to the terms of outstanding awards in order to preserve the intrinsic value of the awards immediately before and after the separation. The outstanding awards will continue to vest over the original vesting period, which is generally three years from the grant date. At the Distribution Date, the Company incurred less than \$0.1 million of incremental compensation costs related to the preservation of the share-based compensation intrinsic value post-separation.

**Compensation Expense**

Share-based compensation expense related to continuing operations is included in *Selling and administrative expenses*. The following table summarizes the expenses recognized:

<i>In millions</i>	2022	2021	2020
Stock options	\$ 14.1	\$ 16.7	\$ 17.9
RSUs	19.7	21.9	23.3
PSUs	20.7	26.1	26.7
Deferred compensation	1.2	3.0	3.9
Pre-tax expense	55.7	67.7	71.8
Tax benefit	(13.5)	(16.4)	(17.4)
After-tax expense	\$ 42.2	\$ 51.3	\$ 54.4
Amounts recorded in continuing operations	42.6	51.3	52.7
Amounts recorded in discontinued operations	(0.4)	—	1.7
Total	\$ 42.2	\$ 51.3	\$ 54.4

Grants issued during the years ended December 31 were as follows:

	2022		2021		2020	
	Number Granted	Weighted-average fair value per award	Number Granted	Weighted-average fair value per award	Number Granted	Weighted-average fair value per award
Stock options	430,496	\$ 35.96	589,417	\$ 29.62	1,021,628	\$ 16.75
RSUs	139,730	\$ 165.07	153,806	\$ 154.33	213,142	\$ 104.76
Performance shares <sup>(1)</sup>	195,930	\$ 170.31	284,300	\$ 181.84	278,468	\$ 140.72

<sup>(1)</sup> The number of performance shares represents the maximum award level.

### Stock Options / RSUs

Eligible participants may receive (i) stock options, (ii) RSUs or (iii) a combination of both stock options and RSUs. The fair value of each of the Company's stock option and RSU awards is expensed on a straight-line basis over the required service period, which is generally the 3-year vesting period. However, for stock options and RSUs granted to retirement eligible employees, the Company recognizes expense for the fair value at the grant date.

The average fair value of the stock options granted is determined using the Black Scholes option pricing model. The following assumptions were used during the year ended December 31:

	2022	2021	2020
Dividend yield	1.60 %	1.60 %	2.01 %
Volatility	28.23 %	27.90 %	24.33 %
Risk-free rate of return	1.56 %	0.45 %	0.56 %
Expected life in years	4.8	4.8	4.8

A description of the significant assumptions used to estimate the fair value of the stock option awards is as follows:

- *Dividend yield* - The Company determines the dividend yield based upon the expected quarterly dividend payments as of the grant date and the current fair market value of the Company's shares.
- *Volatility* - The expected volatility is based on a weighted average of the Company's implied volatility and the most recent historical volatility of the Company's shares commensurate with the expected life.
- *Risk-free rate of return* - The Company applies a yield curve of continuous risk-free rates based upon the published US Treasury spot rates on the grant date.
- *Expected life in years* - The expected life of the Company's stock option awards represents the weighted-average of the actual period since the grant date for all exercised or canceled options and an expected period for all outstanding options.

Changes in options outstanding under the plans for the years 2022, 2021 and 2020 were as follows:

	Shares subject to option	Weighted-average exercise price	Aggregate intrinsic value (millions)	Weighted-average remaining life (years)
December 31, 2019	5,419,246	\$ 78.91		
Granted	1,021,628	105.29		
Exercised	(1,767,782)	58.27		
Cancelled	(49,539)	88.12		
Adjustment due to the Transaction	1,095,805	n/a		
December 31, 2020	5,719,358	\$ 70.53		
Granted	589,417	150.34		
Exercised	(1,872,069)	64.74		
Cancelled	(25,706)	115.33		
December 31, 2021	4,411,000	\$ 83.39		
Granted	430,496	167.93		
Exercised	(633,962)	66.06		
Cancelled	(57,050)	137.38		
Outstanding December 31, 2022	4,150,484	\$ 94.06	\$ 308.0	5.1
Exercisable December 31, 2022	3,031,573	\$ 75.79	\$ 279.9	4.2

The following table summarizes information concerning currently outstanding and exercisable options:

Range of exercise price	Options outstanding			Options exercisable		
	Number outstanding at December 31, 2022	Weighted-average remaining life (years)	Weighted-average exercise price	Number exercisable at December 31, 2022	Weighted-average remaining life (years)	Weighted-average exercise price
\$ 25.01 — \$ 50.00	462,274	2.2	\$ 40.18	462,274	2.2	\$ 40.18
50.01 — 75.00	1,196,126	3.5	65.41	1,196,126	3.5	65.41
75.01 — 100.00	753,524	4.9	79.35	753,524	4.9	79.35
100.01 — 125.00	772,358	6.2	105.25	445,716	6.1	105.28
125.01 — 150.00	529,584	7.1	148.68	163,945	6.9	148.96
150.01 — 175.00	401,986	9.0	167.14	2,277	4.8	166.79
175.01 — 200.00	34,632	8.7	189.59	7,711	8.6	186.90
\$ 32.68 — \$ 195.00	4,150,484	5.1	\$ 94.06	3,031,573	4.2	\$ 75.79

At December 31, 2022, there was \$8.5 million of total unrecognized compensation cost from stock option arrangements granted under the plan, which is primarily related to unvested shares of non-retirement eligible employees. The aggregate intrinsic value of options exercised during the years ended December 31, 2022 and 2021 was \$61.2 million and \$212.6 million, respectively. Generally, stock options expire ten years from their date of grant.

The following table summarizes RSU activity for the years 2022, 2021 and 2020:

	RSUs	Weighted-average grant date fair value
Outstanding and unvested at December 31, 2019	604,340	\$ 93.56
Granted	213,142	104.76
Vested	(338,952)	86.62
Cancelled	(11,356)	84.38
Adjustment due to the Transaction	22,348	n/a
Outstanding and unvested at December 31, 2020	489,522	\$ 87.75
Granted	153,806	154.33
Vested	(266,041)	82.18
Cancelled	(6,257)	115.11
Outstanding and unvested at December 31, 2021	371,030	\$ 118.88
Granted	139,730	165.07
Vested	(202,172)	107.29
Cancelled	(13,935)	136.89
Outstanding and unvested at December 31, 2022	294,653	\$ 147.88

At December 31, 2022, there was \$13.7 million of total unrecognized compensation cost from RSU arrangements granted under the plan, which is related to unvested shares of non-retirement eligible employees.

#### **Performance Shares**

The Company has a Performance Share Program (PSP) for key employees. The program provides awards in the form of PSUs based on performance against pre-established objectives. The annual target award level is expressed as a number of the Company's ordinary shares based on the fair market value of the Company's stock on the date of grant. All PSUs are settled in the form of ordinary shares.

PSU awards are earned based 50% upon a performance condition, measured by relative Cash Flow Return on Invested Capital (CROIC) to the S&P 500 Industrials Index over a 3-year performance period, and 50% upon a market condition, measured by the Company's relative total shareholder return (TSR) as compared to the TSR of the S&P 500 Industrials Index over a 3-year performance period. The fair value of the market condition is estimated using a Monte Carlo simulation model in a risk-neutral framework based upon historical volatility, risk-free rates and correlation matrix.

The following table summarizes PSU activity for the maximum number of shares that may be issued for the years 2022, 2021 and 2020:

	PSUs	Weighted-average grant date fair value
Outstanding and unvested at December 31, 2019	984,930	\$ 103.12
Granted	278,468	140.72
Vested	(340,400)	93.63
Forfeited	(56,430)	89.94
Adjustment due to the Transaction	151,904	n/a
Outstanding and unvested at December 31, 2020	1,018,472	\$ 99.53
Granted	284,300	181.84
Vested	(419,088)	82.93
Forfeited	(81,728)	160.86
Outstanding and unvested at December 31, 2021	801,956	\$ 131.14
Granted	195,930	170.31
Vested	(346,540)	89.70
Forfeited	(42,320)	164.21
Outstanding and unvested at December 31, 2022	609,026	\$ 165.02

At December 31, 2022, there was \$16.5 million of total unrecognized compensation cost from PSU arrangements based on current performance, which is related to unvested shares. This compensation will be recognized over the required service period, which is generally the three-year vesting period.

#### *Deferred Compensation*

The Company allows key employees to defer a portion of their eligible compensation into a number of investment choices, including its ordinary share equivalents. Any amounts invested in ordinary share equivalents will be settled in ordinary shares of the Company at the time of distribution.

#### **NOTE 15. OTHER INCOME/(EXPENSE), NET**

The components of *Other income/(expense), net* for the years ended December 31, 2022, 2021 and 2020 were as follows:

<i>In millions</i>	2022	2021	2020
Interest income	\$ 9.2	\$ 4.0	\$ 4.5
Foreign currency exchange loss	(17.9)	(10.7)	(10.0)
Other components of net periodic benefit credit/(cost)	(10.6)	(1.6)	(14.7)
Other activity, net	(4.0)	9.4	24.3
Other income/(expense), net	\$ (23.3)	\$ 1.1	\$ 4.1

*Other income/(expense), net* includes the results from activities other than core business operations such as interest income and foreign currency gains and losses on transactions that are denominated in a currency other than an entity's functional currency. In addition, the Company includes the components of net periodic benefit credit/(cost) for pension and post retirement obligations other than the service cost component. During the year ended December 31, 2022, the Company recorded a \$15.0 million settlement charge for a compensation related payment to a retired executive within other components of net periodic benefit credit/(cost).

Other activity, net primarily includes items associated with certain legal matters, as well as asbestos-related activities. During the year ended December 31, 2021, the Company recorded a gain of \$12.8 million related to the release of a pension indemnification liability, partially offset by a charge of \$7.2 million to increase its Funding Agreement liability from asbestos-related activities of Murray. Other activity, net for the year ended December 31, 2020, primarily includes a \$17.4 million adjustment to correct an overstatement of a legacy legal liability that originated in prior years and a gain of \$0.9 million related to the deconsolidation of Murray and its wholly-owned subsidiary ClimateLabs. Refer to Note 20, "Commitments and Contingencies," for more information regarding asbestos-related matters.

**NOTE 16. INCOME TAXES**
***Current and deferred provision for income taxes***

Earnings before income taxes for the years ended December 31 were taxed within the following jurisdictions:

<i>In millions</i>	2022	2021	2020
United States	\$ 1,312.3	\$ 995.5	\$ 653.9
Non-U.S.	859.8	795.2	634.3
Total	\$ 2,172.1	\$ 1,790.7	\$ 1,288.2

The components of the *Provision for income taxes* for the years ended December 31 were as follows:

<i>In millions</i>	2022	2021	2020
Current tax expense (benefit):			
United States	\$ 180.4	\$ 247.0	\$ 168.3
Non-U.S.	127.7	111.7	106.3
Total:	308.1	358.7	274.6
Deferred tax expense (benefit):			
United States	66.5	(42.5)	11.2
Non-U.S.	1.3	17.3	11.0
Total:	67.8	(25.2)	22.2
Total tax expense (benefit):			
United States	246.9	204.5	179.5
Non-U.S.	129.0	129.0	117.3
Total	\$ 375.9	\$ 333.5	\$ 296.8

The *Provision for income taxes* differs from the amount of income taxes determined by applying the applicable U.S. statutory income tax rate to pretax income, as a result of the following differences:

	Percent of pretax income		
	2022	2021	2020
Statutory U.S. rate	21.0 %	21.0 %	21.0 %
Increase (decrease) in rates resulting from:			
Non-U.S. tax rate differential	(2.8)	(2.8)	(1.1)
Tax on U.S. subsidiaries on non-U.S. earnings <sup>(a)</sup>	0.3	(0.3)	0.3
State and local income taxes <sup>(b)</sup>	1.1	2.0	4.3
Valuation allowances <sup>(c)</sup>	(0.7)	(1.1)	(1.1)
Stock based compensation	(0.8)	(1.8)	(1.7)
Expiration of carryforward tax attributes	—	—	1.1
Other adjustments	(0.8)	1.6	0.2
Effective tax rate	17.3 %	18.6 %	23.0 %

(a) Net of foreign tax credits

(b) Net of changes in state valuation allowances

(c) Primarily federal and non-U.S., excludes state valuation allowances

Tax incentives, in the form of tax holidays, have been granted to the Company in certain jurisdictions to encourage industrial development. The expiration of these tax holidays varies by country. The tax holidays are conditional on the Company meeting certain employment and investment thresholds. The most significant tax holidays relate to the Company's qualifying locations in China, Puerto Rico and Panama. The benefit for the tax holidays for the years ended December 31, 2022, 2021 and 2020 was \$52.5 million, \$32.6 million and \$24.6 million, respectively.

### *Deferred tax assets and liabilities*

A summary of the deferred tax accounts at December 31 were as follows:

<i>In millions</i>	2022	2021
Deferred tax assets:		
Inventory and accounts receivable	\$ 11.2	\$ 11.0
Fixed assets and intangibles	2.6	5.6
Operating lease liabilities	112.0	106.0
Postemployment and other benefit liabilities	254.6	285.7
Product liability	5.5	4.6
Funding liability	—	73.7
Other reserves and accruals	181.5	171.2
Net operating losses and credit carryforwards	346.0	453.3
Other	40.7	29.0
Gross deferred tax assets	954.1	1,140.1
Less: deferred tax valuation allowances	(199.8)	(258.6)
Deferred tax assets net of valuation allowances	\$ 754.3	\$ 881.5
Deferred tax liabilities:		
Inventory and accounts receivable	\$ (50.7)	\$ (18.6)
Fixed assets and intangibles	(1,069.0)	(1,135.4)
Operating lease right-of-use assets	(110.4)	(104.4)
Postemployment and other benefit liabilities	(15.7)	(21.3)
Other reserves and accruals	(5.5)	(5.2)
Undistributed earnings of foreign subsidiaries	(28.0)	(27.8)
Other	(1.6)	(6.9)
Gross deferred tax liabilities	(1,280.9)	(1,319.6)
Net deferred tax assets (liabilities)	\$ (526.6)	\$ (438.1)

At December 31, 2022, no deferred taxes have been provided for earnings of certain of the Company's subsidiaries, since these earnings have been and under current plans will continue to be permanently reinvested in these subsidiaries. These earnings amount to approximately \$3.4 billion which if distributed would result in additional taxes, which may be payable upon distribution, of approximately \$350.0 million.

At December 31, 2022, the Company had the following operating loss, capital loss and tax credit carryforwards available to offset taxable income in prior and future years:

<i>In millions</i>	Amount	Expiration Period
U.S. Federal net operating loss carryforwards	\$ 355.2	2023-2033
U.S. Federal credit carryforwards	105.4	2027-2030
U.S. State net operating loss carryforwards	2,813.4	2023-Unlimited
U.S. State credit carryforwards	27.5	2023-Unlimited
Non-U.S. net operating loss carryforwards	511.0	2023-Unlimited
Non-U.S. credit carryforwards	13.5	Unlimited

The U.S. state net operating loss carryforwards were incurred in various jurisdictions. The non-U.S. net operating loss carryforwards were incurred in various jurisdictions, predominantly in Belgium, Brazil, Luxembourg, Spain and the United Kingdom.



Activity associated with the Company's valuation allowance is as follows:

<i>In millions</i>	2022	2021	2020
Beginning balance	\$ 258.6	\$ 320.5	\$ 309.4
Increase to valuation allowance	5.9	86.5	38.9
Decrease to valuation allowance	(65.1)	(113.5)	(22.8)
Other deductions	—	—	(0.1)
Write off against valuation allowance	—	(33.0)	(3.7)
Accumulated other comprehensive income (loss)	0.4	(1.9)	(1.2)
Ending balance	\$ 199.8	\$ 258.6	\$ 320.5

During 2022, the Company recorded a \$48.2 million reduction in valuation allowances primarily related to certain net state deferred tax assets resulting from U.S. legal entity restructurings and deferred tax assets associated with foreign tax credits as a result of an increase in current year and projected foreign source income. Additional reductions in the valuation allowance related to deferred tax assets associated with foreign tax credits could be recognized in future periods if foreign source income exceeds current projections for the periods 2023 through 2028, the remainder of the carryforward period.

During 2021, the Company recorded a \$21.4 million reduction in valuation allowance on deferred tax assets primarily related to foreign tax credits as a result of an increase in current year foreign source income.

During 2020, the Company recorded a \$22.3 million increase in valuation allowance on deferred tax assets primarily related to certain state net deferred tax assets as a result of the Transaction. In addition, the Company recorded a \$16.0 million reduction in valuation allowances related to non-U.S. net operating losses, primarily as a result of a planned restructuring in a non-U.S. tax jurisdiction, and foreign tax credits as a result of revised projections of future foreign source income.

#### *Unrecognized tax benefits*

The Company has total unrecognized tax benefits of \$82.4 million and \$65.2 million as of December 31, 2022, and December 31, 2021, respectively. The amount of unrecognized tax benefits that, if recognized, would affect the continuing operations effective tax rate are \$41.5 million as of December 31, 2022. A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

<i>In millions</i>	2022	2021	2020
Beginning balance	\$ 65.2	\$ 65.4	\$ 63.7
Additions based on tax positions related to the current year	3.9	1.0	1.0
Additions based on tax positions related to prior years	22.5	5.1	2.1
Reductions based on tax positions related to prior years	(5.9)	(2.4)	(1.5)
Reductions related to settlements with tax authorities	(0.9)	(0.1)	(0.7)
Reductions related to lapses of statute of limitations	(0.6)	(1.0)	(1.7)
Translation (gain) loss	(1.8)	(2.8)	2.5
Ending balance	\$ 82.4	\$ 65.2	\$ 65.4

The Company records interest and penalties associated with the uncertain tax positions within its Provision for income taxes. The Company had reserves associated with interest and penalties, net of tax, of \$11.3 million and \$7.1 million at December 31, 2022 and December 31, 2021, respectively. For the years ended December 31, 2022 and December 31, 2021, the Company recognized a \$3.7 million and \$0.7 million tax expense, respectively, in interest and penalties, net of tax in continuing operations related to these uncertain tax positions.

The total amount of unrecognized tax benefits relating to the Company's tax positions is subject to change based on future events including, but not limited to, the settlements of ongoing audits and/or the expiration of applicable statutes of limitations. Although the outcomes and timing of such events are highly uncertain, it is reasonably possible that the balance of gross unrecognized tax benefits, excluding interest and penalties, could potentially be reduced by up to approximately \$3.7 million during the next 12 months.

The provision for income taxes involves a significant amount of management judgment regarding interpretation of relevant facts and laws in the jurisdictions in which the Company operates. Future changes in applicable laws, projected levels of taxable income and tax planning could change the effective tax rate and tax balances recorded by the Company. In addition, tax authorities periodically review income tax returns filed by the Company and can raise issues regarding its filing positions, timing and amount of income or deductions, and the allocation of income among the jurisdictions in which the Company operates. A significant period of time may elapse between the filing of an income tax return and the ultimate resolution of an issue raised by a revenue authority with respect to that return. In the normal course of business the Company is subject to examination by taxing authorities throughout the world, including such major jurisdictions as Belgium, Brazil, Canada, China, France, Germany, Ireland, Italy, Luxembourg, Mexico, Spain, the Netherlands, the United Kingdom and the United States. These examinations on their own, or any subsequent litigation related to the examinations, may result in additional taxes or penalties against the Company. If the ultimate result of these audits differ from original or adjusted estimates, they could have a material impact on the Company's tax provision. In general, the examination of the Company's U.S. federal tax returns is complete or effectively settled for years prior to 2016. In general, the examination of the Company's material non-U.S. tax returns is complete or effectively settled for the years prior to 2013, with certain matters prior to 2013 being resolved through appeals and litigation and also unilateral procedures as provided for under double tax treaties.

In connection with the Transaction, the Company and Ingersoll Rand entered into a tax sharing agreement for the allocation of taxes. The Company has an indemnity payable to Ingersoll Rand, included within other non-current liabilities, in the amount of \$1.6 million of tax and interest primarily related to open audit years in non-U.S. tax jurisdictions.

## NOTE 17. ACQUISITIONS AND DIVESTITURES

### *Acquisitions*

On October 31, 2022, the Company acquired 100% of AL-KO Air Technology (AL-KO) for \$118.5 million, net of cash acquired, financed through cash on hand. AL-KO designs, engineers, manufactures, sells, installs, and services air handling and extraction systems in commercial applications. Intangible assets associated with this acquisition totaled \$49.4 million and primarily relate to customer relationships. The excess purchase price over the estimated fair value of net assets acquired was recognized as goodwill and totaled \$52.0 million. The results of operations of AL-KO are reported within the EMEA and Asia Pacific segments from the date of acquisition.

On April 1, 2022, the Company acquired a Commercial HVAC independent dealer, reported within the Americas segment from the date of acquisition, to support the Company's ongoing strategy to expand its distribution network and service area. The aggregate cash paid, net of cash acquired, totaled \$110.0 million and was financed through cash on hand. Intangible assets associated with this acquisition totaled \$52.7 million and primarily relate to customer relationships. The excess purchase price over the estimated fair value of net assets acquired was recognized as goodwill and totaled \$42.5 million.

The preliminary amounts assigned to the major identifiable intangible asset classifications for both acquisitions were as follows:

<i>In millions</i>	Weighted-average useful life (in years)		Fair value
Customer relationships	15	\$	82.9
Other	6		19.2
Total intangible assets		\$	102.1

The valuation of intangible assets was determined using an income approach methodology. The fair value of the customer relationship intangible assets were determined using the multi-period excess earnings method based on discounted projected net cash flows associated with the net earnings attributable to the acquired customer relationships. These projected cash flows are estimated over the remaining economic life of the intangible asset and are considered from a market participant perspective. Key assumptions used in estimating future cash flows included projected revenue growth rates and customer attrition rates. The projected future cash flows are discounted to present value using an appropriate discount rate. The Company has not included pro forma financial information for the acquisitions as the pro forma impact was deemed not material.

On October 15, 2021, the Company acquired 100% of Farrar Scientific Corporation's (Farrar Scientific) assets, including its patented ultra-low temperature control technologies, a development and assembly operation in Marietta, Ohio, and a specialized team of engineers, sales engineers, operators, and technicians. Farrar Scientific is a leader in ultra-low temperature control for biopharmaceutical and other life science applications. The results of Farrar Scientific are reported within the Americas segment from the date of acquisition.

The Company paid \$251.2 million in initial cash consideration, financed through cash on hand, and agreed to contingent consideration of up to \$115.0 million to be paid in 2025, tied to the attainment of key revenue targets during the period of January 1, 2022 through December 31, 2024. The purchase price for the acquisition was expected to be \$349.9 million, comprised of the upfront cash consideration of \$251.2 million paid on October 15, 2021 and the fair value of the earnout payment at the time of closing the acquisition of \$98.7 million. See Note 9, "Fair Value Measurements" to the Consolidated Financial Statements for additional information regarding fair value of contingent consideration.

The aggregate purchase price has been allocated to the assets acquired and liabilities assumed based on the estimate of fair market value of such assets and liabilities at the date of acquisition. Intangible assets associated with the acquisition totaled \$140.7 million and primarily relate to customer relationships. The excess purchase price over the estimated fair value of net assets acquired was recognized as goodwill and totaled \$203.6 million.

The Company recorded intangible assets based on their estimated fair value, which consisted of the following:

<i>In millions</i>	Weighted-average useful life (in years)		October 15, 2021
Customer relationships	14	\$	105.2
Other	6		35.5
<b>Total intangible assets</b>		<b>\$</b>	<b>140.7</b>

The goodwill is primarily attributable to the fair value of market share and revenue growth from Farrar Scientific. The benefit of access to the workforce is an additional element of goodwill. For income tax purposes, the acquisition was an asset purchase and the goodwill will be deductible for tax purposes. The Company has not included pro forma financial information as the pro forma impact was deemed not material.

During 2020, the Company acquired two independent dealers, reported within the Americas segment, to support the Company's ongoing strategy to expand its distribution network and service area. The aggregate cash paid, net of cash acquired, totaled \$182.8 million and was financed through cash on hand. Intangible assets associated with these acquisitions totaled \$76.9 million and primarily relate to customer relationships. The customer relationships had a weighted-average useful life of 16 years. The excess purchase price over the estimated fair value of net assets acquired was recognized as goodwill and totaled \$131.8 million. The Company has not included pro forma financial information as the pro forma impact was deemed not material.

#### *Divestitures*

The components of *Discontinued operations, net of tax* for the years ended December 31 were as follows:

<i>In millions</i>	2022	2021	2020
Net revenues	\$ —	\$ —	\$ 469.8
Cost of goods sold	(3.4)	—	(315.8)
Selling and administrative expenses	(1.9)	(3.0)	(234.4)
Operating income (loss)	(5.3)	(3.0)	(80.4)
Other income/ (expense), net	(21.6)	(36.3)	(55.9)
Pre-tax earnings (loss) from discontinued operations	(26.9)	(39.3)	(136.3)
Tax benefit (expense)	5.4	18.7	14.9
<b>Discontinued operations, net of tax</b>	<b>\$ (21.5)</b>	<b>\$ (20.6)</b>	<b>\$ (121.4)</b>

The table above presents the financial statement line items that support amounts included in *Discontinued operations, net of tax*.

For the year ended December 31, 2022, *Other income/(expense), net* included a charge of \$16.5 million to support Aldrich's ongoing legal costs in accordance with the Company's Funding Agreement. For the year ended December 31, 2021, *Other income/(expense), net* included a charge of \$14.0 million to increase the Company's Funding Agreement liability from asbestos-related activities of Aldrich as well as pension and post retirement obligations and environmental costs related to businesses formerly owned by the Company. For the year ended December 31, 2020, *Selling and administrative expenses* included pre-tax Ingersoll Rand Industrial separation costs of \$114.2 million, which are primarily related to legal, consulting and advisory fees.

In addition, for the year ended December 31, 2021, *Other income/ (expense), net* included a loss of \$25.8 million related to the deconsolidation of Aldrich and its wholly-owned subsidiary 200 Park.

#### *Separation of Industrial Segment Businesses*

On February 29, 2020, the Company completed the Transaction with Ingersoll Rand whereby the Company separated Ingersoll Rand Industrial which then merged with a wholly-owned subsidiary of Ingersoll Rand. In accordance with GAAP, the historical results of Ingersoll Rand Industrial are presented as a discontinued operation in the Consolidated Statements of Earnings and Consolidated Statements of Cash Flows.

*Net revenues* and earnings from operations, net of tax of Ingersoll Rand Industrial for the years ended December 31 were as follows:

<i>In millions</i>	2022		2021		2020	
Net revenues	\$	—	\$	—	\$	469.8
Earnings (loss) attributable to Trane Technologies plc		(6.1)		0.1		(85.8)
Earnings (loss) attributable to noncontrolling interests		—		—		0.9
Earnings (loss) from operations, net of tax	\$	(6.1)	\$	0.1	\$	(84.9)

*Earnings (loss) attributable to Trane Technologies plc* includes Ingersoll Rand Industrial separation costs, net of tax primarily related to legal, consulting and advisory fees of \$96.2 million during the year ended December 31, 2020.

#### *Other Discontinued Operations*

Other discontinued operations, net of tax related to retained obligations from previously sold businesses that primarily include ongoing expenses for postretirement benefits, product liability and legal costs. In addition, the Company includes its obligations under the Funding Agreement for the asbestos-related activities of Aldrich.

The components of *Discontinued operations, net of tax* for the years ended December 31 were as follows:

<i>In millions</i>	2022		2021		2020	
Ingersoll Rand Industrial	\$	(6.1)	\$	0.1	\$	(84.9)
Asbestos-related activities of Aldrich (post-Petition Date)		(12.4)		(13.3)		(19.1)
Other discontinued operations		(3.0)		(7.4)		(17.4)
Discontinued operations	\$	(21.5)	\$	(20.6)	\$	(121.4)

Refer to Note 20, "Commitments and Contingencies," for more information regarding the deconsolidation and asbestos-related matters.

#### **NOTE 18. EARNINGS PER SHARE (EPS)**

Basic EPS is calculated by dividing *Net earnings attributable to Trane Technologies plc* by the weighted-average number of ordinary shares outstanding for the applicable period. Diluted EPS is calculated after adjusting the denominator of the basic EPS calculation for the effect of all potentially dilutive ordinary shares, which in the Company's case, includes shares issuable under share-based compensation plans. The following table summarizes the weighted-average number of ordinary shares outstanding for basic and diluted earnings per share calculations:

<i>In millions</i>	2022		2021		2020	
Weighted-average number of basic shares outstanding		232.6		238.7		240.1
Shares issuable under incentive share plans		2.3		3.6		3.0
Weighted-average number of diluted shares outstanding		234.9		242.3		243.1
Anti-dilutive shares		0.8		—		0.6
Dividends declared per ordinary share	\$	2.68	\$	2.36	\$	2.12

**NOTE 19. BUSINESS SEGMENT INFORMATION**

The Company operates under four regional operating segments designed to create deep customer focus and relevance in markets around the world. The Company determined that its two Europe, Middle East and Africa (EMEA) operating segments meet the aggregation criteria based on similar operating and economic characteristics, resulting in one reportable segment. Therefore, the Company has three regional reportable segments, Americas, EMEA and Asia Pacific. Intercompany sales between segments are immaterial.

- The Company's Americas segment innovates for customers in North America and Latin America. The Americas segment encompasses commercial heating, cooling and ventilation systems, building controls, and energy services and solutions; residential heating and cooling; and transport refrigeration systems and solutions.
- The Company's EMEA segment innovates for customers in the Europe, Middle East and Africa region. The EMEA segment encompasses heating, cooling and ventilation systems, services and solutions for commercial buildings, and transport refrigeration systems and solutions.
- The Company's Asia Pacific segment innovates for customers throughout the Asia Pacific region. The Asia Pacific segment encompasses heating, cooling and ventilation systems, services and solutions for commercial buildings, and transport refrigeration systems and solutions.

Management measures segment operating performance based on net earnings excluding interest expense, income taxes, depreciation and amortization, restructuring, non-cash adjustments for contingent consideration, insurance settlement on property claim in Q3 2022, merger and acquisition-related costs, unallocated corporate expenses and discontinued operations (Segment Adjusted EBITDA). Segment Adjusted EBITDA is not defined under GAAP and may not be comparable to similarly-titled measures used by other companies and should not be considered a substitute for net earnings or other results reported in accordance with GAAP. The Company believes Segment Adjusted EBITDA provides the most relevant measure of profitability as well as earnings power and the ability to generate cash. This measure is a useful financial metric to assess the Company's operating performance from period to period by excluding certain items that it believes are not representative of its core business and the Company uses this measure for business planning purposes. Segment Adjusted EBITDA also provides a useful tool for assessing the comparability between periods and the Company's ability to generate cash from operations sufficient to pay taxes, to service debt and to undertake capital expenditures because it eliminates non-cash charges such as depreciation and amortization expense.

A summary of operations by reportable segment for the years ended December 31 were as follows:

<i>In millions</i>	2022	2021	2020
<b>Net revenues</b>			
Americas	\$ 12,640.8	\$ 10,957.1	\$ 9,685.9
EMEA	2,034.5	1,944.9	1,648.1
Asia Pacific	1,316.4	1,234.4	1,120.7
Total Net revenues	\$ 15,991.7	\$ 14,136.4	\$ 12,454.7
<b>Segment Adjusted EBITDA</b>			
Americas	\$ 2,326.3	\$ 2,008.8	\$ 1,677.7
EMEA	338.1	359.2	265.7
Asia Pacific	248.3	228.5	188.8
Total Segment Adjusted EBITDA	\$ 2,912.7	\$ 2,596.5	\$ 2,132.2
<b>Reconciliation of Segment Adjusted EBITDA to earnings before income taxes</b>			
Total Segment Adjusted EBITDA	\$ 2,912.7	\$ 2,596.5	\$ 2,132.2
Interest expense	(223.5)	(233.7)	(248.7)
Depreciation and amortization	(323.6)	(299.4)	(294.3)
Restructuring costs	(20.7)	(27.0)	(75.7)
Non-cash adjustments for contingent consideration	46.9	—	—
Insurance settlement on property claim in Q3 2022	25.0	—	—
Acquisition inventory step-up	(0.8)	—	—
Unallocated corporate expenses	(243.9)	(245.7)	(225.3)
Earnings before income taxes	\$ 2,172.1	\$ 1,790.7	\$ 1,288.2
<b>Depreciation and Amortization</b>			
Americas	\$ 256.9	\$ 227.6	\$ 224.0
EMEA	28.8	33.3	32.6
Asia Pacific	17.6	16.5	11.6
Depreciation and amortization from reportable segments	\$ 303.3	\$ 277.4	\$ 268.2
Unallocated depreciation and amortization	20.3	22.0	26.1
Total depreciation and amortization	\$ 323.6	\$ 299.4	\$ 294.3
<b>Capital Expenditures</b>			
Americas	\$ 230.5	\$ 148.7	\$ 98.2
EMEA	25.9	23.6	24.7
Asia Pacific	11.2	20.6	7.7
Capital expenditures from reportable segments	\$ 267.6	\$ 192.9	\$ 130.6
Corporate capital expenditures	24.2	30.1	15.6
Total capital expenditures	\$ 291.8	\$ 223.0	\$ 146.2

At December 31, a summary of long-lived assets by geographic area were as follows:

<i>In millions</i>	2022	2021
United States	\$ 1,413.8	\$ 1,287.5
Non-U.S.	584.8	548.1
Total	\$ 1,998.6	\$ 1,835.6

## NOTE 20. COMMITMENTS AND CONTINGENCIES

The Company is involved in various litigation, claims and administrative proceedings, including those related to the bankruptcy proceedings for Aldrich and Murray and environmental and product liability matters. The Company records accruals for loss contingencies when it is both probable that a liability will be incurred and the amount of the loss can be reasonably estimated. Amounts recorded for identified contingent liabilities are estimates, which are reviewed periodically and adjusted to reflect additional information when it becomes available. Subject to the uncertainties inherent in estimating future costs for contingent liabilities, except as expressly set forth in this note, management believes that any liability which may result from these legal matters would not have a material adverse effect on the financial condition, results of operations, liquidity or cash flows of the Company.

### *Asbestos-Related Matters*

Certain wholly-owned subsidiaries and former companies of the Company have been named as defendants in asbestos-related lawsuits in state and federal courts. In virtually all of the suits, a large number of other companies have also been named as defendants. The vast majority of those claims were filed against predecessors of Aldrich and Murray and generally allege injury caused by exposure to asbestos contained in certain historical products sold by predecessors of Aldrich or Murray, primarily pumps, boilers and railroad brake shoes. None of the Company's existing or previously-owned businesses were a producer or manufacturer of asbestos.

On June 18, 2020, Aldrich and Murray filed voluntary petitions for relief under Chapter 11 of the Bankruptcy Code to resolve equitably and permanently all current and future asbestos related claims in a manner beneficial to claimants and to Aldrich and Murray. As a result of the Chapter 11 filings, all asbestos-related lawsuits against Aldrich and Murray have been stayed due to the imposition of a statutory automatic stay applicable in Chapter 11 bankruptcy cases. In addition, at the request of Aldrich and Murray, the Bankruptcy Court has entered an order temporarily staying all asbestos-related claims against the Trane Companies that relate to claims against Aldrich or Murray (except for asbestos-related claims for which the exclusive remedy is provided under workers' compensation statutes or similar laws). On August 23, 2021, the Bankruptcy Court entered its findings of facts and conclusions of law and order declaring that the automatic stay applies to certain asbestos related claims against the Trane Companies and enjoining such actions. As a result, all asbestos-related lawsuits against Aldrich, Murray and the Trane Companies remain stayed.

The goal of these Chapter 11 filings is to resolve equitably and permanently all current and future asbestos-related claims in a manner beneficial to claimants and to Aldrich and Murray through court approval of a plan of reorganization that would create a trust pursuant to section 524(g) of the Bankruptcy Code, establish claims resolution procedures for all current and future asbestos-related claims against Aldrich and Murray and channel such claims to the trust for resolution in accordance with those procedures. Aldrich and Murray intend to seek an agreement with representatives of the asbestos claimants on the terms of a plan for the establishment of such a trust.

Prior to the Petition Date, predecessors of each of Aldrich and Murray had been litigating asbestos-related claims brought against them. No such claims have been paid since the Petition Date, and it is not contemplated that any such claims will be paid until the end of the Chapter 11 cases.

From an accounting perspective, the Company no longer has control over Aldrich and Murray as of the Petition Date as their activities are subject to review and oversight by the Bankruptcy Court. Therefore, Aldrich and its wholly-owned subsidiary 200 Park and Murray and its wholly-owned subsidiary ClimateLabs were deconsolidated as of the Petition Date and their respective assets and liabilities were derecognized from the Company's Consolidated Financial Statements. Amounts derecognized in 2020 primarily related to the legacy asbestos-related liabilities and asbestos-related insurance recoveries and \$41.7 million of cash.

### *Accounting Treatment Prior to the Petition Date*

Historically, the Company performed a detailed analysis and projected an estimated range of the Company's total liability for pending and unasserted future asbestos-related claims. The Company recorded the liability at the low end of the range as it believed that no amount within the range was a better estimate than any other amount. Asbestos-related defense costs were excluded from the liability and were recorded separately as services were incurred. The methodology used to prepare estimates relied upon and included the following factors, among others:

- the interpretation of a widely accepted forecast of the population likely to have been occupationally exposed to asbestos;
- epidemiological studies estimating the number of people likely to develop asbestos-related diseases such as mesothelioma and lung cancer;
- the Company's historical experience with the filing of non-malignancy claims and claims alleging other types of malignant diseases filed against the Company relative to the number of lung cancer claims filed against the Company;

- the analysis of the number of people likely to file an asbestos-related personal injury claim against the Company based on such epidemiological and historical data and the Company's claims history;
- an analysis of the Company's pending cases, by type of disease claimed and by year filed;
- an analysis of the Company's history to determine the average settlement and resolution value of claims, by type of disease claimed;
- an adjustment for inflation in the future average settlement value of claims, at a 2.5% annual inflation rate, adjusted downward to 1.0% to take account of the declining value of claims resulting from the aging of the claimant population; and
- an analysis of the period over which the Company has and is likely to resolve asbestos-related claims against it in the future (currently projected through 2053).

Prior to the Petition Date, over 73 percent of the open and active claims against the Company were non-malignant or unspecified disease claims. In addition, the Company had a number of claims which had been placed on inactive or deferred dockets and expected to have little or no settlement value against the Company.

Prior to the Petition Date, the costs associated with the settlement and defense of asbestos-related claims, insurance settlements on asbestos-related matters and the revaluation of the Company's liability for potential future claims and recoveries were included in the Consolidated Statements of Earnings within continuing operations or discontinued operations depending on the business to which they relate. Income and expenses associated with asbestos-related matters of Aldrich and its predecessors were recorded within discontinued operations as they related to previously divested businesses, primarily Ingersoll-Dresser Pump, which was sold by the Company in 2000. Income and expenses associated with asbestos-related matters for Murray and its predecessors were recorded within continuing operations. The year ended December 31, 2020 includes a \$17.4 million adjustment to correct an overstatement of a legacy legal liability that originated in prior years.

The net income (expense) associated with these pre-Petition Date transactions for the year ended December 31, 2020 was as follows:

<i>In millions</i>	<b>2020</b>	
Continuing operations	\$	14.8
Discontinued operations		(11.2)
Total	\$	3.6

The amounts recorded by the Company for asbestos-related liabilities and insurance-related assets are based on currently available information. Key assumptions underlying the estimated asbestos-related liabilities include the number of people occupationally exposed and likely to develop asbestos-related diseases such as mesothelioma and lung cancer, the number of people likely to file an asbestos-related personal injury claim against the Company, the average settlement and resolution of each claim and the percentage of claims resolved with no payment. Furthermore, predictions with respect to estimates of the liability were subject to greater uncertainty as the projection period lengthens. Other factors that have affected the Company's liability include uncertainties surrounding the litigation process from jurisdiction to jurisdiction and from case to case, reforms that have been made by state and federal courts, and the passage of state or federal tort reform legislation.

The aggregate amount of the stated limits in insurance policies available to Aldrich and Murray for asbestos-related claims acquired, over many years and from many different carriers, is substantial. However, as a result of limitations in that coverage, the projected total liability to claimants substantially exceeds the probable insurance recovery.

#### *Accounting Treatment After the Petition Date*

Upon deconsolidation in 2020, the Company recorded its retained interest in Aldrich and Murray at fair value within *Other noncurrent assets* in the Consolidated Balance Sheet. In determining the fair value of its equity investment, the Company used a market-adjusted multiple of earnings valuation technique. As a result, the Company recorded an aggregate equity investment of \$53.6 million as of the Petition Date.

Simultaneously, the Company recognized a liability of \$248.8 million within *Other noncurrent liabilities* in the Consolidated Balance Sheet related to its obligation under the Funding Agreements. The liability was based on asbestos-related liabilities and insurance-related assets balances previously recorded by the Company prior to the Petition Date.



As a result of the deconsolidation, the Company recognized an aggregate loss of \$24.9 million in its Consolidated Statements of Earnings during the year ended December 31, 2020. A gain of \$0.9 million related to Murray and its wholly-owned subsidiary ClimateLabs was recorded within *Other income/ (expense), net* and a loss of \$25.8 million related to Aldrich and its wholly-owned subsidiary 200 Park was recorded within *Discontinued operations, net of tax*. Additionally, the deconsolidation resulted in an investing cash outflow of \$41.7 million in the Company's Consolidated Statements of Cash Flows, of which \$10.8 million was recorded within continuing operations during the year ended December 31, 2020.

On August 26, 2021, the Company announced that Aldrich and Murray reached an agreement in principle with the court-appointed legal representative of future asbestos claimants (the FCR) in the bankruptcy proceedings. The agreement in principle includes the key terms for the permanent resolution of all current and future asbestos claims against Aldrich and Murray pursuant to a plan of reorganization (the Plan). Under the agreed terms, the Plan would create a trust pursuant to section 524(g) of the Bankruptcy Code and establish claims resolution procedures for all current and future claims against Aldrich and Murray (Asbestos Claims). On the effective date of the Plan, Aldrich and Murray would fund the trust with \$545.0 million, comprised of \$540.0 million in cash and a promissory note to be issued by Aldrich and Murray to the trust in the principal amount of \$5.0 million, and the Asbestos Claims would be channeled to the trust for resolution in accordance with the claims resolution procedures. Following the effective date of the Plan, Aldrich and Murray would have no further obligations with respect to the Asbestos Claims. The FCR has agreed to support such Plan. The agreement in principle with the FCR is subject to final documentation and is conditioned on arrangements acceptable to Aldrich and Murray with respect to their asbestos insurance assets. It is currently contemplated that the asbestos insurance assets of Aldrich and Murray would be contributed to the trust, and that, in consideration of their cash contribution to the trust, Aldrich and Murray would have the exclusive right to pursue, collect and retain all insurance reimbursements available in connection with the resolution of Asbestos Claims by the trust. The committee representing current asbestos claimants (the ACC) is not a party to the agreement in principle. Any settlement and its implementation in a plan of reorganization is subject to the approval of the Bankruptcy Court, and there can be no assurance that the Bankruptcy Court will approve the agreement on the terms proposed.

On September 24, 2021, Aldrich and Murray filed the Plan with the Bankruptcy Court. The Plan is supported by, and reflects the agreement in principle reached with the FCR. On the same date, in connection with the Plan, Aldrich and Murray filed a motion with the Bankruptcy Court to create a \$270.0 million trust intended to constitute a "qualified settlement fund" within the meaning of the Treasury Regulations under Section 468B of the Internal Revenue Code (QSF). The funds held in the QSF would be available to provide funding for the Section 524(g) Trust upon effectiveness of the Plan.

During the year ended December 31, 2021, in connection with the agreement in principle reached by Aldrich and Murray with the FCR and the motion to create a \$270.0 million QSF, the Company recorded a charge of \$21.2 million to increase its Funding Agreement liability to \$270.0 million. The corresponding charge was bifurcated between *Other income/ (expense), net* of \$7.2 million relating to Murray and discontinued operations of \$14.0 million relating to Aldrich.

On January 27, 2022, the Bankruptcy Court granted the request to fund the QSF, which was funded on March 2, 2022, resulting in an operating cash outflow of \$270.0 million in the Company's Consolidated Statements of Cash Flows, of which \$91.8 million was allocated to continuing operations and \$178.2 million was allocated to discontinued operations for the year ended December 31, 2022. On April 18, 2022, the Bankruptcy Court entered an order granting Aldrich and Murray's request to seek to estimate their aggregate liability for all current and future asbestos-related personal injury claims. Aldrich and Murray are pursuing discovery and related matters in connection with the estimation proceedings.

On October 18, 2021, the ACC filed a motion seeking standing to pursue and investigate on behalf of the bankruptcy estates of Aldrich and Murray, claims arising from or related to the 2020 Corporate Restructuring. Also on October 18, 2021, the ACC filed a complaint seeking to substantively consolidate the bankruptcy estates of Aldrich and Murray with certain of the Company's subsidiaries. On December 20, 2021, Aldrich, Murray and certain of the Company's subsidiaries filed motions to dismiss the ACC's substantive consolidation complaint. On April 14, 2022, the Bankruptcy Court granted the ACC's standing motion and denied the motions to dismiss the substantive consolidation complaint. On June 18, 2022, the ACC filed complaints against the Company and other related parties asserting various claims and causes of action arising from or related to the 2020 Corporate Restructuring. Additionally, the Bankruptcy Court denied motions to dismiss the ACC's substantive consolidation complaint. While the Company is vigorously opposing and defending against these claims, it is not possible to predict whether it will be successful. At this point in the Chapter 11 cases of Aldrich and Murray, it is not possible to predict whether the Bankruptcy Court will approve the terms of the Plan, what the extent of the asbestos liability will be or how long the Chapter 11 cases will last. The Chapter 11 cases remain pending as of February 10, 2023.

Furthermore, in connection with the 2020 Corporate Restructuring, Aldrich, Murray and their respective subsidiaries entered into several agreements with subsidiaries of the Company to ensure they each have access to services necessary for the effective operation of their respective businesses and access to capital to address any liquidity needs that arise as a result of working capital requirements or timing issues. In addition, the Company regularly transacts business with Aldrich and its wholly-owned subsidiary 200 Park and Murray and its wholly-owned subsidiary ClimateLabs. As of the Petition Date, these entities are considered related parties and post deconsolidation activity between the Company and them are reported as third party

transactions and are reflected within the Company's Consolidated Statements of Earnings. Since the Petition Date, there were no material transactions between the Company and these entities other than as described above.

#### ***Environmental Matters***

The Company continues to be dedicated to environmental and sustainability programs to minimize the use of natural resources, reduce the utilization and generation of hazardous materials from our manufacturing processes and remediate identified environmental concerns. As to the latter, the Company is currently engaged in site investigations and remediation activities to address environmental cleanup from past operations at current and former manufacturing facilities and off-site waste disposal facilities.

It is the Company's policy to establish environmental reserves for investigation and remediation activities when it is probable that a liability has been incurred and a reasonable estimate of the liability can be made. Estimated liabilities are determined based upon existing remediation laws and technologies. Inherent uncertainties exist in such evaluations due to unknown environmental conditions, changes in government laws and regulations, and changes in cleanup technologies. The environmental reserves are updated on a routine basis as remediation efforts progress and new information becomes available.

The Company is sometimes a party to environmental lawsuits and claims and has received notices of potential violations of environmental laws and regulations from the Environmental Protection Agency and similar state and international authorities. It has also been identified as a potentially responsible party (PRP) for cleanup costs associated with off-site waste disposal at federal Superfund and state remediation sites. In most instances at multi-party sites, the Company's share of the liability is not material.

In estimating its liability at multi-party sites, the Company has assumed it will not bear the entire cost of remediation of any site to the exclusion of other PRPs who may be jointly and severally liable. The ability of other PRPs to participate has been taken into account, based on the Company's understanding of the parties' financial condition and probable contributions on a per site basis.

Reserves for environmental matters are classified as *Accrued expenses and other current liabilities* or *Other noncurrent liabilities* based on their expected term. As of December 31, 2022 and 2021, the Company has recorded reserves for environmental matters of \$42.4 million and \$39.6 million, respectively. Of these amounts, \$36.5 million and \$36.3 million, respectively, relate to investigation and remediation of properties and multi-waste disposal sites related to businesses formerly owned by the Company.

#### ***Warranty Liability***

Standard product warranty accruals are recorded at the time of sale and are estimated based upon product warranty terms and historical experience. The Company assesses the adequacy of its liabilities and will make adjustments as necessary based on known or anticipated warranty claims, or as new information becomes available.

The changes in the standard product warranty liability for the years ended December 31, were as follows:

<i>In millions</i>	2022	2021
Balance at beginning of period	\$ 296.2	\$ 282.7
Reductions for payments	(127.3)	(119.7)
Accruals for warranties issued during the current period	156.6	133.7
Changes to accruals related to preexisting warranties	1.2	1.3
Translation	(3.1)	(1.8)
Balance at end of period	\$ 323.6	\$ 296.2

Standard product warranty liabilities are classified as *Accrued expenses and other current liabilities* or *Other noncurrent liabilities* based on their expected term. The Company's total current standard product warranty reserve at December 31, 2022 and December 31, 2021 was \$120.4 million and \$106.6 million, respectively.

**Warranty Deferred Revenue**

The Company's extended warranty liability represents the deferred revenue associated with its extended warranty contracts and is amortized into *Net revenues* on a straight-line basis over the life of the contract, unless another method is more representative of the costs incurred. The Company assesses the adequacy of its liability by evaluating the expected costs under its existing contracts to ensure these expected costs do not exceed the extended warranty liability.

The changes in the extended warranty liability for the years ended December 31, were as follows:

<i>In millions</i>	2022		2021	
Balance at beginning of period	\$	311.7	\$	304.4
Amortization of deferred revenue for the period		(117.4)		(121.5)
Additions for extended warranties issued during the period		125.1		119.4
Changes to accruals related to preexisting warranties		0.3		10.7
Translation		(2.0)		(1.3)
Balance at end of period	\$	317.7	\$	311.7

The extended warranty liability is classified as *Accrued expenses and other current liabilities* or *Other noncurrent liabilities* based on the timing of when the deferred revenue is expected to be amortized into *Net revenues*. The Company's total current extended warranty liability at December 31, 2022 and December 31, 2021 was \$110.5 million and \$115.4 million, respectively. For the years ended December 31, 2022, 2021 and 2020, the Company incurred costs of \$54.8 million, \$58.5 million and \$61.0 million, respectively, related to extended warranties.

**DESCRIPTION OF TRANE TECHNOLOGIES SHARE CAPITAL REGISTERED UNDER SECTION 12 OF THE EXCHANGE ACT**

The following description of the share capital of Trane Technologies plc (“Trane”) is a summary. This summary is not complete and is subject to the complete text of Trane’s memorandum and articles of association previously filed with the Commission and to the Irish Companies Act 2014 (the “Irish Companies Act”). We encourage you to read those documents and laws carefully.

**Capital Structure**

*Authorized Share Capital.* The authorized share capital of Trane is €40,000 and US\$1,175,010,000 divided into 40,000 ordinary shares with a nominal value of €1 per share, 1,175,000,000 ordinary shares with a nominal value of US\$1.00 per share and 10,000,000 preferred shares with a nominal value of US\$0.001 per share.

Trane may issue shares subject to the maximum prescribed by its authorized share capital contained in its memorandum of association and subject to the maximum authorized by shareholders from time to time.

As a matter of Irish company law, the directors of a company may issue new ordinary or preferred shares without shareholder approval once authorized to do so by the articles of association of the company or by an ordinary resolution adopted by the shareholders at a general meeting. An ordinary resolution requires over 50% of the votes of a company’s shareholders cast at a general meeting. The authority conferred can be granted for a maximum period of five years, at which point it must be renewed by the shareholders of the company by an ordinary resolution. The shareholders of Trane adopted an ordinary resolution at the 2022 annual general meeting of the Company on June 2, 2022 authorizing the directors of Trane to issue up to an aggregate nominal amount of \$85,251,537 (85,251,537 shares) (being equivalent to approximately 33% of the aggregate nominal value of the issued ordinary share capital of the Company as of April 8, 2022), for a period of 18 months from June 2, 2022.

The authorized share capital may be increased or reduced by way of an ordinary resolution of Trane’s shareholders. The shares comprising the authorized share capital of Trane may be divided into shares of such par value as the resolution shall prescribe.

The rights and restrictions to which the ordinary shares are subject are prescribed in Trane’s articles of association. Trane’s articles of association entitle the board of directors, without shareholder approval, to determine the terms of the preferred shares issued by Trane. The Trane board of directors is authorized, without obtaining any vote or consent of the holders of any class or series of shares (other than the authority to allot shares referred to above) unless expressly provided by the terms of that class or series or shares, to provide from time to time for the issuance of other classes or series of preferred shares and to establish the characteristics of each class or series, including the number of shares, designations, relative voting rights, dividend rights, liquidation and other rights, redemption, repurchase or exchange rights and any other preferences and relative, participating, optional or other rights and limitations not inconsistent with applicable law.

Irish law does not recognize fractional shares held of record; accordingly, Trane’s articles of association do not provide for the issuance of fractional shares of Trane, and the official Irish register of Trane will not reflect any fractional shares.

**Pre-emption Rights, Share Warrants and Share Options**

Certain statutory pre-emption rights apply automatically in favor of Trane’s shareholders where shares in Trane are to be issued for cash. However, Trane initially opted out of these pre-emption rights on its incorporation in its articles of association as permitted under Irish company law. Because Irish law requires this opt-out to be renewed every five years by a special resolution of the shareholders, Trane’s articles of association provide that this opt-out must be so renewed. A special resolution requires not less than 75% of the votes of Trane’s shareholders cast

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at a general meeting. If the opt-out is not renewed, shares issued for cash must be offered to pre-existing shareholders of Trane pro rata to their existing shareholding before the shares can be issued to any new shareholders. The statutory pre-emption rights do not apply where shares are issued for non-cash consideration and do not apply to the issue of non-equity shares (that is, shares that have the right to participate only up to a specified amount in any income or capital distribution). Shareholders of Trane passed a special resolution at the 2022 annual general meeting of the Company on June 2, 2022 authorizing the directors of Trane to opt out of pre-emption rights with respect to equity securities with up to an aggregate nominal value of \$12,916,899 (12,916,899 shares) (being equivalent to approximately 5% of the aggregate nominal value of the issued ordinary share capital of Trane as of April 8, 2022), for a period of 18 months from June 2, 2022.

The articles of association of Trane provide that, subject to any shareholder approval requirement under any laws, regulations or the rules of any stock exchange to which Trane is subject, the board is authorized, from time to time, in its discretion, to grant such persons, for such periods and upon such terms as the board deems advisable, options to purchase such number of shares of any class or classes or of any series of any class as the board may deem advisable, and to cause warrants or other appropriate instruments evidencing such options to be issued. The Irish Companies Act provides that directors may issue share warrants or options without shareholder approval once authorized to do so by the articles of association or an ordinary resolution of shareholders. The board may issue shares upon exercise of warrants or options without shareholder approval or authorization.

Trane is subject to the rules of the NYSE that require shareholder approval of certain share issuances.

## **Dividends**

Under Irish law, dividends and distributions may only be made from distributable reserves. Distributable reserves, broadly, means the accumulated realized profits of Trane less accumulated realized losses of Trane. In addition, no distribution or dividend may be made unless the net assets of Trane are equal to, or in excess of, the aggregate of Trane's called up share capital plus undistributable reserves and the distribution does not reduce Trane's net assets below such aggregate. Undistributable reserves include the share premium account, the capital redemption reserve fund, the revaluation reserve, and the amount by which Trane's accumulated unrealized profits, so far as not previously utilized by any capitalization, exceed Trane's accumulated unrealized losses, so far as not previously written off in a reduction or reorganization of capital.

The determination as to whether or not Trane has sufficient distributable reserves to fund a dividend must be made by reference to "relevant financial statements" of Trane. The "relevant financial statements" will be either the last set of unconsolidated annual audited financial statements or unaudited financial statements prepared in accordance with the Irish Companies Act, which gives a "true and fair view" of Trane's unconsolidated financial position and accord with accepted accounting practice. The relevant financial statements must be filed in the Companies Registration Office (the official public registry for companies in Ireland).

The mechanism as to who declares a dividend and when a dividend shall become payable is governed by the articles of association of Trane. Trane's articles of association authorize the directors to declare such dividends as appear justified from the profits of Trane without the approval of the shareholders at a general meeting. The board of directors may also recommend a dividend to be approved and declared by the shareholders at a general meeting. Although the shareholders may direct that the payment be made by distribution of assets, shares or cash, no dividend issued may exceed the amount recommended by the directors. The dividends can be declared and paid in the form of cash or non-cash assets.

The directors of Trane may deduct from any dividend payable to any member all sums of money (if any) payable by such member to Trane in relation to the shares of Trane.

The directors of Trane are also entitled to issue shares with preferred rights to participate in dividends declared by Trane. The holders of such preferred shares may, depending on their terms, be entitled to claim arrears of a declared dividend out of subsequently declared dividends in priority to ordinary shareholders.

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## Share Repurchases, Redemptions and Conversions

### *Overview*

Article 3(d) of Trane's articles of association provides that any ordinary share which Trane has acquired or agreed to acquire shall be deemed to be a redeemable share. Accordingly, for Irish company law purposes, the repurchase of ordinary shares by Trane will technically be effected as a redemption of those shares as described below under "—Repurchases and Redemptions by Trane." If the articles of association of Trane did not contain Article 3(d), repurchases by Trane would be subject to many of the same rules that apply to purchases of Trane shares by subsidiaries described below under "—Purchases by Subsidiaries of Trane," including the shareholder approval requirements described below and the requirement that any on-market purchases be effected on a "recognized stock exchange." Except where otherwise noted, when we refer elsewhere in this summary to repurchasing or buying back ordinary shares of Trane, we are referring to the redemption of ordinary shares by Trane pursuant to Article 3(d) of the articles of association or the purchase of ordinary shares of Trane by a subsidiary of Trane, in each case in accordance with the Trane articles of association and Irish company law as described below.

### *Repurchases and Redemptions by Trane*

Under Irish law, a company can issue redeemable shares and redeem them out of distributable reserves (which are described above under "—Dividends") or the proceeds of a new issue of shares for that purpose. Trane currently has distributable reserves which are calculated by reference to the relevant financial statements of Trane. Please see "—Dividends." All redeemable shares must be fully paid and the terms of redemption of the shares must provide for payment on redemption. Redeemable shares may, upon redemption, be cancelled or held in treasury. Shareholder approval will not be required to redeem Trane shares.

The board of directors of Trane will also be entitled to issue preferred shares which may be redeemed at the option of either Trane or the shareholder, depending on the terms of such preferred shares. Please see "—Capital Structure—Authorized Share Capital" above for additional information on redeemable shares.

Repurchased and redeemed shares may be cancelled or held as treasury shares. The nominal value of treasury shares held by Trane at any time must not exceed 10% of the nominal value of the issued share capital of Trane. While Trane holds shares as treasury shares, it cannot exercise any voting rights in respect of those shares. Treasury shares may be cancelled by Trane or re-issued subject to certain conditions.

### *Purchases by Subsidiaries of Trane*

Under Irish law, it may be permissible for an Irish or non-Irish subsidiary to purchase shares of Trane either on-market or off-market. A general authority of the shareholders of Trane is required to allow a subsidiary of Trane to make on-market purchases of Trane shares; however, as long as this general authority has been granted, no specific shareholder authority for a particular on-market purchase by a subsidiary of Trane shares is required. Trane does not currently seek such authority from its shareholders but may seek such general authority from shareholders in the future. In order for a subsidiary of Trane to make an on-market purchase of Trane's shares, such shares must be purchased on a "recognized stock exchange." The NYSE, on which the shares of Trane are listed, became a "recognized stock exchange" for this purpose on March 12, 2010, as a result of the coming into effect of the Irish Companies (Recognised Stock Exchanges) Regulations 2010. For an off-market purchase by a subsidiary of Trane, the proposed purchase contract must be authorized by special resolution of the shareholders of Trane before the contract is entered into. The person whose shares are to be bought back cannot vote in favor of the special resolution and, for at least 21 days prior to the special resolution, the purchase contract must be on display or must be available for inspection by shareholders at the registered office of Trane.

The number of shares held by the subsidiaries of Trane at any time will count as treasury shares and will be included in any calculation of the permitted treasury share threshold of 10% of the nominal value of the issued share capital of Trane. While a subsidiary holds shares of Trane, it cannot exercise any voting rights in respect of those shares. The acquisition of the shares of Trane by a subsidiary must be funded out of distributable reserves of the subsidiary.

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### *Existing Share Repurchase Program*

The board of directors of Trane has authorized a program to repurchase up to \$3.0 billion of its ordinary shares, to commence upon the completion of Trane's 2021 \$2 billion program. The 2021 program had approximately \$200 million remaining as of January 31, 2023. Based on market conditions, share repurchases will be made from time to time in the open market and in privately negotiated transactions at the discretion of management. The repurchase program does not have a prescribed expiration date.

As noted above, because repurchases of Trane shares by Trane will technically be effected as a redemption of those shares pursuant to Article 3(d) of the articles of association, shareholder approval for such repurchases will not be required.

### **Bonus Shares**

Under Trane's articles of association, the board may resolve to capitalize any amount credited to any reserve or fund available for distribution or the share premium account of Trane for issuance and distribution to shareholders as fully paid up bonus shares on the same basis of entitlement as would apply in respect of a dividend distribution.

### **Consolidation and Division; Subdivision**

Under its articles of association, Trane may by ordinary resolution consolidate and divide all or any of its share capital into shares of larger par value than its existing shares or subdivide its shares into smaller amounts than is fixed by its articles of association.

### **Reduction of Share Capital**

Trane may, by ordinary resolution, reduce its authorized share capital in any way. Trane also may, by special resolution and subject to confirmation by the Irish High Court, reduce or cancel its issued share capital in any way.

### **General Meetings of Shareholders**

Trane is required to hold annual general meetings at intervals of no more than fifteen months, provided that an annual general meeting is held in each calendar year, no more than nine months after Trane's fiscal year-end. Trane has held all of its annual general meetings in Ireland. However, any annual general meeting may be held outside Ireland if a resolution so authorizing is passed at the preceding annual general meeting. Because of the fifteen-month requirement described in this paragraph, Trane's articles of association include a provision reflecting this requirement of Irish law. At any annual general meeting, only such business shall be conducted as shall have been brought before the meeting (a) by or at the direction of the board or (b) by any member entitled to vote at such meeting who complies with the procedures set forth in the articles of association.

Extraordinary general meetings of Trane may be convened by (i) the chairman of the board of directors, (ii) the board of directors, (iii) on requisition of the shareholders holding not less than 10% of the paid up share capital of Trane carrying voting rights or (iv) on requisition of Trane's auditors. Extraordinary general meetings are generally held for the purposes of approving shareholder resolutions of Trane as may be required from time to time. At any extraordinary general meeting, only such business shall be conducted as is set forth in the notice thereof.

Notice of a general meeting must be given to all shareholders of Trane and to the auditors of Trane. The articles of association of Trane provide that the maximum notice period is 60 days. The minimum notice periods are 21 days' notice in writing for an annual general meeting or an extraordinary general meeting to approve a special resolution and 14 days' notice in writing for any other extraordinary general meeting. Because of the 21-day and 14-day requirements described in this paragraph, Trane's articles of association include provisions reflecting these requirements of Irish law.

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In the case of an extraordinary general meeting convened by shareholders of Trane, the proposed purpose of the meeting must be set out in the requisition notice. The requisition notice can contain any resolution. Upon receipt of this requisition notice, the board of directors has 21 days to convene a meeting of Trane's shareholders to vote on the matters set out in the requisition notice. This meeting must be held within two months of the receipt of the requisition notice. If the board of directors does not convene the meeting within such 21-day period, the requisitioning shareholders, or any of them representing more than one half of the total voting rights of all of them, may themselves convene a meeting, which meeting must be held within three months of the receipt of the requisition notice.

The only matters which must, as a matter of Irish company law, be transacted at an annual general meeting are the presentation of the annual financial statements, reports of the directors and auditors, the review by the members of the company's affairs, the appointment of auditors and the approval of the auditor's remuneration (or delegation of same), the declaration of dividends and the election of directors. If no resolution is made in respect of the reappointment of an auditor at an annual general meeting, the previous auditor will be deemed to have continued in office.

Directors are elected by the affirmative vote of a majority of the votes cast by shareholders at an annual general meeting and serve for one year terms. Where there is a contested election and the number of nominees exceeds the number of directors to be elected, then a plurality voting standard shall apply and only those nominees receiving the most votes for the available seats will be elected. However, because Irish law requires a minimum of two directors at all times, in the event that an election results in no director being elected, each of the two nominees receiving the greatest number of votes in favor of his or her election shall hold office until his or her successor shall be elected. In the event that an election results in only one director being elected, that director shall be elected and shall serve for a one year term, and the nominee receiving the greatest number of votes in favor of their election shall hold office until his or her successor shall be elected.

If the directors become aware that the net assets of Trane are half or less of the amount of Trane's called-up share capital, the directors of Trane must convene an extraordinary general meeting of Trane's shareholders not later than 28 days from the date that they learn of this fact. This meeting must be convened for the purposes of considering whether any, and if so what, measures should be taken to address the situation.

## **Voting**

At a general meeting a resolution put to the vote is decided by a poll whereby every shareholder shall have one vote for each ordinary share that he or she holds as of the record date for the meeting. Voting rights may be exercised by shareholders registered in Trane's share register as of the record date for the meeting or by a duly appointed proxy of such a registered shareholder, which proxy need not be a shareholder. Where interests in shares are held by a nominee trust company, this company may exercise the rights of the beneficial holders on their behalf as their proxy. All proxies must be appointed in the manner prescribed by Trane's articles of association, by such time as is prescribed in the notice of the meeting, and if no time is specified, by no later than 48 hours before the commencement of the meeting. The articles of association of Trane permit the appointment of proxies by the shareholders to be notified to Trane electronically.

In accordance with the articles of association of Trane, the directors of Trane may from time to time cause Trane to issue preferred shares. These preferred shares may have such voting rights as may be specified in the terms of such preferred shares (e.g., they may carry more votes per share than ordinary shares or may entitle their holders to a class vote on such matters as may be specified in the terms of the preferred shares).

Treasury shares will not be entitled to vote at general meetings of shareholders.

Irish company law requires "special resolutions" of the shareholders at a general meeting to approve certain matters. A special resolution requires not less than 75% of the votes cast of Trane's shareholders at a general meeting. This may be contrasted with "ordinary resolutions," which require a simple majority of the votes of Trane's shareholders cast at a general meeting. Examples of matters requiring special resolutions include:

- Amending the objects of Trane;
  - Amending the articles of association of Trane;
  - Approving the change of name of Trane;
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Authorizing the entering into of a guarantee or provision of security in connection with a loan, quasi-loan or credit transaction to a director or connected person;

- Opting out of pre-emption rights on the issuance of new shares;
- Re-registration of Trane from a public limited company as a private company;
- Variation of class rights attaching to classes of shares;
- Purchase of own shares off-market;
- The reduction of share capital;
- Resolving that Trane be wound up by the Irish courts;
- Resolving in favor of a shareholders' voluntary winding-up;
- Re-designation of shares into different share classes; and
- Setting the re-issue price of treasury shares.

A scheme of arrangement with shareholders requires a court order from the Irish High Court and the approval of: (1) 75% of the voting shareholders by value; and (2) 50% in number of the voting shareholders, at a meeting called to approve the scheme.

### **Variation of Rights Attaching to a Class or Series of Shares**

Variation of all or any special rights attached to any class or series of shares of Trane is addressed in the articles of association of Trane as well as the Irish Companies Act. Any variation of class rights attaching to the issued shares of Trane must be approved by a special resolution of the shareholders of the class or series affected.

### **Quorum for General Meetings**

The presence, in person or by proxy, of the holders of a majority of the Trane ordinary shares outstanding constitutes a quorum for the conduct of business. No business may take place at a general meeting of Trane if a quorum is not present in person or by proxy. The board of directors has no authority to waive quorum requirements stipulated in the articles of association of Trane. Abstentions and broker non-votes will be counted as present for purposes of determining whether there is a quorum in respect of the proposals.

### **Inspection of Books and Records**

Under Irish law, shareholders have the right to: (i) receive a copy of the memorandum and articles of association of Trane and any act of the Irish government which alters the memorandum of association of Trane; (ii) inspect and obtain copies of the minutes of general meetings and resolutions of Trane; (iii) inspect and receive a copy of the register of shareholders, register of directors and secretaries, register of directors' interests and other statutory registers maintained by Trane; (iv) receive copies of balance sheets and directors' and auditors' reports which have previously been sent to shareholders prior to an annual general meeting; and (v) receive balance sheets of a subsidiary company of Trane which have previously been sent to shareholders prior to an annual general meeting for the preceding ten years. The auditors of Trane will also have the right to inspect all books, records and vouchers of Trane. The auditors' report must be circulated to the shareholders with audited consolidated annual financial statements of Trane prepared in accordance with applicable accounting standards 21 days before the annual general meeting and must be read to the shareholders at Trane's annual general meeting.

### **Acquisitions**

There are a number of mechanisms for acquiring an Irish public limited company, including:

- (a) a court-approved scheme of arrangement under the Irish Companies Act. A scheme of arrangement with shareholders requires a court order from the Irish High Court and the approval of: (1) 75% of the
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voting shareholders by value; and (2) 50% in number of the voting shareholders, at a meeting called to approve the scheme;

- (b) through a tender offer by a third party for all of the shares of Trane. Where the holders of 80% or more of Trane's shares have accepted an offer for their shares in Trane, the remaining shareholders may be statutorily required to also transfer their shares. If the bidder does not exercise its "squeeze out" right, then the non-accepting shareholders also have a statutory right to require the bidder to acquire their shares on the same terms. If shares of Trane were listed on the Irish Stock Exchange or another regulated stock exchange in the European Union (the "EU"), this threshold would be increased to 90%;
- (c) it is possible for Trane to be acquired by way of a merger with an EU-incorporated public company under the EU Cross Border Merger Directive 2005/56. Such a merger must be approved by a special resolution. If Trane is being merged with another EU public company under the EU Cross Border Merger Directive 2005/56 and the consideration payable to Trane's shareholders is not all in the form of cash, Trane's shareholders may be entitled to require their shares to be acquired at fair value; and
- (d) it is also possible for Trane to be acquired by way of a merger with an Irish incorporated company under the Irish Companies Act. Such a merger must be implemented by a court order from the Irish High Court and be approved by a special resolution of Trane's shareholders.

Under Irish law, there is no requirement for a company's shareholders to approve a sale, lease or exchange of all or substantially all of a company's property and assets. However, Trane's articles of association provide that the affirmative vote of the holders of a majority of the outstanding voting shares on the relevant record date is required to approve a sale, lease or exchange of all or substantially all of its property or assets.

### **Appraisal Rights**

Generally, under Irish law, shareholders of an Irish company do not have appraisal rights. Under the EC (Cross-Border Mergers) Regulations 2008 (as amended by the European Communities (Mergers and Divisions of Companies) (Amendment) Regulations 2011) and Part 17 of the Irish Companies Act governing the merger of an Irish public limited company and a company incorporated in the European Economic Area, a shareholder (a) who voted against the special resolution approving the merger or (b) of a company in which 90% of the shares is held by the other company the party to the merger of the transferor company has the right to request that the company acquire its shares for cash.

### **Disclosure of Interests in Shares**

Under the Irish Companies Act, there is a notification requirement for shareholders who acquire or cease to be interested in 3% of the shares of an Irish public limited company. A shareholder of Trane must therefore make such a notification to Trane if as a result of a transaction the shareholder will be interested in 3% or more of the shares of Trane or if as a result of a transaction a shareholder who was interested in more than 3% of the shares of Trane ceases to be so interested. Where a shareholder is interested in more than 3% of the shares of Trane, any alteration of his or her interest that brings his or her total holding through the nearest whole percentage number, whether an increase or a reduction, must be notified to Trane. The relevant percentage figure is calculated by reference to the aggregate par value of the shares in which the shareholder is interested as a proportion of the entire par value of Trane's share capital. Where the percentage level of the shareholder's interest does not amount to a whole percentage this figure may be rounded down to the next whole number. All such disclosures should be notified to Trane within 5 business days of the transaction or alteration of the shareholder's interests that gave rise to the requirement to notify. Where a person fails to comply with the notification requirements described above no right or interest of any kind whatsoever in respect of any shares in Trane concerned, held by such person, shall be enforceable by such person, whether directly or indirectly, by action or legal proceeding. However, such person may apply to the court to have the rights attaching to the shares concerned reinstated.

In addition to the above disclosure requirement, Trane, under the Irish Companies Act, may by notice in writing require a person whom Trane knows or has reasonable cause to believe to be, or at any time during the three years immediately preceding the date on which such notice is issued, to have been interested in shares comprised in Trane's relevant share capital to: (a) indicate whether or not it is the case, and (b) where such person holds or has during that time held an interest in the shares of Trane, to give such further information as may be required by Trane including particulars of such person's own past or present interests in shares of Trane. Any information given in

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response to the notice is required to be given in writing within such reasonable time as may be specified in the notice.

Where such a notice is served by Trane on a person who is or was interested in shares of Trane and that person fails to give Trane any information required within the reasonable time specified, Trane may apply to court for an order directing that the affected shares be subject to certain restrictions. Under the Irish Companies Act, the restrictions that may be placed on the shares by the court are as follows:

- (a) any transfer of those shares, or in the case of unissued shares any transfer of the right to be issued with shares and any issue of shares, shall be void;
- (b) no voting rights shall be exercisable in respect of those shares;
- (c) no further shares shall be issued in right of those shares or in pursuance of any offer made to the holder of those shares; and
- (d) no payment shall be made of any sums due from Trane on those shares, whether in respect of capital or otherwise.

Where the shares in Trane are subject to these restrictions, the court may order the shares to be sold and may also direct that the shares shall cease to be subject to these restrictions.

## **Anti-Takeover Provisions**

### *Business Combinations with Interested Shareholders*

As provided in Trane's articles of association, the affirmative vote of the holders of 80% of the shares then in issue of all classes of shares entitled to vote considered for purposes of this provision as one class, is required for Trane to engage in any "business combination" with any interested shareholder (generally, a 10% or greater shareholder), provided that the above vote requirement does not apply to:

- any business combination with an interested shareholder that has been approved by the board of directors; or
- any agreement for the amalgamation, merger or consolidation of any of Trane's subsidiaries with Trane or with another of Trane's subsidiaries if (1) the relevant provisions of Trane's articles of association will not be changed or otherwise affected by or by virtue of the amalgamation, merger or consolidation and (2) the holders of greater than 50% of the voting power of Trane or the subsidiary, as appropriate, immediately prior to the amalgamation, merger or consolidation continue to hold greater than 50% of the voting power of the amalgamated company immediately following the amalgamation, merger or consolidation.

Trane's articles of association provide that "business combination" means:

- any amalgamation, merger or consolidation of Trane or one of Trane's subsidiaries with an interested shareholder or with any person that is, or would be after such amalgamation, merger or consolidation, an affiliate or associate of an interested shareholder;
- any transfer or other disposition to or with an interested shareholder or any affiliate or associate of an interested shareholder of all or any material part of the assets of Trane or one of Trane's subsidiaries; and
- any issuance or transfer of Trane's shares upon conversion of or in exchange for the securities or assets of any interested shareholder, or with any company that is, or would be after such merger or consolidation, an affiliate or associate of an interested shareholder.

### *Irish Takeover Rules and Substantial Acquisition Rules*

A transaction by virtue of which a third party is seeking to acquire 30% or more of the voting rights of Trane will be governed by the Irish Takeover Panel Act 1997 and the Irish Takeover Rules made thereunder and will be

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regulated by the Irish Takeover Panel. The “General Principles” of the Irish Takeover Rules and certain important aspects of the Irish Takeover Rules are described below.

### *General Principles*

The Irish Takeover Rules are built on the following General Principles which will apply to any transaction regulated by the Irish Takeover Panel:

- in the event of an offer, all classes of shareholders of the target company should be afforded equivalent treatment and, if a person acquires control of a company, the other holders of securities must be protected;
- the holders of securities in the target company must have sufficient time to allow them to make an informed decision regarding the offer;
- the board of a company must act in the interests of the company as a whole. If the board of the target company advises the holders of securities as regards the offer it must advise on the effects of the implementation of the offer on employment, employment conditions and the locations of the target company’s place of business;
- false markets in the securities of the target company or any other company concerned by the offer must not be created;
- a bidder can only announce an offer after ensuring that he or she can fulfill in full the consideration offered;
- a target company may not be hindered longer than is reasonable by an offer for its securities. This is a recognition that an offer will disrupt the day-to-day running of a target company particularly if the offer is hostile and the board of the target company must divert its attention to resist the offer; and
- a “substantial acquisition” of securities (whether such acquisition is to be effected by one transaction or a series of transactions) will only be allowed to take place at an acceptable speed and shall be subject to adequate and timely disclosure.

### *Mandatory Bid*

If an acquisition of shares were to increase the aggregate holding of an acquirer and its concert parties to shares carrying 30% or more of the voting rights in Trane, the acquirer and, depending on the circumstances, its concert parties would be required (except with the consent of the Irish Takeover Panel) to make a cash offer for the outstanding shares at a price not less than the highest price paid for the shares by the acquirer or its concert parties during the previous 12 months. This requirement would also be triggered by an acquisition of shares by a person holding (together with its concert parties) shares carrying between 30% and 50% of the voting rights in Trane if the effect of such acquisition were to increase the percentage of the voting rights held by that person (together with its concert parties) by 0.05% within a twelve-month period. A single holder (that is, a holder excluding any parties acting in concert with the holder) holding more than 50% of the voting rights of a company is not subject to this rule.

### *Voluntary Bid; Requirements to Make a Cash Offer and Minimum Price Requirements*

A voluntary offer is an offer that is not a mandatory offer. If a bidder or any of its concert parties acquire ordinary shares of Trane within the period of three months prior to the commencement of the offer period, the offer price must be not less than the highest price paid for Trane ordinary shares by the bidder or its concert parties during that period. The Irish Takeover Panel has the power to extend the “look back” period to 12 months if the Irish Takeover Panel, having regard to the General Principles, believes it is appropriate to do so.

If the bidder or any of its concert parties has acquired ordinary shares of Trane (i) during the period of 12 months prior to the commencement of the offer period which represent more than 10% of the total ordinary shares of Trane or (ii) at any time after the commencement of the offer period, the offer shall be in cash (or accompanied by a full cash alternative) and the price per Trane ordinary share shall be not less than the highest price paid by the bidder or its concert parties during, in the case of (i), the period of 12 months prior to the commencement of the offer period and, in the case of (ii), the offer period. The Irish Takeover Panel may apply this rule to a bidder who, together with its concert parties, has acquired less than 10% of the total ordinary shares of Trane in the 12 month period prior to the commencement of the offer period if the Panel, having regard to the General Principles, considers it just and proper to do so.

An offer period will generally commence from the date of the first announcement of the offer or proposed offer.

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### *Substantial Acquisition Rules*

The Irish Takeover Rules also contain rules governing substantial acquisitions of shares which restrict the speed at which a person may increase his or her holding of shares and rights over shares to an aggregate of between 15% and 30% of the voting rights of Trane. Except in certain circumstances, an acquisition or series of acquisitions of shares or rights over shares representing 10% or more of the voting rights of Trane is prohibited, if such acquisition(s), when aggregated with shares or rights already held, would result in the acquirer holding 15% or more but less than 30% of the voting rights of Trane and such acquisitions are made within a period of seven days. These rules also require accelerated disclosure of acquisitions of shares or rights over shares relating to such holdings.

### *Frustrating Action*

Under the Irish Takeover Rules, the board of directors of Trane is not permitted to take any action which might frustrate an offer for the shares of Trane once the board of directors has received an approach which may lead to an offer or has reason to believe an offer is imminent except as noted below. Potentially frustrating actions such as (i) the issue of shares, options or convertible securities, (ii) material disposals, (iii) entering into contracts other than in the ordinary course of business or (iv) any action, other than seeking alternative offers, which may result in frustration of an offer, are prohibited during the course of an offer or at any time during which the board has reason to believe an offer is imminent. Exceptions to this prohibition are available where:

- (a) the action is approved by Trane's shareholders at a general meeting; or
- (b) with the consent of the Irish Takeover Panel where:
  - (i) the Irish Takeover Panel is satisfied the action would not constitute a frustrating action;
  - (ii) the holders of 50% of the voting rights state in writing that they approve the proposed action and would vote in favor of it at a general meeting;
  - (iii) in accordance with a contract entered into prior to the announcement of the offer; or
  - (iv) the decision to take such action was made before the announcement of the offer and either has been at least partially implemented or is in the ordinary course of business.

For other provisions that could be considered to have an anti-takeover effect, please see above at “—Pre-emption Rights, Share Warrants and Share Options” and “—Disclosure of Interests in Shares,” in addition to “—Corporate Governance” below.

### **Corporate Governance**

The articles of association of Trane allocate authority over the management of Trane to the board of directors. The board of directors may then delegate management of Trane to committees of the board, executives or to a management team, but regardless, the directors will remain responsible, as a matter of Irish law, for the proper management of the affairs of Trane. Trane currently has an Audit Committee, a Human Resources and Compensation Committee, a Sustainability, Corporate Governance and Nominating Committee, a Finance Committee, a Technology and Innovation Committee and an Executive Committee. Trane has also adopted Corporate Governance Guidelines that provide the corporate governance framework for Trane.

### **Legal Name; Formation; Fiscal Year; Registered Office**

The legal and commercial name of Trane, an Irish company, is Trane Technologies plc. Trane was incorporated in Ireland, as a public limited company on April 1, 2009 with company registration number 469272. Trane's fiscal year ends on December 31 and Trane's registered address is 170/175 Lakeview Dr., Airside Business Park, Swords, Co. Dublin, Ireland.

### **Duration; Dissolution; Rights upon Liquidation**

Trane's duration will be unlimited. Trane may be dissolved at any time by way of either a shareholders' voluntary winding up or a creditors' voluntary winding up. In the case of a shareholders' voluntary winding up, the

consent of not less than 75% of the shareholders of Trane is required. Trane may also be dissolved by way of court order on the application of a creditor, or by the Companies Registration Office as an enforcement measure where Trane has failed to file certain returns.

The rights of the shareholders to a return of Trane's assets on dissolution or winding up, following the settlement of all claims of creditors, may be prescribed in Trane's articles of association or the terms of any preferred shares issued by the directors of Trane from time to time. The holders of preferred shares in particular may have the right to priority in a dissolution or winding up of Trane. If the articles of association contain no specific provisions in respect of a dissolution or winding up then, subject to the priorities of any creditors, the assets will be distributed to shareholders in proportion to the paid-up par value of the shares held. Trane's articles of association provide that the ordinary shareholders of Trane are entitled to participate pro rata in a winding up, but their right to do so may be subject to the rights of any preferred shareholders to participate under the terms of any series or class of preferred shares.

### **Uncertificated Shares**

Holders of ordinary shares of Trane will not have the right to require Trane to issue certificates for their shares. Trane will only issue uncertificated ordinary shares.

### **Stock Exchange Listing**

The Trane ordinary shares are listed on the NYSE under the symbol "TT."

### **No Sinking Fund**

The ordinary shares have no sinking fund provisions.

### **No Liability for Further Calls or Assessments**

All of our issued ordinary shares are duly and validly issued and fully paid.

### **Transfer and Registration of Shares**

Trane's share register will be maintained by its transfer agent. Registration in this share register will be determinative of membership in Trane. A shareholder of Trane who holds shares beneficially will not be the holder of record of such shares. Instead, the depository (for example, Cede & Co., as nominee for DTC) or other nominee will be the holder of record of such shares. Accordingly, a transfer of shares from a person who holds such shares beneficially to a person who also holds such shares beneficially through a depository or other nominee will not be registered in Trane's official share register, as the depository or other nominee will remain the record holder of such shares.

A written instrument of transfer is required under Irish law in order to register on Trane's official share register any transfer of shares (i) from a person who holds such shares directly to any other person, (ii) from a person who holds such shares beneficially to a person who holds such shares directly, or (iii) from a person who holds such shares beneficially to another person who holds such shares beneficially where the transfer involves a change in the depository or other nominee that is the record owner of the transferred shares. An instrument of transfer also is required for a shareholder who directly holds shares to transfer those shares into his or her own broker account (or vice versa). Such instruments of transfer may give rise to Irish stamp duty, which must be paid prior to registration of the transfer on Trane's official Irish share register.

We currently intend to pay (or cause one of our affiliates to pay) stamp duty in connection with share transfers made in the ordinary course of trading by a seller who holds shares directly to a buyer who holds the acquired shares beneficially. In other cases Trane may, in its absolute discretion, pay (or cause one of its affiliates to pay) any stamp duty. Trane's articles of association provide that, in the event of any such payment, Trane (i) may seek

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reimbursement from the transferor or transferee (at our discretion), (ii) may set-off the amount of the stamp duty against future dividends payable to the transferor or transferee (at our discretion), and (iii) will have a lien against the Trane shares on which we have paid stamp duty. Parties to a share transfer may assume that any stamp duty arising in respect of a transaction in Trane shares has been paid unless one or both of such parties is otherwise notified by us.

Trane's articles of association delegate to Trane's secretary or an assistant secretary the authority to execute an instrument of transfer on behalf of a transferring party. In order to help ensure that the official share register is regularly updated to reflect trading of Trane shares occurring through normal electronic systems, we intend to regularly produce any required instruments of transfer in connection with any transactions for which we pay stamp duty (subject to the reimbursement and set-off rights described above). In the event that we notify one or both of the parties to a share transfer that we believe stamp duty is required to be paid in connection with such transfer and that we will not pay such stamp duty, such parties may either themselves arrange for the execution of the required instrument of transfer (and may request a form of instrument of transfer from Trane for this purpose) or request that Trane execute an instrument of transfer on behalf of the transferring party in a form determined by Trane. In either event, if the parties to the share transfer have the instrument of transfer duly stamped (to the extent required) and then provide it to Trane's transfer agent, the transferee will be registered as the legal owner of the relevant shares on Trane's official Irish share register (subject to the matters described below).

The directors of Trane have general discretion to decline to register an instrument of transfer unless the transfer is in respect of one class of share only.

The registration of transfers may be suspended by the directors at such times and for such period, not exceeding in the whole 30 days in each year, as the directors may from time to time determine.

**AMENDMENT ONE  
TO THE TRANE TECHNOLOGIES  
KEY MANAGEMENT SUPPLEMENTAL PROGRAM  
(Amended and Restated as of May 4, 2020)**

**WHEREAS**, Trane Technologies Company LLC (the “Company”) sponsors and maintains the Trane Technologies Key Management Supplemental Program (the “Program”) for the benefit of a select group of employees of the Company and of its direct or indirect parents, subsidiaries or affiliates;

**WHEREAS**, as there have been no employees nominated for participation in the Program since 2019, management recommended that the Program be closed to new participants;

**WHEREAS**, pursuant to Section 7.1 of the Program, the Human Resources & Compensation Committee of the Board of Directors of the Company (the “Committee”) has the right to amend the Program;

**WHEREAS**, at its meeting on October 11, 2022, the Committee closed the Program to new participants effective immediately;

**NOW, THEREFORE BE IT RESOLVED**, that the Program is hereby amended through this Amendment Number One, as follows:

Section 2.1 is amended to add the following to the end thereof:

“Notwithstanding the foregoing, there shall be no additional Employees approved for participation in the Program on or after October 11, 2022.”

**IN WITNESS WHEREOF**, the Company has caused this Amendment One to the Program to be executed on this 15<sup>th</sup> day of November, 2022.

**TRANE TECHNOLOGIES COMPANY LLC**

By: /s/ Lynn Castrataro  
Lynn Castrataro, Vice President, Total Rewards



**TRANE INC.**  
**DEFERRED COMPENSATION PLAN**  
**(As Amended and Restated as of May 4, 2020, except where otherwise stated)**

**Section 1. Purpose**

The purpose of this Trane Inc. Deferred Compensation Plan (the “Plan”), as amended and restated as of May 4, 2020, is to provide a select group of management or highly compensated employees of Trane Inc. (the “Company”) and its subsidiaries with the opportunity to defer receipt of certain compensation, and for the Company to defer payment of certain compensation to such individuals, into future years; however, no Deferral Elections have been permitted under this Plan for compensation earned after 2010. The Plan covers employees (each an “Employee”) of the Company and subsidiaries of the Company which, with the consent of the Company, elect to participate in the Plan (the “Employer”). The Plan has been amended as of January 1, 2005 to conform to Section 409A of the Internal Revenue Code (“Section 409A”) for all amounts deferred on or after January 1, 2005 as defined in Section 409A and applicable regulations (such amounts hereinafter referred to as “Post-December 31, 2004 Deferrals”). All amounts deferred hereunder which are not subject to Section 409A shall be referred to herein as “Pre-2005 Deferrals”. The provisions in the Plan with respect to Post-December 31, 2004 Deferrals are subject to the transition rules set forth in guidance from the Internal Revenue Service (the “IRS”), including, without limitation, Notice 2005-1 and subsequent notices issued by the IRS providing for transitional relief with respect to Section 409A. The Company reserves the right to allow Participants to take advantage of any such transitional relief with respect to their Post-December 31, 2004 Deferrals.

**Section 2. Eligibility**

Each employee of the Employer who, prior to 2011, is a U.S. taxpayer and who either (i) participates in the Long Term Incentive Compensation Plan of the Company or any equivalent plan of Ingersoll-Rand Company plc (“Ingersoll Rand”) or any of its subsidiaries or (ii) is a district sales manager for the Trane Commercial Sales business is eligible to participate in the Plan, or (iii) effective July 7, 2006 is a territory sales manager for the Trane Commercial Sales Business. All those who are eligible to participate in or have account balances under the Plan are considered to be Participants. The Plan Administrator has provided, and upon request shall again provide, a copy of the Plan to each Participant. No Deferral Elections have been permitted under this Plan with respect to compensation earned for calendar years after 2010.

**Section 3. Participation**

**a. Deferral Election.** On or before the date chosen from time to time by the Plan Administrator, a Participant may elect to defer receipt of certain forms of compensation which, but for such election, would have been paid to him or her, and to have such amounts credited, in whole or in part, to a memorandum account credited with a fixed annual return (the “Interest Account”) and/or a memorandum account deemed to be invested in notional Ordinary Shares of Trane Technologies plc (“Trane”) (the “Stock Account”). A Participant may elect to defer up to (i) 50% of base pay, (ii) 100% of payments under the Company’s Annual Incentive Program or an equivalent Ingersoll Rand program, (iii) 100% of payments under the Company’s Long Term Incentive Compensation Program or an equivalent Ingersoll Rand program, and (iv) 100% of such other sources as are determined from time to time by the Plan Administrator; *provided, however*, that the total amount deferred by a Participant shall be limited in any calendar year, if necessary, to satisfy Social Security Tax (including Medicare), income tax and employee benefit plan withholding requirements as determined in the sole and absolute discretion of the Plan Administrator.

**b. Form and Duration of Deferral Election.** A deferral election shall be made by a Participant in the form of a written notice filed on a designated form with the Plan Administrator (the “Deferral Election”). The Deferral Election shall specify the amount being deferred under that election and how much, if any, of the deferral amount is going to each of the Interest Account and the Stock Account. The minimum amount that each Participant may defer under the Plan for each year shall be \$5,000 (or such other amount as the Plan Administrator shall determine from time to time). For Pre-2005 Deferrals, any such election shall be effective solely with respect to payments that would otherwise be made in the calendar year following the year in which such election is filed, except that with respect to individuals who first become Participants during a calendar year, such election shall apply to compensation to be earned and paid in that calendar year. For Post-December 31, 2004 Deferrals that are not deferrals of performance based compensation based on services provided over a period of at least twelve (12) months within the meaning of Section 409A (hereinafter, “Performance Based Compensation”), any deferral election with respect to compensation for services to be performed during a taxable year must be made not later than the close of the preceding taxable year or at such other times as provided under the regulations governing Section 409A. For Post-December 31, 2004 Deferrals of Performance Based Compensation, such deferral election may be made no later than six (6) months before the end of the performance period to which the Performance Based Compensation applies. Notwithstanding the foregoing, for Post-December 31, 2004 Deferrals by individuals who first become Participants during a calendar year, elections to defer shall be made with respect to compensation for services to be performed subsequent to the election within thirty (30) days after the date such individual becomes a Participant. All deferral elections shall remain in effect for future years until it is modified or revoked. Any revocation or modification of a Deferral Election shall become effective only with respect to compensation payable in the calendar year following receipt of such revocation or modification by the Plan Administrator.

**c. Renewal.** A Participant who has revoked an election to participate in the Plan may file a new election to defer compensation payable in the calendar year following the year in which such election is filed, if the Participant continues to meet the Plan’s eligibility criteria as are then in effect.

**d. Discretionary Company Contributions; Change of Control.** The Employer may from time to time elect to make fully discretionary contributions (“Discretionary Company Contributions”) to the Interest Accounts of some or all Participants, in such amounts as it, in its sole discretion, elects. Such Discretionary Company Contributions may be subject to a vesting schedule, as determined by the Plan Administrator. Notwithstanding the vesting schedule, such amounts will become fully vested upon the occurrence of a Change of Control, or upon the death or disability (as defined below) of the Participant (while actively employed by the Employer as an employee). “Change of Control” shall have the same meaning as set forth in the Trane Technologies plc Incentive Stock Plan of 2018 (formerly known as the Ingersoll-Rand plc Incentive Stock Plan of 2018), as amended, or any successor plan thereto.

**e. Matching Contributions.** The Employer may from time to time elect to make fully discretionary matching contributions (“Matching Contributions”) to the Interest Accounts of some or all Participants, in such amounts as it, in its sole discretion, elects. Such Matching Contributions shall be fully vested at all times.

#### **Section 4. Participant’s Accounts**

**a. Establishment of Account.** The Company shall maintain an Interest Account and a Stock Account for each Participant, and shall make additions to and subtractions from such Accounts as provided in this Plan. For each amount credited to the Interest Account, such Account shall note the date the amount was credited to the Account, any interest accrued pursuant to this Section 4, as well as the date that distribution is to commence. For each amount

credited to the Stock Account, the Account shall note the date the amount was credited to the Account, the number of notional shares credited on such date, the Market Value per Share used to determine the notional shares credited, as well as the date distribution is to commence.

**b. Interest Account.** Compensation allocated to the Interest Account pursuant to this Section 4 shall be credited to such Account as of the date such compensation would otherwise have been paid to the Participant, and for Matching Contributions and Discretionary Company Contributions, as of the date on which such amounts are credited to the Interest Account. Any amounts credited to the Interest Account shall earn interest on an annual basis at the Applicable Interest Rate in effect for each calendar year, as defined below, which interest shall be credited on the last business day of each calendar month.

The Applicable Interest Rate for amounts credited prior to January 1, 2002, shall mean the percentage equal to the prime rate of interest in effect at Chase Manhattan Bank (or any successor thereto) on the last business day of the previous calendar year, plus one percent.

For amounts credited to the Interest Account after December 31, 2001, Applicable Interest Rate shall mean the rate of interest to be determined by the Plan Administrator from time to time.

**c. Stock Account.** Any compensation allocated to the Stock Account pursuant to this Section 4 shall be deemed to be invested in a number of notional Ordinary Shares (including fractional shares) of Trane (the "Shares") equal to the quotient of (i) the dollar amount of such compensation divided by (ii) the Market Value Per Share (as defined below) on the date the compensation being allocated to the Stock Account would otherwise have been payable to the Participant. The Market Value Per Share on any date shall mean the closing price per share for an ordinary share of Trane ("Ordinary Share") as reported on the Consolidated Tape of the New York Stock Exchange on such date. If such date is not a business day or if no sale occurs on such date, Market Value Per Share shall be determined, in the manner described above, as of the first preceding business day on which a sale occurs.

Whenever a dividend other than a dividend payable in the form of Trane's Ordinary Shares is declared with respect to Trane's Ordinary Shares, the number of Shares in the Participant's Stock Account shall be increased by the number of Shares determined by dividing (i) the product of (A) the number of Shares in the Participant's Stock Account on the related dividend record date and (B) the amount of any cash dividend declared by Trane on an Ordinary Share (or, in the case of any dividend distributable in property other than Ordinary Shares, the per share value of such dividend, as determined by Trane for purposes of income tax reporting) by (ii) the Market Value Per Share on the related dividend payment date. In the case of any dividend declared on Trane's Ordinary Shares which is payable in Ordinary Shares, the Participant's Stock Account shall be increased by the number of Shares equal to the product of (i) the number of Shares credited to the Participant's Stock Account on the related dividend record date and (ii) the number of shares of Ordinary Shares (including any fraction thereof) distributable as a dividend on an Ordinary Share.

In the event of any change in the number or kind of outstanding Ordinary Shares by reason of any recapitalization, reorganization, merger, consolidation, stock split or any similar change affecting the Ordinary Shares, other than a stock dividend as provided above, the Administrator shall make an appropriate adjustment in the number of Shares credited to each Participant's Stock Account and, to the extent such adjustment results in a cash credit to such Stock Account, may cause such cash credit to be deemed reinvested in Shares or may effect a transfer of such cash credit to the Participant's Interest Account. Solely for purposes of determining the amount of any interest to be credited thereon, any amount transferred to a Participant's Interest Account pursuant to the immediately preceding sentence shall be treated in

the same manner as though such transfer were a deferral, at the election of the Participant, of compensation otherwise payable as of the effective date of the corresponding adjustment to the Participant's Stock Account.

**d. Investment Elections for Deferrals and Other Contributions.** At the time a Participant elects to defer compensation pursuant to Section 3.a, the Participant shall designate in writing the portion of such compensation, stated as a whole percentage, to be credited to the Interest Account and the portion to be credited to the Stock Account. Any compensation to be credited to either Account shall be rounded to the nearest whole cent. If a Participant fails to designate how the deferrals and/or other contributions are to be allocated between the two Accounts, 100% of such amounts shall be credited to the Interest Account. Participants may not elect to transfer from the Interest Account to the Stock Account, or vice versa. In addition, any Discretionary or Matching Company Contributions shall be invested in the Interest Account.

## **Section 5. Distributions from the Accounts**

**a. Distribution Elections for Pre-2005 Deferrals.** This Section 5.a applies to Pre-2005 Deferrals only. At the time a Participant makes a Deferral Election with respect to a particular calendar year, such Participant shall also file with the Plan Administrator a written election (a "Distribution Election") with respect to the timing and manner of distribution of the aggregate amount, if any, credited to the Interest Account and/or the Stock Account for that year's deferrals and matching contributions. In all cases, the Plan Administrator will determine the time and form of distributions with respect to Discretionary Company Contributions, if any. A Distribution Election shall specify that a distribution for that year's deferrals and Matching Contributions shall be made in one of the following manners:

- (1) Distributions to be made upon termination of employment (as an employee of the Employer or as a member of the then existing Company board) or disability. Disability, for this purpose, shall mean the Participant's permanent inability to perform each and every duty of his or her occupation or position of employment due to illness or injury as determined in the sole and absolute discretion of the Plan Administrator. The normal form of distribution under this method will be installments paid over 10 years, but the Participant may elect instead to be paid in annual installments over a period of less than 10 years, or in the form of a lump sum. Distributions under this methodology will commence the month immediately following the month in which the Participant terminates employment or becomes disabled; or
- (2) Distributions commence either one, two, or three years following termination of employment (as an employee of the Employer or as a member of the then existing Company board) or Disability (as defined above). The normal form of distribution under this method will be installments paid over 10 years, but the Participant may elect instead to be paid in annual installments over a period of less than 10 years, or in the form of a lump sum. Distributions under this methodology will commence in February of the selected calendar year; or
- (3) Distributions to be made at scheduled dates while still employed or while still a member of the Company board. Under this methodology, the Participant may elect to defer receipt until a year which is at least two years following the calendar year in which the deferrals or contributions are being made. The normal form of distribution under this methodology will be a lump sum, but the Participant may elect instead to be paid in installments over two, three, four or five years.

Distributions under this methodology will commence in February of the selected calendar year. In the event that a Participant becomes disabled (as defined above) or terminates employment (as an employee or a member of the then existing Company board) prior to commencement of a scheduled withdrawal under this methodology, then such withdrawal shall commence in the month immediately following such Disability or termination of employment in the form selected by the Participant for in-service distributions. In the event that a Participant becomes disabled (as defined above) or terminates employment (as an employee or a member of the then existing Company board) after commencement of a scheduled withdrawal under this methodology for a given year's deferrals and Matching Contributions, then that year's deferrals and Matching Contributions will continue to be distributed in the form selected.

**b. Amendment of Distribution Election for Pre-2005 Deferrals.** This Section 5.b applies to Pre-2005 Deferrals only. A Participant may change a Distribution Election applicable to a particular year's deferrals and Matching Contributions upon written notice filed with the Plan Administrator up to two times, subject to the following limitations:

- (1) No election to change the method and/or timing of any distribution may accelerate the time at which payment of amounts previously deferred would otherwise have been paid;
- (2) No election to change the method and/or timing of any distribution shall be effective unless at least one full calendar year elapses between:
  - (a) the date as of which such election is so filed, and
  - (b) the date as of which a distribution would otherwise have commenced.

**c. Distribution Elections for Post-December 31, 2004 Deferrals.** This Section 5.c applies to Post-December 31, 2004 Deferrals only. At the time a Participant makes a Deferral Election with respect to a particular calendar year, such Participant shall also file with the Plan Administrator a written election (a "Distribution Election") with respect to the timing and manner of distribution of the aggregate amount, if any, credited to the Interest Account and/or the Stock Account for that year's deferrals and matching contributions. In all cases, the Plan Administrator will determine the time and form of distributions with respect to Discretionary Company Contributions, if any, provided that such distributions shall be made in accordance with Section 409A. A Distribution Election shall specify that a distribution for that year's deferrals and Matching Contributions shall be made in one of the following manners:

- (1) Distributions to be made upon separation from service as such term is defined under Section 409A and applicable regulations (hereinafter "Separation from Service") (as an employee of the Employer or as a member of the then existing Company board) or disability. Disability, for this purpose, shall mean the Participant (i) is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than twelve (12) months or (ii) is by reason of medically determinable physical or mental impairment which can be expected to last for a continuous period of not less than twelve (12) months, receiving income replacement benefits for a period of not less than three (3) months under an accident and health plan covering employees of the Participants' employer. The normal form of distribution under

this method will be installments paid over 10 years, but the Participant may elect instead to be paid in annual installments over a period of less than 10 years, or in the form of a lump sum. Distributions under this methodology will commence on the first day of the month immediately following the month in which the Participant incurs a Separation from Service or becomes disabled, provided that, distributions made upon Separation from Service to key employees as defined under Section 416(i) of the Internal Revenue Code as amended (hereinafter "Key Employees") shall not commence until the date that is six (6) months following Separation from Service; or

- (2) Distributions commence either one, two, three, four or five years following Separation from Service (as an employee of the Employer or as a member of the Company board) or Disability (as defined above). The normal form of distribution under this method will be installments paid over 10 years, but the Participant may elect instead to be paid in annual installments over a period of less than 10 years, or in the form of a lump sum. Distributions under this methodology will commence on February 1 of the selected calendar year; or
- (3) Distributions to be made at scheduled dates while still employed or while still a member of the Company board. Under this methodology, the Participant may elect to defer receipt until a year which is at least two years following the calendar year in which the deferrals or contributions are being made. The normal form of distribution under this methodology will be a lump sum, but the Participant may elect instead to be paid in installments over two, three, four or five years. Distributions under this methodology will commence on February 1 of the selected calendar year. In the event that a Participant becomes disabled (as defined above) or has a Separation from Service (as an employee or a member of the then existing Company board) prior to commencement of a scheduled withdrawal under this methodology, then such withdrawal shall commence on the first day of the month immediately following such Disability or Separation from Service in the form selected by the Participant for in-service distributions; provided that, distributions made upon Separation from Service to key employees as defined under Section 416(i) of the Internal Revenue Code as amended (hereinafter "Key Employees") shall not commence until the date that is six (6) months following such Separation from Service. In the event that a Participant becomes disabled (as defined above) or has a Separation from Service (as an employee or a member of the then existing Company board) after commencement of a scheduled withdrawal under this methodology for a given year's deferrals and Matching Contributions, then any deferrals and Matching Contributions distributable in such year and any subsequent year will continue to be distributed in the form selected.

**d. Amendment of Distribution Election for Post-December 31, 2004 Deferrals.** This Section 5.d applies to Post-December 31, 2004 Deferrals only. A Participant may change a Distribution Election applicable to a particular year's deferrals and Matching Contributions upon written notice filed with the Plan Administrator up to two times, subject to the following limitations:

- (1) Except as specifically provided under Section 409A and applicable regulations, no election to change the method and/or timing of any distribution may accelerate the time at which payment of amounts previously deferred would otherwise have been paid;

- (2) No election to change the method and/or timing of any distribution shall be effective unless at least twelve (12) months elapse between the date of such election and the date it takes effect;
- (3) Except for distributions that commence upon death or Disability or in the case of a Hardship Distribution, the first payment with respect to which such election is made must be deferred for a period of not less than five (5) years from the date such payment would otherwise have been made;
- (4) Any election amendment with respect to a deferral distribution described in Section 5(c)(2) or 5(c)(3) may not be made less than 12 months prior to the date of the first scheduled payment.

e. **Payment upon Death.** Notwithstanding anything else herein to the contrary, if a Participant shall die before payment of all amounts credited to such Participant's Accounts have been completed, the total remaining balance in such Accounts shall be paid in a single lump sum to the Participant's designated beneficiary or, if no beneficiary has been designated, to his or her estate, thirty (30) days after the Plan Administrator receives notice of the Participant's death.

f. **Valuation on Distribution.** Distributions from the Stock Account shall be paid in Ordinary Shares, unless otherwise determined by the Plan Administrator in its sole discretion. In the event of a distribution from the Stock Account to be paid in Ordinary Shares, the number of Ordinary Shares payable shall be equal to the number of whole Shares subject to such distribution. Any fractional Shares will be settled in cash. The Stock Account will be valued for tax withholding purposes, as well as all other purposes (including, but not limited to, settlement of the Stock Account (in whole or in part) in cash), based on the Market Value Per Share on the last business day of the calendar month prior to the date as of which distribution is to be made. Distributions from the Interest Account will be valued as of the last business day of the calendar month prior to the date as of which distribution is to be made.

g. **Interest Account Installment Payments.** Where a Participant elects to receive a distribution in annual installments, the amount of each installment payment from the Interest Account shall be equal to the product of (i) the balance credited to such Interest Account (which is subject to the particular installment election) on the last business day of the calendar month prior to the date as of which such payment is to be made, and (ii) a fraction, the numerator of which is one (1) and the denominator of which is the total number of installments remaining to be paid at that time.

h. **Stock Account Installment Payments.** Where a Participant elects to receive the distribution in annual installments, the number of Shares subject to such annual installment payment from the Stock Account shall be equal to the product of (i) the number of Shares credited to such Stock Account on the date of such payment which is subject to the particular installment election, and (ii) a fraction, the numerator of which is one (1) and the denominator of which is the total number of installments remaining to be paid at that time.

## **Section 6. Hardship and Unscheduled In-Service Distributions**

a. **Hardship Distributions.** A Participant shall be permitted to elect a Hardship Distribution from his or her vested Accounts at any time, subject to the following. Discretionary Company Contributions are not available for a Hardship Distribution, unless otherwise determined by the Plan Administrator in its sole discretion. The election to take a Hardship Distribution shall be made by filing a form provided by and filed with the Plan Administrator prior to the end of any calendar month. The Plan Administrator shall determine whether the requested distribution constitutes a Hardship Distribution as defined below. The amount

determined by the Plan Administrator as a Hardship Distribution shall be paid in a single payment as soon as practicable after the end of the calendar month in which the Hardship Distribution election is made and approved by the Plan Administrator. If a Participant receives a Hardship Distribution, the Participant will be ineligible to participate in the Plan for the balance of that calendar year. The Plan Administrator will in its sole discretion determine the Account or Accounts from which to debit the amount of the distribution.

For this purpose, Hardship Distribution shall mean a severe financial hardship to the Participant resulting from a sudden and unexpected illness or accident of the Participant or of his or her dependent (as defined in Section 152(a) of the Internal Revenue Code of 1986, as amended), loss of a Participant's property due to casualty, or other similar or extraordinary and unforeseeable circumstances arising as a result of events beyond the control of the Participant. The circumstances that would constitute an unforeseeable emergency will depend upon the facts of each case, but, in any case, a Hardship Distribution may not be made to the extent that such hardship is or may be relieved (i) through reimbursement or compensation by insurance or otherwise, or (ii) by liquidation of the Participant's assets, to the extent the liquidation of assets would not itself cause severe financial hardship. In all instances, the Plan Administrator will have sole discretion to determine whether a valid hardship exists for this purpose. The amounts distributed pursuant to a Hardship Distribution shall not exceed the amount necessary to satisfy the emergency plus amounts necessary to pay taxes reasonably anticipated as a result of the distribution.

**b. Unscheduled In-Service Distributions.** In no event shall this paragraph apply to Post-December 31, 2004 Deferrals. A Participant shall be permitted to elect an Unscheduled In-Service Distribution from his or her vested Accounts at any time, subject to the following. Discretionary Company Contributions are not available for an Unscheduled In-Service Distribution. The election to take an Unscheduled In-Service Distribution shall be made by filing a form provided by and filed with the Plan Administrator prior to the end of any calendar month. The amount of the Unscheduled In-Service Distribution shall be the amount selected by the Participant, up to a maximum of 90% of his vested Account balance. The amount described herein shall be paid in a single payment as soon as practicable after the end of the calendar month in which the Unscheduled In-Service Distribution election is made. If a Participant requests an Unscheduled In-Service Distribution of some or all of his or her vested Account, such Participant shall permanently forfeit 10% of the gross amount to be distributed from the Participant's Account, and the Company shall have no obligation to the Participant or his or her Beneficiary with respect to such forfeited amount. If a Participant receives an Unscheduled In-Service Distribution of either all or a part of his or her Account, then the Participant will be ineligible to participate in the Plan for the balance of the calendar year. The Plan Administrator will in its sole discretion determine the Account or Accounts from which to debit the amount of the distribution.

## **Section 7. Designation of Beneficiaries**

A Participant may designate a beneficiary or beneficiaries (which may be an entity other than a natural person) to receive payments to be made following such Participant's death. At any time, and from time to time, any such designation may be changed or canceled by the Participant without the consent of the beneficiary. Any such designation, change or cancellation must be made by written notice filed with the Plan Administrator. If a Participant designates more than one beneficiary, any payments to such beneficiaries shall be made in equal amounts unless the Participant has designated otherwise, in which case the payments shall be made as designated by the Participant. If no beneficiary is named by the Participant, or if a beneficiary has been designated and such designation has been canceled, payment shall be made to the Participant's estate. Notwithstanding the above, if a Participant has designated his or her spouse as beneficiary, and subsequent to such designation becomes divorced from such spouse, then the



designation previously filed will be deemed revoked as to such former spouse, unless specifically reaffirmed in writing by the Participant subsequent to the date of divorce.

#### **Section 8. Amendment and Termination**

The Board of Directors of Trane (“Board”) may amend or terminate the Plan at any time; *provided, however*, that, no such amendment or termination shall impair the rights of a Participant with respect to amounts then credited to his Account under the Plan, and *further provided, however*, that no amendment or termination may be effected with respect to a Participant prior to the end of two years following a Change of Control, except with the written consent of such an affected Participant.

#### **Section 9. Administration**

The Plan shall be administered by the Compensation Committee appointed by the Board (the “Committee”). The Committee may delegate any or all of its administrative powers and duties to one or more employees of Ingersoll Rand or its affiliates and subsidiaries. In addition to such functions and responsibilities specifically reserved to the Plan Administrator under the Plan, the Plan Administrator shall have full power and authority, subject to the provisions of the Plan, to construe and interpret and carry out the terms of the Plan, and to exercise discretion where necessary or appropriate in the interpretation of the Plan, and all decisions by the Plan Administrator shall be final and binding on all affected parties. In addition to such powers, the Plan Administrator has the authority to modify eligibility criteria for the Plan, to select or change investment options under the Plan, to appoint and replace the trustee of the grantor trust to be established hereunder, to establish rules and regulations for efficient plan administration, to employ and rely upon advisers, and shall have such other powers, duties and responsibilities as are customary for plans such as the Plan, all as determined by the Plan Administrator. The Plan is intended to be administered in a manner consistent with the requirements, where applicable, of Section 409A of the Code. Where reasonably possible and practicable, the Plan shall be administered in a manner to avoid the imposition on Participants of immediate tax recognition and additional taxes pursuant to such Section 409A. Notwithstanding anything else contained herein to the contrary, neither the Plan Administrator nor the Company shall be in breach of its obligations hereunder, nor liable for any interest or other payments, if the Company fails to make any payments hereunder on the stated date on which such payment is due. The Compensation Committee has delegated to the Administrative Committee appointed by Trane’s Chief Executive Officer (the “Administrative Committee”) the authority to administer this Plan in accordance with its terms. Subject to review by the Compensation Committee, the Administrative Committee shall make all determinations as to the right of any person to a benefit. Any denial by the Administrative Committee of the claim for benefits under this Plan by a Participant or beneficiary shall be stated in writing by the Administrative Committee in accordance with the claims procedures annexed hereto as Appendix A.

#### **Section 10. Miscellaneous**

**a. Unfunded Plan.** The Employer shall not be obligated to fund its liabilities under the Plan, the Accounts established for each Participant electing deferment shall not constitute a trust, and a Participant shall have no claim against the Company or its assets other than as an unsecured general creditor. Without limiting the generality of the foregoing, the Participant’s claim at any time shall be for the amount credited to such Participant’s Accounts at such time. Notwithstanding the foregoing, the Company will establish a grantor trust to assist it in meeting its obligations hereunder, which grantor trust may be funded by the Company at such levels as it determines from time to time; *provided, however*, that in no event shall any Participant have any interest in such trust or property other than that of an unsecured general creditor of the Company. Notwithstanding the above, upon the occurrence of a Change of Control, the Company will

immediately contribute to such grantor trust such amounts of cash and Company stock as are necessary to satisfy all claims for benefits under the Plan, on an assumed termination basis at such date.

**b. Non-Alienation.** The right of a Participant to receive a distribution of the value of such Participant's Account payable pursuant to the Plan shall not be subject to assignment, alienation, attachment, garnishment or other similar process.

**c. No Right to Continued Employment.** Nothing in this Plan shall be construed to give any Participant the right to continued employment by the Employer, nor shall it limit the Employer's ability to affect the terms and conditions of a Participant's employment with the Employer.

**d. Governing Law.** This Plan and all rights and obligations hereunder shall be construed in accordance with and governed by the laws of the State of Delaware, to the extent such laws are not superseded by federal law. The Plan is intended to be a nonqualified deferred compensation plan maintained for a select group of management or highly compensated individuals. As such, it is generally subject to Title I of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"). While ERISA generally applies to the Plan, Parts 2 (Participation and Vesting), 3 (Funding), and 4 (Fiduciary Responsibility) of Title I of ERISA do not apply. Part 5 (Administration and Enforcement) applies, and the Part 1 (Reporting and Disclosure) requirements apply to the Plan, but only on a limited basis.

**e. Withholding.** The Company may withhold from any amounts payable hereunder, whether in cash or shares, such federal, state or local taxes as may be deemed required to be withheld pursuant to applicable law or regulations.

**f. Compliance.** A Participant shall have no right to receive payment (in any form) with respect to his or her Accounts until legal and contractual obligations of the Employer relating to the making of such payments shall have been complied with in full. In addition, the Plan Administrator shall impose such restrictions, limitations, rules and regulations as it may deem advisable in order to comply with the applicable federal securities laws, the requirements of the New York Stock Exchange or any other applicable stock exchange or automated quotation system, any applicable state securities laws, any provision of the Company's Certificate of Incorporation or Bylaws, or any other law, regulation, rule, or binding contract to which the Company or the Employer is subject.

IN WITNESS WHEREOF, the Company has caused this amendment and restatement to be executed by its duly authorized representative as of December \_\_, 2020.

Trane Inc.



By\_\_  
Lynn Castrataro  
Vice President, Total Rewards

## **APPENDIX A Claim Procedures**

### **Claim Procedures**

Employees, their beneficiaries, if applicable, or any individual duly authorized by them, shall have the right under the Plan and the Employee Retirement Income Security Act of 1974, as amended (“ERISA”), to file a written claim for benefits from the Plan in the event of a dispute over such Employee’s entitlement to benefits. All claims, including claims that involve a determination of disability by the Administrative Committee, must be submitted to the Administrative Committee, or its delegate, in writing and within one year of the date on which the lump sum payment was made or allegedly should have been made. For all other claims, the date on which the action complained of occurred.

### **Timing of Claim Decision**

If an Employee’s claim is denied, in whole or in part, the Administrative Committee, or its delegate, will give the Employee (or his or her representative) a written (or electronic) notice of the decision within 90 days after the Employee’s claim is received by the Administrative Committee, or its delegate, or within 180 days if special circumstances require an extension of time with respect to a determination of the claim. If the claim for benefits relates to disability benefits, the Employee (or his or her representative) will be given a written (or electronic) notice within 45 days after his or her claim is received by the Administrative Committee, or its delegate, unless special circumstances require an extension of time. The Administrative Committee, or its delegate, may extend the period no more than twice for up to 30 days for each extension to make a determination of a disability benefit claim. The Employee (or his or her representative) will be notified if any extensions are required, the special circumstances requiring an extension, and the date a determination is expected. If any additional information is needed to process an Employee’s claim for disability benefits, the Employee will be advised of the additional information that is needed and the standards on which the benefit entitlement is based, and he or she will have at least 45 days to provide the needed information. Failure to provide additional requested information may result in the denial of the claim.

### **Notice of Claim Denial**

If the Employee is denied a claim for benefits, the Administrative Committee, or its delegate, will provide such Employee with a written or electronic notice setting forth:

1. The specific reason(s) for the denial;
2. Specific reference(s) to pertinent Plan provisions upon which the denial is based;
3. A description of any additional material or information necessary to perfect the claim, and an explanation of why such material or information is necessary;
4. A description of the Plan’s claims review procedure and the time limits applicable to such procedures, including a statement of your right to bring a civil action under Section 502(a) of ERISA following the exhaustion of the Plans’ administrative process;
5. If a claim based on disability was denied in reliance upon an internal rule, guideline, protocol or other similar criterion, the internal rule, guideline, protocol or other criteria will be described, or the notice will include a statement that no such rule, guideline, protocol or other criteria exists or, if the determination is based on a medical necessity or experimental treatment or similar exclusion or limit, either an explanation of the scientific or clinical judgement for the

determination, applying the terms of the plan to the Employee's medical circumstances or a statement that such explanation will be provided free of charge upon request; and,

6. A statement that the Employee has the right to appeal the decision.

### **Appeal of Claim Denial**

The Employee (or his or her representative) may request a review of a denial of a claim to the Administrative Committee, or its delegate, by filing a written application for review within 60 days (or, for disability claims, 180 days) after his or her receipt of the written notice of the denial of the claim. The filing of an appeal is mandatory if the Employee later determines that he or she wants to initiate a lawsuit under ERISA Section 502(a). The Administrative Committee, or its delegate, will conduct a full and fair review of the claim denial.

The Employee shall have the opportunity to submit written comments, documents, records and other information relating to his or her claim without regard to whether such information was submitted or considered in the initial benefit determination and be provided, upon request, and free of charge, reasonable access to and copies of, all documents, records and other information relevant to the Employee's claim. The Administrative Committee will re-examine your claim, along with all comments, documents, records and other information that you submit relating to the claim, regardless of whether or not it was submitted or considered in the initial determination.

For claims involving disability benefits, the review shall:

1. Not afford deference to the initial adverse benefit determination;
2. Provide for the identification of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with the appeal, if applicable;
3. In deciding an appeal that is based in whole or in part on a medical judgment, the decision maker shall consult with a health care professional who has appropriate experience in the field of medicine and who was not consulted in connection with the initial adverse determination and is not the subordinate of someone who did; and
4. In advance of the Administrative Committee rendering any adverse benefit decision on review, the Employee will be provided, free of charge, with any new or additional evidence considered, relied on or generated by the Plan in connection with the claim and any new or additional rationale of the Administrative Committee in time sufficient to give the Employee a reasonable opportunity to respond before any such adverse benefit determination is rendered.

### **Timing of Decision on Appeal**

The Administrative Committee, or its delegate, shall notify the Employee (or his or her representative) of the determination on review within 60 days (or, for disability claims, 45 days) after receipt of the Employee's request for review, unless the Administrative Committee, or its delegate, determines that special circumstances require an extension. The extension may not be longer than 60 days (or, for disability claims, 45 days). The Employee (or his or her representative) shall be notified if any extension is required, the special circumstances requiring an extension and the date when a determination is expected before the end of the initial 60 day (for disability claims, 45 day) period. Subject to the Compensation Committee, the Administrative Committee's, or its delegate's, decision shall be final and binding on all parties.

### **Notice of Benefit Determination on Review of an Appeal**

The Administrative Committee, or its delegate, will provide the Employee (or his or her representative) with a written or electronic notice of the determination on review and, if the claim on review is denied:

1. The specific reason or reasons for the denial;
2. The specific Plan provision(s) on which the decision is based;
3. A statement that the Employee is entitled to receive upon request and free of charge, reasonable access to, and copies of, all documents, records and other information relevant to his or her claim for benefits;
4. If a claim based on disability was denied in reliance upon an internal rule, guideline, protocol or other similar criterion, the internal rule guideline, protocol or other criteria will be described, or the notice will include a statement that no such rule, guideline, protocol or other criteria exists or, if the determination is based on a medical necessity or experimental treatment or similar exclusion or limit, either an explanation of the scientific or clinical judgement for the determination, applying the terms of the plan to the Employee's medical circumstances or a statement that such explanation will be provided free of charge upon request; and
5. A statement that the Employee shall have a right to bring a civil action under Section 502(a) of ERISA following exhaustion of the Plans' administrative processes and a description of the limitations period discussed below.

### **Discretionary Authority to Decide Claims and Appeals**

The Administrative Committee, or its delegate, shall have full discretionary authority to determine eligibility under the Plan's terms, to interpret and apply the terms and provisions of the Plan, to resolve discrepancies and ambiguities, and to make final decisions on the appeal by an Employee of an initial denied claim. Subject to Compensation Committee, the Administrative Committee's, or its delegate's, decision will be final and binding on all parties.

### **Right to File a Lawsuit Under ERISA**

In the event an Employee's appeal under the Plan is denied by the Administrative Committee, or its delegate, he or she shall have the right to file a lawsuit under ERISA Section 502(a). Any such lawsuit must be filed within 12 months of the appeal having been denied. Any lawsuit filed shall be governed by ERISA, or to the extent not preempted, the laws of the State of Delaware.

**LIST OF SUBSIDIARIES OF TRANE TECHNOLOGIES PLC**  
As of December 31, 2022

<u>Name of Subsidiary</u>	<u>Jurisdiction of Formation</u>	<u>Percent of Ownership</u>
200 PARK, INC.	SOUTH CAROLINA	100%
AIRCO LIMITED	THAILAND	48%
AL-KO AIR TECHNOLOGY (SUZHOU) CO., LTD.	CHINA	100%
AL-KO AIR TECHNOLOGY EQUIPMENT SALES (TIANJIN) CO., LTD.	CHINA	100%
AL-KO LUCHTTECHNIEK B.V.	NETHERLANDS	100%
AL-KO THERM D.O.O.	SLOVENIA	33%
AL-KO THERM GMBH	GERMANY	100%
ALDRICH PUMP LLC	NORTH CAROLINA	100%
ALLIANCE COMPRESSORS LLC	DELAWARE	25%
AMAIR LIMITED	THAILAND	97%
ARCTIC COOL CHILLERS LIMITED	CANADA	100%
ARO DE VENEZUELA, C.A.	VENEZUELA	100%
BEST MATIC INTERNATIONAL AB	SWEDEN	100%
BEST MATIC INTERNATIONAL LIMITED	UNITED KINGDOM	100%
BEST MATIC VERMOGENSVERWALTUNGS GMBH	GERMANY	100%
CALMAC CORP.	NEW YORK	100%
CLIMATE ETC TECHNOLOGY SERVICES PRIVATE LIMITED	INDIA	100%
CLIMATELABS LLC	NORTH CAROLINA	100%
COMPAGNIE TRANE TECHNOLOGIES SAS	FRANCE	100%
COOL ENERGY LIMITED	UNITED KINGDOM	100%





DALLAH TRANE FOR MANUFACTURING AIR CONDITIONERS	SAUDI ARABIA	49%
DIASORIN INTERNATIONAL B.V.	NETHERLANDS	100%
ECOENERGIE I AL-KO SAS	FRANCE	30%
FILAIRCO, INC.	PHILIPPINES	100%
FILAIRCO TECHNICAL SERVICES CO., INC.	PHILIPPINES	25%
FRIGOBLOCK GMBH	GERMANY	100%
FRIGOBLOCK UK LIMITED	UNITED KINGDOM	100%
HERMANN TRANE HARRISBURG INC.	DELAWARE	100%
ICS COOL ENERGY (SAS)	FRANCE	100%
ICS COOL ENERGY AG	SWITZERLAND	100%
ICS COOL ENERGY B.V.	NETHERLANDS	100%
ICS COOL ENERGY GMBH	GERMANY	100%
ICS COOL ENERGY INVESTMENTS LIMITED	UNITED KINGDOM	100%
ICS COOL ENERGY LIMITED	UNITED KINGDOM	100%
ICS GROUP HOLDINGS LIMITED	UNITED KINGDOM	100%
INDUSTRIAL CHILL SERVICING PRIVATE LTD.	MAURITIUS	100%
INGERSOLL-RAND ZIMBABWE (PRIVATE) LIMITED	ZIMBABWE	100%
LKV LUFTTECHNISCHE KOMPONENTEN VERTRIEBSGESELLSCHAFT MBH NEUBRANDENBURG	GERMANY	100%
MAGENTA TECHNOLOGIES, LLC	DELAWARE	49%
MITSUBISHI ELECTRIC TRANE HVAC US LLC	DELAWARE	50%
MURRAY BOILER HOLDINGS LLC	DELAWARE	100%
MURRAY BOILER LLC	NORTH CAROLINA	100%

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NEXIA INTELLIGENCE LLC	DELAWARE	100%
PERFECT PITCH, L.P.	DELAWARE	68%
PT TRANE INDONESIA	INDONESIA	100%
R&O IMMOBILIEN GMBH	GERMANY	100%
REFTRANS, S.A.	SPAIN	85%
SHAANXI BAOCHENG AEROTECH AIR-CONDITIONING EQUIPMENT CO., LTD	CHINA	38%
SOCIÉTÉ TRANE SAS	FRANCE	100%
SPANASHVIEW UNLIMITED COMPANY	IRELAND	100%
STANDARD COMPRESSORS INC.	DELAWARE	100%
STANDARD INDUSTRIAL MINERAL PRODUCTS CORP.	PHILIPPINES	40%
STANDARD RESOURCES AND DEVELOPMENT CORPORATION	PHILIPPINES	40%
STANDARD TRANE INSURANCE COMPANY	NORTH CAROLINA	100%
STANDARD TRANE IRELAND DESIGNATED ACTIVITY COMPANY	IRELAND	100%
STANDARD TRANE WARRANTY COMPANY	SOUTH CAROLINA	100%
T.I. SOLUTIONS (ISRAEL) LTD.	ISRAEL	100%
TAST LIMITED	THAILAND	48%
THE IMTEAZ ALROAA COMPANY FOR GENERAL TRADE AND MAINTENANCE OF INDUSTRIAL EQUIPMENT LIMITED LIABILITY	IRAQ	100%
THERMO KING (HONG KONG) COMPANY LIMITED	HONG KONG	100%
THERMO KING (SHANGHAI) CO., LTD.	CHINA	100%
THERMO KING CONTAINER TEMPERATURE CONTROL (SUZHOU) CORPORATION LTD.	CHINA	82%
THERMO KING CONTAINER-DENMARK A/S	DENMARK	100%
THERMO KING DE PUERTO RICO, INC.	DELAWARE	100%

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THERMO KING ENTERPRISE HONG KONG LLC	DELAWARE	100%
THERMO KING INDIA PRIVATE LIMITED	INDIA	100%
THERMO KING IRELAND LIMITED	IRELAND	100%
THERMO KING JAPAN LIMITED	JAPAN	100%
THERMO KING LLC	DELAWARE	100%
THERMO KING MANUFACTURING S.R.O.	CZECHIA	100%
THERMO KING PUERTO RICO MANUFACTURA, INC.	PUERTO RICO	100%
THERMO KING RODAMIENTOS, S.L.	SPAIN	100%
THERMO KING SOUTH AFRICA (PTY) LTD.	SOUTH AFRICA	100%
THERMO KING SVC, INC.	DELAWARE	100%
THERMO KING SVERIGE AB	SWEDEN	100%
THERMO KING TRANSPORTKOELING B.V.	NETHERLANDS	100%
TK PUERTO RICO AIRE, INC.	PUERTO RICO	100%
TK PUERTO RICO COMERCIAL, INC.	PUERTO RICO	100%
TK PUERTO RICO ENSAMBLAJE, INC.	PUERTO RICO	100%
TK PUERTO RICO FABRICACION, INC.	PUERTO RICO	100%
TK PUERTO RICO LOGISTICA, INC.	PUERTO RICO	100%
TK PUERTO RICO OPERACIONES INDUSTRIALES, INC.	PUERTO RICO	100%
TK PUERTO RICO PRODUCCION, INC.	PUERTO RICO	100%
TK PUERTO RICO SOLUCIONES CLIMATICAS, INC.	PUERTO RICO	100%
TK PUERTO RICO TECNOLOGIAS, INC.	PUERTO RICO	100%
TM AIR CONDITIONING SDN. BHD.	MALAYSIA	100%
TRANE (EUROPE) LIMITED	UNITED KINGDOM	100%

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TRANE (IRELAND) LIMITED	IRELAND	100%
TRANE (SCHWEIZ) GMBH / TRANE (SUISSE) S.À.R.L.	SWITZERLAND	100%
TRANE (THAILAND) LIMITED	THAILAND	100%
TRANE AIR CONDITIONING PRODUCTS LIMITED	CAYMAN ISLANDS	100%
TRANE AIR CONDITIONING SYSTEMS (CHINA) CO. LTD.	CHINA	100%
TRANE AIR CONDITIONING SYSTEMS AND SERVICE CO., LIMITED	HONG KONG	100%
TRANE AIR CONDITIONING TECHNOLOGIES (SHANGHAI) CO., LTD	CHINA	100%
TRANE AIRCONDITIONING PTE. LTD.	SINGAPORE	100%
TRANE AIRE ACONDICIONADO S.L.	SPAIN	100%
TRANE BERMUDA LTD.	BERMUDA	100%
TRANE BRANDS, INC.	DELAWARE	100%
TRANE BUFORD LLC	DELAWARE	100%
TRANE BV	BELGIUM	100%
TRANE CANADA ULC	CANADA	100%
TRANE CENTRAL AMERICA, INC.	DELAWARE	100%
TRANE CHINA HOLDINGS LIMITED	CAYMAN ISLANDS	100%
TRANE CLIMATE MANUFACTURING S.R.L.	ITALY	100%
TRANE CR SPOL SRO.	CZECHIA	100%
TRANE CROATIA D.O.O. ZA TRGOVINU	CROATIA	100%
TRANE DE ARGENTINA S.A.	ARGENTINA	100%
TRANE DE CHILE S.A.	CHILE	100%
TRANE DE COLOMBIA S.A.	COLOMBIA	100%
TRANE DEUTSCHLAND GMBH	GERMANY	100%

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TRANE DISTRIBUTION PTE LTD	SINGAPORE	100%
TRANE DO BRASIL INDÚSTRIA E COMÉRCIO DE PRODUCTOS PARA CONDICIONAMENTO DE AR LTDA.	BRAZIL	100%
TRANE DOMINICANA, S.R.L.	DOMINICAN REPUBLIC	100%
TRANE EGYPT LLC	EGYPT	99%
TRANE ENERGY CHOICE, LLC	DELAWARE	100%
TRANE EUROPE HOLDINGS B.V.	NETHERLANDS	100%
TRANE EXPORT LLC	DELAWARE	100%
TRANE FINANCE SRL	BELGIUM	100%
TRANE FRANCE SAS	FRANCE	100%
TRANE GMBH	AUSTRIA	100%
TRANE GRID SERVICES LLC	KENTUCKY	100%
TRANE HELLAS S.A.	GREECE	100%
TRANE HOLDING LIMITED	DELAWARE	100%
TRANE HOLDINGS COMPANY YK	JAPAN	100%
TRANE HUNGARY KFT	HUNGARY	100%
TRANE INC.	DELAWARE	100%
TRANE INC. OF DELAWARE	DELAWARE	100%
TRANE INDIA LTD.	DELAWARE	100%
TRANE INTERNATIONAL INC.	DELAWARE	100%
TRANE INVESTMENTS CANADA INC.	CANADA	100%
TRANE IP INC.	DELAWARE	100%
TRANE ITALIA S.R.L	ITALY	100%
TRANE JAPAN, LTD.	JAPAN	100%
TRANE KLIMA TICARET AS	TURKEY	100%

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TRANE KOREA, INC.	KOREA, REPUBLIC OF	100%
TRANE KUWAIT AIRCONDITIONING CO WLL	KUWAIT	49%
TRANE MALAYSIA SALES & SERVICES SDN. BHD.	MALAYSIA	100%
TRANE MAROC S.A.R.L.AU	MOROCCO	100%
TRANE NETHERLANDS B.V.	NETHERLANDS	100%
TRANE POLAND SP. Z O.O.	POLAND	100%
TRANE PORTUGAL	PORTUGAL	100%
TRANE PUERTO RICO LLC	DELAWARE	100%
TRANE QATAR LLC	QATAR	49%
TRANE ROMANIA S.R.L.	ROMANIA	100%
TRANE S.A.	SWITZERLAND	100%
TRANE S.A.E.	EGYPT	100%
TRANE SERVICEFIRST, C.A.	VENEZUELA	100%
TRANE SERVICES LIMITED	UNITED KINGDOM	100%
TRANE SINGAPORE ENTERPRISES PTE. LTD.	SINGAPORE	100%
TRANE SISTEMAS INTEGRALES, S. DE R.L. DE C.V.	MEXICO	100%
TRANE SPC	OMAN	100%
TRANE SUPPORT SAS	FRANCE	100%
TRANE SWEDEN AB	SWEDEN	100%
TRANE SYSTEMS SOLUTIONS OF PANAMA, INC.	PANAMA	100%
TRANE TAIWAN DISTRIBUTION LTD.	TAIWAN, PROVINCE OF CHINA	100%
TRANE TECHNOLOGIES (CHINA) CO., LTD	CHINA	100%

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TRANE TECHNOLOGIES CHARITABLE FOUNDATION	DELAWARE	100%
TRANE TECHNOLOGIES COMPANY LLC	DELAWARE	100%
TRANE TECHNOLOGIES COSTA RICA SOCIEDAD ANONIMA	COSTA RICA	100%
TRANE TECHNOLOGIES EUROPEAN HOLDING COMPANY B.V.	NETHERLANDS	100%
TRANE TECHNOLOGIES FINANCIAL SERVICES CORPORATION	DELAWARE	100%
TRANE TECHNOLOGIES FINANCING LIMITED	IRELAND	100%
TRANE TECHNOLOGIES FINLAND OY	FINLAND	100%
TRANE TECHNOLOGIES FUNDING LTD.	BERMUDA	100%
TRANE TECHNOLOGIES GLOBAL HOLDING COMPANY LIMITED	DELAWARE	100%
TRANE TECHNOLOGIES GMBH	GERMANY	100%
TRANE TECHNOLOGIES HOLDCO INC.	DELAWARE	100%
TRANE TECHNOLOGIES HOLDINGS B.V.	NETHERLANDS	100%
TRANE TECHNOLOGIES INDIA PRIVATE LIMITED	INDIA	100%
TRANE TECHNOLOGIES INDÚSTRIA, COMÉRCIO E SERVIÇOS DE AR-CONDICIONADO LTDA.	BRAZIL	100%
TRANE TECHNOLOGIES INTERNATIONAL FINANCE LIMITED	IRELAND	100%
TRANE TECHNOLOGIES INTERNATIONAL LIMITED	IRELAND	100%
TRANE TECHNOLOGIES INVESTMENTS NETHERLANDS B.V.	NETHERLANDS	100%
TRANE TECHNOLOGIES IRISH HOLDINGS UNLIMITED COMPANY	IRELAND	100%
TRANE TECHNOLOGIES LATIN AMERICA B.V.	NETHERLANDS	100%
TRANE TECHNOLOGIES LATIN AMERICA, S. DE R.L. DE C.V.	MEXICO	100%

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TRANE TECHNOLOGIES LIFE SCIENCES LLC	DELAWARE	100%
TRANE TECHNOLOGIES LUX EURO III FINANCING S.À R.L.	LUXEMBOURG	100%
TRANE TECHNOLOGIES LUX INTERNATIONAL HOLDING COMPANY S.À R.L.	LUXEMBOURG	100%
TRANE TECHNOLOGIES MANUFACTURA, S. DE R.L DE C.V.	MEXICO	100%
TRANE TECHNOLOGIES PERU S.A.C.	PERU	100%
TRANE TECHNOLOGIES RUS LLC	RUSSIAN FEDERATION	100%
TRANE TECHNOLOGIES S.A.	SWITZERLAND	100%
TRANE TECHNOLOGIES SALES COMPANY, LLC	DELAWARE	100%
TRANE TECHNOLOGIES S.R.O.	CZECHIA	100%
TRANE THERMO KING (SHANGHAI) ENTERPRISE MANAGEMENT CO., LTD.	CHINA	100%
TRANE THERMO KING PTY. LTD.	AUSTRALIA	100%
TRANE UK LIMITED	UNITED KINGDOM	100%
TRANE U.S. INC.	DELAWARE	100%
TRANE VIETNAM SERVICES COMPANY LIMITED	VIETNAM	100%
TRANE, S.A. DE C.V.	MEXICO	100%
TRICOOL THERMAL LIMITED	UNITED KINGDOM	100%
TSI ANSTALT LTD.	LIECHTENSTEIN	100%
TUI HOLDINGS INC.	DELAWARE	100%
TWENTYTHREEC, LLC	DELAWARE	65%
TYS LIMITED	HONG KONG	50%
VKL VERTRIEBSGESELLSCHAFT FÜR KÄLTE- UND LUFTECHNIK MBH	GERMANY	100%
WORLD STANDARD LTD.	DELAWARE	100%



**List of Guarantors and Subsidiary Issuers of Guaranteed Securities**

Trane Technologies plc (Plc or Parent Company) and certain of its 100% directly or indirectly owned subsidiaries provide guarantees of public debt issued by other 100% directly or indirectly owned subsidiaries of Plc. The following table shows our guarantor relationships as of December 31, 2022:

<b>Parent, issuer or guarantors</b>	<b>Notes issued</b>	<b>Notes guaranteed</b>
Trane Technologies plc (Plc)	None	All registered notes and debentures
Trane Technologies Irish Holdings Unlimited Company (TT Holdings)	None	All notes issued by TTFL and TTC HoldCo
Trane Technologies Lux International Holding Company S.à.r.l. (TT International)	None	All notes issued by TTFL and TTC HoldCo
Trane Technologies Global Holding Company Limited (TT Global)	None	All notes issued by TTFL and TTC HoldCo
Trane Technologies Financing Limited (TTFL)	3.550% Senior notes due 2024 3.500% Senior notes due 2026 3.800% Senior notes due 2029 4.650% Senior notes due 2044 4.500% Senior notes due 2049	All notes and debentures issued by TTC HoldCo and TTC
Trane Technologies HoldCo Inc. (TTC HoldCo)	4.250% Senior notes due 2023 3.750% Senior notes due 2028 5.750% Senior notes due 2043 4.300% Senior notes due 2048	All notes issued by TTFL
Trane Technologies Company LLC (TTC)	7.200% Debentures due 2023-2025 6.480% Debentures due 2025 Puttable debentures due 2027-2028	All notes issued by TTFL and TTC HoldCo

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-255905) and Form S-8 (Nos. 333-206494, 333-225575, 333-189446, 333-185429, 333-185428, 333-151607-99, 333-149537-99, 333-149396-99, 333-143716-99, 333-130047-99, 333-42133-99, 333-19445-99 and 333-67257-99) of Trane Technologies plc of our report dated February 10, 2023 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP  
Charlotte, North Carolina  
February 10, 2023

**CERTIFICATION**

I, David S. Regnery, certify that:

1. I have reviewed the Annual Report on Form 10-K of Trane Technologies plc for the year ended December 31, 2022;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 10, 2023

/s/ David S. Regnery

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David S. Regnery  
Principal Executive Officer

**CERTIFICATION**

I, Christopher J. Kuehn, certify that:

1. I have reviewed the Annual Report on Form 10-K of Trane Technologies plc for the year ended December 31, 2022;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 10, 2023

/s/ Christopher J. Kuehn

Christopher J. Kuehn  
Principal Financial Officer

**Section 1350 Certifications**  
**Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**  
**(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)**

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code), each of the undersigned officers of Trane Technologies plc (the Company), does hereby certify that to our knowledge:

The Annual Report on Form 10-K for the year ended December 31, 2022 (the Form 10-K) of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ David S. Regnery

David S. Regnery  
Principal Executive Officer  
February 10, 2023

/s/ Christopher J. Kuehn

Christopher J. Kuehn  
Principal Financial Officer  
February 10, 2023