UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

For the transition period from to			
	Commission file number 000-	22418	
	ITRON, IN		
Washington		91-1011792	
(State of Incorporatio	n)	(I.R.S. Employer Identifica	tion Number)
	1 N Molter Road, Liberty Lake, Wa (509) 924-9900 ss and telephone number of registrant's prin	5	
	rities registered pursuant to Section		
Title of each class	Trading Symbol(s)	Name of each exchange on	which registered
Common stock, no par value	ITRI	NASDAQ Global Sel	
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Itron, Inc.

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In this Annual Report on Form 10-K, the terms "we", "us", "our", "Itron", and the "Company" refer to Itron, Inc.

Certain Forward-Looking Statements

This report contains, and our officers and representatives may from time to time make, "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements are neither historical factors nor assurances of future performance. These statements are based on our expectations about, among others, revenues, operations, financial performance, earnings, liquidity, earnings per share, cash flows and restructuring activities including headcount reductions and other cost savings initiatives. This document reflects our current strategy, plans and expectations and is based on information currently available as of the date of this Annual Report on Form 10-K. When we use words such as "expect", "intend", "anticipate", "believe", "plan", "goal", "seek", "project", "estimate", "future", "strategy", "objective", "may", "likely", "should", "will", "will continue", and similar expressions, including related to future periods, they are intended to identify forward-looking statements. Forward-looking statements rely on a number of assumptions and estimates. Although we believe the estimates and assumptions upon which these forwardlooking statements are based are reasonable, any of these estimates or assumptions could prove to be inaccurate and the forward-looking statements based on these estimates and assumptions could be incorrect. Our operations involve risks and uncertainties, many of which are outside our control, and any one of which, or a combination of which, could materially affect our results of operations and whether the forward-looking statements ultimately prove to be correct. Actual results and trends in the future may differ materially from those suggested or implied by the forward-looking statements depending on a variety of factors. Therefore, you should not rely on any of these forward-looking statements. Some of the factors that we believe could affect our results include our ability to execute on our restructuring plans, our ability to achieve estimated cost savings, the rate and timing of customer demand for our products, rescheduling of current customer orders, changes in estimated liabilities for product warranties, adverse impacts of litigation, changes in laws and regulations, our dependence on new product development and intellectual property, future acquisitions, changes in estimates for stock-based and bonus compensation, increasing volatility in foreign exchange rates, international business risks, uncertainties caused by adverse economic conditions, including, without limitation those resulting from extraordinary events or circumstances such as the COVID-19 pandemic and other factors that are more fully described in Part I, Item 1A: Risk Factors included in this Annual Report and other reports on file with the Securities and Exchange Commission. We undertake no obligation to update or revise any forward-looking statement, whether written or oral.

PART I

Item 1: Business

Available Information

Documents we provide to the Securities and Exchange Commission (SEC) are available free of charge under the Investors section of our website at *www.itron.com* as soon as practicable after they are filed with or furnished to the SEC. In addition, these documents are available at the SEC's website (http://www.sec.gov). The information posted on or accessible through our website is not part of or incorporated by reference into this Annual Report.

General

Itron is a leader in enabling utilities and cities to safely, securely and reliably deliver critical infrastructure solutions to communities around the world. Our proven platform enables smart networks, software, services, devices and sensors to help our customers better manage their operations in the energy, water, and smart city spaces. We are among the leading technology and services companies offering end-to-end device solutions, networked solutions, and outcomes-based products and services to the utility and municipal sectors. Our comprehensive offerings control, measure, monitor, and provide data analytics and services that enable utilities and municipalities to manage their critical resources responsibly and efficiently.

We have over 40 years of experience supporting utilities and municipalities in the management of their data and critical infrastructure needs and we have delivered continuous innovation to help drive the industry forward. Incorporated in 1977 with a focus on meter reading services and technology, we entered the electricity meter manufacturing business with the acquisition of Schlumberger Electricity Metering in 2004. In 2007, we expanded our presence in global meter manufacturing and systems with the acquisition of Actaris Metering Systems SA. In 2017, we completed our acquisition of Comverge, which enabled us to offer integrated cloud-based demand response, energy efficiency, and customer engagement solutions. In 2018, we strengthened our ability to deliver a broader set of solutions and to increase the pace of growth and innovation in the utility, smart city, and broader Industrial Internet of Things (IIoT) markets with the acquisition of Silver Spring Networks, Inc. (SSNI).

Looking forward, we will continue to innovate and support open standards and maintain a device and transport agnostic platform that enables our customers to meet their needs either directly or via our ecosystem of partners. We support a worldwide network of connected devices, and we will continue to develop more applications, new opportunities, and value-added outcomes for our customers in the future.

The following is a discussion of our solutions, markets, and operating segments. Refer to Part II, Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations and Part II, Item 8: Financial Statements and Supplementary Data for specific segment results.

Our Business

The way the world manages energy and water will be one of the defining actions of this century. At Itron, we are committed to creating a more resourceful world—one where energy, water, and city resources are managed safely, securely, and reliably, to help improve day-to-day life and promote the well-being of people around the world. We invent new ways for cities and utilities to work together so they can use data captured by our intelligent endpoints, sensors, and systems to cost-effectively leverage their infrastructure to deliver multiple services and applications on a reliable, intelligent platform capable of serving all their customers.

Itron helps our customers adapt to a rapidly changing world and to address a number of macro trends, including:

- *Infrastructure* such as aging utility infrastructure, grid security, safety, asset monitoring and management, and incorporating the proliferation of distributed energy resources, such as electric vehicles, renewable energy and storage, into the grid
- Environmental such as extreme weather, resource scarcity, and demand for sustainability and decarbonization
- Social such as enhanced customer experience, critical need consumers, privacy, urbanization, population increase, and the management of "big data" and incorporating IIoT technology into their existing operations

Our solutions include smart networks, software, services, devices, sensors, and data analytics upon a platform that allows our customers to not only address the changing macro trends listed above but also to address pressing industry challenges to better manage and control assets, intelligently benchmark, secure revenue, lower operational costs, improve customer service, develop new business models and revenue streams, improve safety, and enable efficient management of valuable resources. Our comprehensive solutions and data analytics also help our customers address operational issues including increasing demand on resources, non-technical loss, leak detection, environmental and regulatory compliance, integrating renewable and distributed energy sources, and improving operational reliability.

Itron solutions include technology, software, and services delivered as part of a standalone, one-time purchase or end-to-end solution over multiple years. The portfolio includes hardware products used for measurement, control, or sensing, with and without communications capability; a combination of endpoints and network infrastructure with embedded intelligence that is designed and sold as a complete solution to acquire and transport application-specific data; distribution automation - intelligent communication for the modern grid allowing secure, low-voltage distribution-system automation and control; distributed energy resource management (DERMs) to connect, analyze, and optimize distributed energy resources; and value-added services, software, and products that organize, analyze, and interpret data to gain insights, make decisions, and inform actions. We also offer managed services, Software-as-a-Service (SaaS), Network-as-a-Service (NaaS), technical support services, licensed hardware technology, and consulting services.

Industry Drivers

Utility and municipalities are undergoing an evolution in affordability, reliability and sustainability impacting how they operate critical infrastructure, manage scarce resources, address impacts of climate disruption, and interact with their customers. Efficiently managing resources within energy, water, and cities is a top priority globally, as increasing populations and resource consumption along with extreme weather events continue to stress an aging infrastructure. The growing demand for energy, water, and municipal services coupled with the proliferation of renewable energy sources, smart communicating devices, sensors, and multiple data-producing technologies as well as the growing need to manage distributed energy resources is forcing providers to rethink how they operate and service their communities. This evolution comes at a time when utilities and municipalities are challenged by cost constraints, regulatory requirements, environmental concerns, safety, and resource scarcity. Itron provides its customers with solution-based offerings to safely, securely, and reliably optimize their critical infrastructure to improve the efficiency of their services and to better understand their customers and peers with near real-time knowledge of their resource usage. An added benefit of our solutions is that a utility or municipality can empower its customers

to understand and have control over their resource usage, allowing for better management and conservation of valuable resources.

To address these challenges, utilities and cities are looking to leverage innovations across a networked platform, such as edge (or distributed) intelligence to build and maintain critical infrastructure that can:

- efficiently and effectively operate energy and water systems that are safe, reliable, and resilient
- reduce the risk and impact of natural disasters
- think for itself, repair itself, and anticipate problems before they occur
- deliver enhanced, more personalized services at lower cost
- · accommodate next-generation services through shared infrastructure between utilities and cities/municipalities
- provide actionable insights for asset management

Our Operating Segments

We operate under the Itron brand worldwide and manage and report under three operating segments: Device Solutions, Networked Solutions, and Outcomes. The following is a description of each of the three segments:

Device Solutions – This segment primarily includes hardware products used for measurement, control, or sensing that do not have communications capability embedded for use with our broader Itron systems, i.e., hardware-based products not part of a complete end-to-end solution. Examples from the Device Solutions portfolio include: standard endpoints that are shipped without Itron communications, such as our standard gas, electricity, and water meters for a variety of global markets and adhering to regulations and standards within those markets, as well as our heat and allocation products; communicating meters that are not a part of an Itron end-to-end solution, such as Smart Spec meters; and the implementation and installation of non-communicating devices.

Networked Solutions — This segment primarily includes a combination of communicating devices (e.g., smart meters, modules, endpoints, and sensors), network infrastructure, and associated application software designed and sold as a complete solution for acquiring and transporting robust application-specific data. Networked Solutions includes products and software for the implementation, installation, and management of communicating devices and data networks. The Industrial Internet of Things (IIoT) solutions supported by this segment include automated meter reading (AMR), advanced metering infrastructure (AMI), distributed energy resource management (DERMs), smart grid and distribution automation, smart street lighting, and an ever-growing set of smart city applications such as traffic management, smart parking, air quality monitoring, electric vehicle charging, customer engagement, digital signage, acoustic (e.g., gunshot) detection, and leak detection and mitigation for both gas and water systems. Our IIoT platform allows all these utility and smart city applications to be run and managed on a single, multi-purpose network.

Outcomes – This segment primarily includes our value-added, enhanced software and services in which we manage, organize, analyze, and interpret raw, anonymized and aggregated data to improve decision making, maximize operational profitability, drive resource efficiency, improve grid analytics, and deliver results for consumers, utilities, and smart cities. Outcomes supports high-value use cases such as data management, grid operations, distributed intelligence, operations management, gas distribution and safety, water operations management, revenue assurance, DERMs, energy forecasting, consumer engagement, smart payment, and fleet energy resource management. Utilities leverage these outcomes to capitalize on the power of networks and devices, empower their workforce, maximize their operations and enhance the customer experience. The revenues from these offerings are primarily recurring in nature and would include any direct management of Device Solutions, Networked Solutions, and other products on behalf of our end customers.

Bookings and Backlog of Orders

Bookings for a reported period represent customer contracts and purchase orders received during the period for hardware, software, and services that have met certain conditions, such as regulatory and/or contractual approval. Total backlog represents committed but undelivered products and services for contracts and purchase orders at period-end. Twelve-month backlog represents the portion of total backlog that reflects our understanding of customer's desired deployment over the next 12 months. The actual revenue recognized and timing of revenue earned from backlog may vary based on actual currency rates at the time of shipment, supply constraints, and adjusted customer project timing. Backlog is not a complete measure of our future revenues as we also receive significant book-and-ship orders, as well as frame contracts. Bookings and backlog may fluctuate significantly due to the timing of large project awards. In addition, annual or multi-year contracts are subject to rescheduling due to the long-term nature of the contracts. Certain of our customers have the right to cancel contracts, but we do not have a history of any significant cancellations. Beginning total backlog, plus bookings, minus revenues, will not equal ending total backlog due to miscellaneous contract adjustments, foreign currency fluctuations, and other factors. Total bookings and backlog include certain contracts with a termination for convenience clause, which will not agree to the total transaction

price allocated to the remaining performance obligations disclosed in Part II, Item 8: Financial Statements and Supplementary Data, Note 17: Revenues.

Year Ended	Total :	Bookings Tot	al Backlog	12-Month Backlog		
In millions		_		_		
December 31, 2022	\$	2,505 \$	4,619	2,052		
December 31, 2021		2,755	4,017	1,539		
December 31, 2020		2,213	3,259	1,204		

Our total backlog, as of December 31, 2021, included \$64.7 million of backlog related to the sale of certain Gas product lines from our Device Solutions manufacturing and business operations in Europe and North America to Dresser Utility Solutions (Dresser). At transaction close on February 28, 2022, \$55.7 million of this backlog was transferred to Dresser. For more information on the transaction refer to Part II, Item 8: Financial Statements and Supplementary Data, Note 18: Sale of Businesses.

Sales and Distribution

We use a combination of direct and indirect sales channels to access our customers. A direct sales force is utilized for our larger customers, with which we have long-established relationships. This direct sales force is focused on solution selling, solving problems and business challenges, and delivering valuable outcomes to our utility and smart city customers. For smaller utilities and most municipalities, we typically use an indirect sales channel that extends the reach of Itron's solutions by empowering trusted partners with the right tools, training, and technology to grow their business, deliver results, and help these customers better manage energy and water. These channels consist of distributors, agents, partners, and meter manufacturer representatives.

No single customer represented more than 10% of total revenues for the years ended December 31, 2022, 2021, and 2020. Our 10 largest customers in each of the years ended December 31, 2022, 2021, and 2020, accounted for approximately 32%, 25%, and 33% of total revenues.

Manufacturing

Our products require a wide variety of components and materials, which are subject to price and supply fluctuations. We enter into typical contracts in the ordinary course of business, which can include purchase orders for specific quantities based on market prices, as well as open-ended agreements that provide for estimated quantities over an extended shipment period, typically up to one year at an established unit cost. Although we have multiple sources of supply for many of our material requirements, certain components and raw materials are supplied by limited or sole-source vendors, and our ability to perform certain contracts depends on the availability of these materials. Refer to Item 1A: Risk Factors for further discussion related to manufacturing and supply risks.

Our manufacturing facilities are located throughout the world, an overview of which is presented in Item 2: Properties. While we manufacture and assemble a portion of our products, we outsource the manufacturing of many products and sub-assemblies to various manufacturing partners and strive to create an efficient and cost-effective structure. This approach allows us to reduce the costs related to our manufacturing overhead and inventory and also allows us to adjust more quickly to changing customer demand. These manufacturing partners assemble our sub-assemblies and products using design specifications, quality assurance programs, and standards that we establish and procure components and assemble our products based on demand forecasts. These forecasts represent our estimates of future demand for our products based upon historical trends and analysis from our sales and product management functions, as adjusted for overall market conditions.

Partners

In connection with delivering solutions and systems to our customers, we frequently partner with third-party vendors to provide hardware, software, or services, e.g., meter installation and communication network equipment and infrastructure. Due to the interoperable, open-standards based nature of our platform, we have also cultivated a highly diverse and growing ecosystem of partners and third-party developers who can create complementary solutions for our customers that run on the same network and within the same platform framework.

Our ability to perform on our contractual obligations with our customers is dependent on these partners meeting their obligations to us. Refer to Item 1A: Risk Factors for further discussion related to third-party vendors and strategic partners.

Research and Development

Our research and development is focused on both improving existing technology and developing innovative new technology for critical infrastructure in electricity, natural gas, water, heat, smart city, and DERMs verticals. This includes endpoints, sensing and control devices, data collection software, communication technologies, data warehousing, software applications, and the IIoT. We invested approximately \$185 million, \$197 million, and \$194 million in research and development in 2022, 2021 and 2020, which represented 10% of total revenues for 2022 and 2021 and 9% of total revenues for 2020. Refer to Item 1A: Risk Factors for further discussion related to costs of developing competitive products and services.

Human Capital

As of December 31, 2022, we had 5,477 people in our workforce, including 4,822 permanent employees. We have not experienced significant employee work stoppages and our employee relations are deemed to be good.

We are an equal opportunity employer, and we promote a culture of inclusion and diversity. We monitor our progress through various programs and policies. We offer wages and a range of company-paid benefits we believe are competitive with other companies in our industry and in the markets we serve.

The table below provides the breakdown of our employees by region and self-identified gender:

	As of December 31, 2022								
Region	Male	Female	Total Number of Employees	Percentage of Total Employees					
Americas	1,728	721	2,449	51 %					
Europe, Middle East and Africa	942	512	1,454	30 %					
Asia Pacific & Other	728	191	919	19 %					
Total (1)	3,398	1,424	4,822						

⁽¹⁾ These numbers do not include contingent workers (655 as of December 31, 2022).

Competition

We enable utilities and cities to safely, securely, and reliably deliver critical infrastructure services to communities around the world. Our portfolio of smart networks, software, services, meters, and sensors help our customers better manage energy, water, and city infrastructure resources for the people they serve. Consequently, we operate within a large and complex competitive landscape, and our competitors range from small companies to large, established corporations. Some of our competitors have diversified product portfolios and participate in multiple geographic markets, while others focus on specific regional markets and/or certain types of products, including some low-cost suppliers of devices based in Asia. Our primary competitors include LM Ericsson Telephone Company, Landis+Gyr, Mueller Water Products, and Xylem, Inc. (formerly Sensus).

We believe that our competitive advantage is based on our in-depth knowledge of the industries we serve, our capacity to innovate, and our ability to provide complete end-to-end integrated solutions. We also differentiate ourselves with an intelligent IIoT platform that is solution, device, and transport agnostic—a platform that can be backwards compatible, able to run a multitude of applications and solutions, is highly secure, fully integrated into our portfolio, highly interoperable, captures relays, and leverages high-resolution data for near real-time decision making. The platform involves an evergrowing, diverse ecosystem of partners and third-party developers who can create and deploy specific point solutions creating greater value for our customers.

We are a global leader in the IIoT category; an industry leader in communication modules deployed; a leading industry innovator; a leader of energy and water end-to-end solutions; and a global leader in endpoints under managed services. We continue to serve our established customer relationships and expand upon our track record of delivering reliable, accurate, and long-lived products and services.

Refer to Item 1A: Risk Factors for a discussion of the competitive pressures we face.

Strategic Alliances

We pursue strategic alliances with other companies in areas where collaboration can produce product advancement and acceleration of entry into new markets. The objectives and goals of a strategic alliance can include one or more of the following: technology exchange, research and development, joint sales and marketing, or access to new geographic markets. Refer to Item 1A: Risk Factors for a discussion of risks associated with strategic alliances.

Intellectual Property

Our patents and patent applications cover a range of technologies that relate to standard metering, smart metering solutions and technology, meter data management software, knowledge application solutions, and IIoT. We also rely on a combination of copyrights, trademarks, and trade secrets to protect our products and technologies. Disputes over the ownership, registration, and enforcement of intellectual property rights arise in the ordinary course of our business. While we believe patents and trademarks are important to our operations and, in aggregate, constitute valuable assets, no single patent or trademark, or group of patents or trademarks, is critical to the success of our business. We license some of our technology to other companies, some of which are our competitors.

Governmental Regulations

In the ordinary course of our business, we are impacted by many governmental regulations, including environmental regulations. We believe that we are materially in compliance with all federal, state, and local governmental laws, rules, and regulations applicable to the operation of our business. There are no known regulations pending that will have a substantial adverse impact on our business, revenue, earnings, or cash flows. However, if new or amended laws or regulations impose significant operational restrictions and compliance requirements upon the Company or its products, the Company's business, capital expenditures, results of operations, financial condition and competitive position could be altered.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

Set forth below are the names, ages, and titles of our executive officers as of February 27, 2023.

Name	Age	Position
Thomas L. Deitrich	56	President and Chief Executive Officer
Joan S. Hooper	65	Senior Vice President and Chief Financial Officer
Michel C. Cadieux	65	Senior Vice President, Human Resources
Justin K. Patrick	50	Senior Vice President, Device Solutions
John F. Marcolini	50	Senior Vice President, Networked Solutions
Donald L. Reeves	55	Senior Vice President, Outcomes
Christopher E. Ware	54	Vice President, General Counsel and Corporate Secretary

Thomas L. Deitrich is President and Chief Executive Officer and a member of our Board of Directors. Mr. Deitrich was appointed to his current position and to the Board of Directors in August 2019. Mr. Deitrich joined Itron in October 2015, serving as Itron's Executive Vice President and Chief Operating Officer until his promotion to CEO. From 2012 to September 2015, Mr. Deitrich was Senior Vice President and General Manager for Digital Networking at Freescale Semiconductor, Inc. (Freescale), and he served as the Senior Vice President and General Manager of Freescale's RF, Analog, Sensor, and Cellular Products Group from 2009 to 2012. Mr. Deitrich had other roles of increasing responsibility at Freescale from 2006 to 2009. Prior to Freescale, Mr. Deitrich worked for Flextronics, Sony-Ericsson/Ericsson, and GE. Mr. Deitrich is a director of ON Semiconductor Corporation, a NASDAQ listed company.

Joan S. Hooper is Senior Vice President and Chief Financial Officer. Ms. Hooper was appointed to this role in June 2017. Prior to joining Itron, Ms. Hooper was Chief Financial Officer of CHC Helicopter from 2011 to July 2015. Following Ms. Hooper's departure from CHC, CHC filed a voluntary petition of relief under Chapter 11 of the U.S. Bankruptcy Code in May 2016, and CHC emerged from bankruptcy in March 2017. Prior to CHC, she held several executive finance positions at Dell, Inc. from 2003 to 2010, including Vice President and Chief Financial Officer for its Global Public and Americas business units, Vice President of Corporate Finance and Chief Accounting Officer.

Michel C. Cadieux is Senior Vice President, Human Resources and has been so since joining Itron in February 2014. From 2008 to 2012, Mr. Cadieux was Senior Vice President of Human Resources and Security at Freescale Semiconductor, Inc. (Freescale). Mr. Cadieux has more than 30 years leading HR organizations in global technology and manufacturing companies including Betz Laboratories, the Hudson Bay Company, ING Bank of Canada, Advanced Micro Devices/ATI, and Freescale.

Justin K. Patrick is Senior Vice President, Device Solutions, where he is responsible for Itron's strategy to become a leading global provider of measurement, safety, and operational devices for utilities and cities. Mr. Patrick joined Itron in January 2020. From 2018 to 2020, Mr. Patrick was Vice President & General Manager, Residential Products at Johnson Controls International (JCI). Before that role, he was Vice President & General Manager, Variable Refrigerant Flow Systems and Ductless from 2014 to 2017, and Director, Channel Strategy and Marketing from 2010 to 2014 at JCI. Prior to his time at JCI, Mr. Patrick held a sales leadership role at the Auer Steel and Heating Supply Company, and at Carrier Corporation he had roles of increasing responsibility culminating in general management. Prior to his civilian career, Mr. Patrick served as a Surface Warfare Officer in the United States Navy.

John F. Marcolini is Senior Vice President, Networked Solutions, where he is responsible for product development, marketing, and overall strategy for Itron's global networking platforms and smart cities strategy and solutions. Mr. Marcolini was appointed to this role in July 2020. Mr. Marcolini joined Itron in January 2018 as part of Itron's acquisition of SSNI as the Vice President of product management, responsible for product strategy and lifecycle management across Itron's smart energy, smart city and IIoT portfolios. He has more than 20 years of product management, business development, and customer delivery experience with deep technical knowledge of networking, radio frequency technologies, and IIoT. Mr. Marcolini has also spent many years working with utility customers to deliver and implement complex product deployments.

Donald L. Reeves is Senior Vice President, Outcomes, where he is responsible for Itron's software and services offerings, delivery teams, managed services operations, and customer support. Mr. Reeves was appointed to this role in September 2019. Mr. Reeves joined Itron in January 2018 as part of Itron's acquisition of SSNI, and, from 2016 to 2018, he was SSNI's Chief Technology Officer. From 2005 to 2016, Mr. Reeves held several managed services and engineering positions at SSNI. Prior to joining SSNI, Mr. Reeves served as Vice President of Engineering at Black Pearl from 2003 to 2004 and was Vice President of Engineering at Commerce One from 2001 to 2003, and prior to that held leadership positions at several startup technology companies.

Christopher E. Ware is Vice President, General Counsel and Corporate Secretary. Mr. Ware has more than 25 years of experience as a senior legal advisor and business executive. He joined Itron in March 2021 as Associate General Counsel and Chief Compliance Officer. In March 2022, he was promoted to Vice President, Legal and Corporate Secretary. In this role, he is responsible for Itron's corporate governance, business legal solutions, and risk management. Prior to joining Itron, Mr. Ware served as Executive Director and General Manager at Johnson Controls International (JCI) from 2018 to 2021. Before that position, Mr. Ware occupied numerous senior legal roles within JCI from 2011 to 2018. He also held roles in the U.S. Attorney's Office, the Department of Justice, and several private law firms.

Item 1A: Risk Factors

Business and Industry Risks

We are dependent on the utility industry, which has lengthy and unpredictable sales cycles and has experienced volatility in capital spending, each of which has and could cause our operating results to fluctuate significantly.

We derive the majority of our revenues from sales of products and services to utilities. Purchases of our products may be deferred as a result of many factors, including economic downturns, slowdowns in new residential and commercial construction, customers' access to capital upon acceptable terms, the timing and availability of government subsidies or other incentives, utility specific financial circumstances, mergers and acquisitions, regulatory decisions, weather conditions and climate disruption, and fluctuating interest rates. We have experienced, and may in the future experience, variability in operating results on an annual and a quarterly basis as a result of these factors.

The industries in which we sell our products and services, in particular the utility industry, are subject to substantial government regulation. For example, regulations have often influenced the frequency of customer meter replacements. Sales cycles for our standalone meter products have typically been based on annual or biennial bid-based agreements. Utilities place purchase orders against these agreements as their inventories decline, which can create fluctuations in our sales volumes.

Sales cycles for smart metering solutions are generally long and unpredictable due to several factors, including budgeting, purchasing, and regulatory approval processes that can take several years to complete. Our utility customers typically issue requests for quotes and proposals, establish evaluation processes, review different technical options with vendors, analyze performance and cost/benefit justifications, and perform a regulatory review, in addition to applying the normal budget approval process. Today, governments around the world are implementing new laws and regulations to promote increased energy efficiency, slow or reverse growth in the consumption of scarce resources, reduce carbon dioxide emissions, and protect the environment. Many of the legislative and regulatory initiatives encourage utilities to develop a smart grid infrastructure, and some of these initiatives provide for government subsidies, grants, or other incentives to utilities and other participants in their industry to promote transition to smart grid technologies. If government regulations regarding the smart grid and smart metering are delayed, revised to permit lower or different investment levels in metering infrastructure, or terminated altogether, this could have a material adverse effect on our results of operation, cash flow, and financial condition.

We must continually shift and adapt our products and services mix, which requires substantial judgment and investment.

Our market is characterized by increasing complexity driven by evolving technology, increased regulatory pressures, and the emergence of new competitive products, all of which impact the way our products and services are designed, developed, marketed, and delivered. The shift in, and increasing complexity of, our products and services mix involves judgment and entails risks. In order to successfully design and develop more complex offerings, we must anticipate the right products, solutions, and technologies to meet estimated market demands. These estimates may prove wrong. Additionally, our complex offerings may contain defects when they are first introduced; their release may be delayed due to unforeseen difficulties during product and service design and development; or they may have reliability, quality, or compatibility problems. We may not be able to successfully design workarounds. Any shift in, or increased complexity of, our products and services mix may not be easily understood or adopted by our current or future customers, who may be reluctant to buy, or may delay purchases of, our products and services.

Additionally, our evolving products and services mix could cause us to incur substantial additional costs if we need to materially improve our manufacturing infrastructure, develop new systems to deliver our services, or fundamentally change the way in which we deliver services. Also, if one of our new offerings were competitive to our prior offerings and represented an adequate or superior alternative, customers could decide to abandon prior offerings that produce higher revenue or better margins than the new offering. Therefore, the adaptation to new technologies or standards or the development and launch of new products or services could result in lower revenue, lower margins, and/or higher costs, which could unfavorably impact our financial performance.

Delays in the availability of or shortages in raw materials and component parts used in the manufacture of our products, as well as freight, labor, and other ancillary cost increases, could unfavorably impact our revenues and results of operations.

We are impacted by the availability and prices of raw materials and component parts used in the manufacturing process of our products. Raw materials include purchased castings made of metal or alloys (such as brass, which uses copper as its main component, aluminum, stainless steel and cast iron), plastic resins, glass, and other electronic components, such as microprocessors and semiconductors. There are multiple sources for these raw materials and components, but we sometimes

rely on single suppliers for certain of these materials. Our inability to obtain adequate supplies of raw materials and component parts at favorable prices could have a material adverse effect on our business, financial condition, or results of operations, including reduced revenue, lower profit margins, and delays in deliveries to customers, which could result in damages or penalties to be paid under the terms of certain of our customer contracts. Since we do not control the production of these raw materials and component parts, there may be delays caused by an interruption in the production or transportation of these materials for reasons that are beyond our control. World commodity markets, inflation, tariffs or embargoes may also affect the availability or prices of raw materials or component parts. Recently, inflation in our raw materials and component costs, freight charges, and labor costs have increased above historical levels, due to, among other things, the continuing impacts of the pandemic and the uncertain economic environment. Certain customer arrangements within our backlog may include previously committed pricing, and we may or may not be able to fully recover increased costs through pricing actions with these customers.

Our operations may be adversely impacted if key vendors, strategic partners, and other third parties fail to perform.

Certain of our products, subassemblies, and system components, including most of our circuit boards, are procured from limited or sole sources. We cannot be certain that we will not experience operational difficulties with these sources, including reductions in the availability of production capacity, errors in complying with product specifications, insufficient quality control, failures to meet production deadlines, increases in manufacturing costs, vendors' access to capital, and increased lead times. Additionally, our manufacturers may experience disruptions in their manufacturing operations due to equipment breakdowns, labor strikes or shortages, natural disasters and pandemics, component or material shortages, cost increases, or other similar problems. Further, to minimize their inventory risk, our manufacturers may not order components from third-party suppliers with adequate lead time, thereby impacting our ability to meet our demand forecast. If we fail to manage our relationship with our manufacturers effectively, or if they experience operational difficulties, our ability to ship products to our customers and distributors could be impaired, and our competitive position and reputation could be harmed. If we receive shipments of products that fail to comply with our technical specifications or that fail to conform to our quality control standards, and if we are not able to obtain replacement products in a timely manner, we risk revenue losses from the inability to sell those products, increased administrative and shipping costs, and lower profitability. Additionally, if defects are not discovered until after consumers take delivery of our products, those customers could lose confidence in the technical attributes of our products, and our business could be harmed. Although arrangements with these partners may contain provisions for warranty expense reimbursement, we may remain responsible to the customer for warranty service in the event of product defects and could experience an unanticipated product de

We have been and will continue to be affected by the ongoing COVID-19 pandemic, and such effects will continue to have an adverse effect on our business operations, results of operations, cash flows, and financial condition.

We have experienced disruptions to our business from the ongoing COVID-19 pandemic, and the full impact of the COVID-19 pandemic on all aspects of our business and geographic markets is highly uncertain and cannot be predicted with confidence. This includes how it may impact our customers, employees, vendors, strategic partners, managed services, and manufacturing operations. The COVID-19 pandemic has created significant volatility, uncertainty, and economic disruption, which may materially and adversely affect our business operations, cash flows, and financial condition.

The impact of the pandemic on third parties on which we rely, such as our suppliers, contract manufacturers, distributors, and strategic partners, cannot be fully known or controlled by us. As a result, we have and will likely continue to experience difficulties sourcing components, sub-assemblies, outsourced finished goods, and other products and services. In particular, our ability to obtain adequate supply of semiconductor components has impacted our ability to service recovering customer demand. While we believe the current imbalance in supply and demand is temporal, the timeline to recovery is uncertain. Efforts are ongoing with suppliers to increase supply, including the approval of alternate sources. The impact of the COVID-19 pandemic on our customers and demand for our products is also uncertain. Due to resulting financial constraints, illness within their organizations, quarantine and travel restrictions placed upon our customers' employees, as well as individual actions our customers may take in response to the spread of COVID-19, our customers may have difficulty in making timely payments to us or may have an inability or unwillingness to purchase our products and services. Also, certain of our projects require regulatory approvals, and our customers may experience delays in regulatory approvals. Any of these effects may materially and adversely affect us.

We continue to take measures, both voluntary and as a result of government directives and guidance, to mitigate the effects of the COVID-19 pandemic on us and others. These measures have included, among others, restrictions on our employees' access to our physical work locations and the purchase of personal protective equipment. Additionally, we may implement the

temporary closure or reduction in operations of certain of our facilities, either voluntarily or through imposed lockdowns, which is disruptive to our operations. We have also implemented measures to allow certain employees to work remotely, which may place a burden on our IT systems and may expose us to increased vulnerability to cyber-attack and other cyber-disruption. Many of these measures may result in incremental costs to us, and such costs may not be recoverable or adequately covered by our insurance. Further, any focus by our management on mitigating COVID-19 effects has required, and will continue to require, a large investment of time and resources, which may delay other value-add initiatives.

As a company with global operations, we are subject to numerous government jurisdictions at all levels that are addressing COVID-19 differently. The guidance and directives provided by these governmental authorities is difficult to predict, may be unclear in their application, and are unknown in duration. This includes uncertainty in governmental authorities' assessments of our business as "essential". If governmental authorities were to reverse their designation of our business as "essential", it could have a material effect on our results of operations and cash flows.

The full extent to which the COVID-19 pandemic impacts us depends on numerous evolving factors and future developments that we are not able to predict at this time, including: medical advancements to treat or stop the virus including the effectiveness, widespread availability, and application of any vaccine; governmental, business, and other actions, which could include limitations on our operations to provide products or services; the duration and severity of the outbreak, including resurgence, reinfections, or mutation of the virus, and the related limitations on our ability to conduct business; or the length of time and velocity at which we will return to more normalized operations. The impact of COVID-19 may also include possible impairment or other charges and may exacerbate other risks discussed herein, any of which could have a material effect on us. This situation continues to change, and additional impacts may arise that we are not aware of currently.

We face competition, which may result in a loss of market share or price erosion of our products and services.

We face competitive pressures from a variety of companies in each of the markets we serve. Some of our present and potential future competitors have, or may have, substantially greater financial, marketing, technical, or manufacturing resources and, in some cases, have greater name recognition, customer relationships, and experience. These competitors may sell products and services at lower prices in order to gain or grow market share, be able to respond more quickly to new or emerging technologies and changes in customer requirements, and may have made or make strategic acquisitions or establish cooperative relationships among themselves or with third parties that enhance their ability to address the needs of our prospective customers. Other companies may also drive technological innovation and develop products and services that are equal in quality and performance or superior to our products and services, which could reduce our market position, reduce our overall sales, and require us to invest additional funds in new technology development. In addition, our products and services may experience price erosion if low-cost providers expand their presence in our markets, improve their quality, or form alliances or cooperative relationships with our competitors, or if our products and services become commoditized. For example, some utilities may purchase meters separately from the communication devices. The specifications for such meters may require interchangeability, which could lead to further commoditization of the meter, thus driving prices lower and reducing margins. Pricing pressure is also driven by other events outside our control, to include movement away from manually read meters, government programs, and new construction. Should we fail to compete successfully with current or future competitors or to adequately manage pricing pressure, we could experience material adverse effects on our business, financial condition, results of operations, and cash flows.

If we cannot continue to invest in developing competitive products and services, we will not be able to compete effectively.

Our future success will depend, in part, on our ability to continue to develop, design and manufacture competitive products and services, enhance and sustain our existing products and services, keep pace with technological advances and changing customer requirements, gain international market acceptance, and manage other factors in the markets in which we sell our products and services. Product and service development will require continued investment to maintain our competitive position, and the periods in which we incur significant research and development costs may drive variability in our results of operations. We may not have the necessary capital, or access to capital at acceptable terms, to make these investments. We have made, and expect to continue to make, substantial investments in technology development. However, we may experience unforeseen problems in the development or performance of our technologies or products, which can prevent us from meeting our research and development schedules. New products often require certifications or regulatory approvals before the products can be used, and we cannot be certain our new products will be approved in a timely manner, or at all. Finally, we may not achieve market acceptance of our new products and services.

If we are unable to maintain a high level of customer satisfaction, demand for our products and services could suffer.

We believe our success depends on our ability to understand and address our customers' requirements and concerns. This includes our ability to effectively articulate and demonstrate to customers how our products and services meet their needs and to deliver our products timely as committed, with a sufficient level of quality. In addition, we continue to work toward easing general concerns about the safety and perceived health risks of using radio frequency communications, as well as privacy concerns of monitoring home appliance energy usage, which have had some adverse publicity in the past. If we were unable to overcome these real and perceived risks, we could face customer dissatisfaction, dilution of our brand, decreased overall demand for our services, and loss of revenue. In addition, our inability to meet customer performance, safety, and service expectations may damage our reputation and could consequently limit our ability to retain existing customers and attract new customers, which would adversely affect our ability to generate revenue and unfavorably impact our operating results.

Product defects could disrupt our operations and result in harm to our reputation and financial position.

Our products are complex and may contain defects or experience failures due to any number of issues in design, materials, deployment, and/or use. If any of our products contain a defect, a compatibility or interoperability issue, or other types of errors, we may have to devote significant time and resources to identify and correct the issue. We provide product warranties for varying lengths of time and establish allowances in anticipation of warranty expenses. In addition, we recognize contingent liabilities for additional product-failure related costs. These warranty and related product-failure allowances may be inadequate due to product defects and unanticipated component failures, as well as higher than anticipated material, labor, and other costs we may incur to replace projected product failures. A product recall or a significant number of product returns could be expensive; damage our reputation and relationships with utilities, meter and communication vendors, other third-party vendors, or regulatory entities; result in the loss of business to competitors; or result in litigation. We may incur additional warranty expenses in the future with respect to new or established products, which could materially and adversely affect our operations and financial position.

Business interruptions could adversely affect our business.

Our worldwide operations could be subject to hurricanes, tornadoes, earthquakes, floods, fires, extreme weather conditions, medical epidemics or pandemics, geopolitical instability, or other natural or man-made disasters or business interruptions. The occurrence of any of these business disruptions could seriously harm our business, financial condition, and results of operations.

Our key manufacturing facilities are concentrated, and, in the event of a significant interruption in production at any of our manufacturing facilities, considerable expense, time, and effort could be required to establish alternative production lines to meet contractual obligations, which would have a material adverse effect on our business, financial condition, and results of operations.

Asset impairment could result in significant changes that would adversely impact our future operating results.

We have significant inventory, intangible assets, long-lived assets, and goodwill that are susceptible to valuation adjustments as a result of changes in various factors or conditions, which could impact our results of operations and financial condition. Factors that could trigger an impairment of such assets include the following:

- · reduction in the net realizable value of inventory, which becomes obsolete or exceeds anticipated demand
- changes in our organization or management reporting structure, which could result in additional reporting units, requiring greater aggregation or disaggregation in our analysis by reporting unit and potentially alternative methods/assumptions of estimating fair values
- underperformance relative to projected future operating results
- changes in the manner or use of the acquired assets or the strategy for our overall business
- unfavorable industry or economic trends
- · decline in our stock price for a sustained period or decline in our market capitalization below net book value

Failure to attract and retain key personnel who are critical to the success of our business could unfavorably impact our ability to operate or grow our business.

Our success depends in large part on the efforts of our highly qualified technical and management personnel and highly skilled individuals in all disciplines. The loss of one or more of these employees and the inability to attract and retain qualified replacements could have a material adverse effect on our business. In addition, as our products and services become more

technologically complex, it could become especially difficult to recruit or retain personnel with unique in-demand skills and knowledge, whom we would expect to become recruiting targets for our competitors and for other companies relying on similar talent. There is no assurance that we will be able to recruit or retain qualified personnel, and this failure could diminish our ability to develop and deliver new products and services, which could cause our operations and financial results to be unfavorably impacted.

Changes in accounting principles and guidance could result in unfavorable accounting charges or effects.

We prepare our consolidated financial statements in accordance with U.S. generally accepted accounting principles (GAAP). These principles are subject to interpretation by the SEC and various bodies formed to create and interpret appropriate accounting principles and guidance. A change in these principles or guidance, or in their interpretations, may have a material effect on our reported results, as well as our processes and related controls, and may retroactively affect previously reported results.

Risks Related to Our Corporate Structure and Organization

Our indebtedness could restrict our operational flexibility and prevent us from raising additional capital or meeting our obligations under our debt instruments.

As of December 31, 2022, our total outstanding indebtedness was \$460.0 million as described under Liquidity and Capital Resources. Our 2018 credit facility allows us to draw on a \$500.0 million revolving line of credit. This indebtedness could have important consequences to us, including:

- increasing our vulnerability to general economic and industry conditions
- requiring a substantial portion of our cash flow used in operations to be dedicated to the payment of principal and interest, therefore reducing our liquidity and our ability to use our cash flow to fund our operations, capital expenditures, and future business opportunities
- requiring us to meet specified financial ratios, a failure of which may result in restrictions on us and our subsidiaries to take certain actions or
 result in the declaration of an event of default, which, if not cured or waived, could require acceleration of required payments against such
 indebtedness and result in cross defaults under our other indebtedness
- exposing us to the risk of increased market interest rates, and corresponding increased interest expense, as unhedged borrowings under the 2018 credit facility as amended (2018 credit facility) would be at variable rates of interest
- limiting our ability to obtain additional financing for working capital, capital expenditures, debt service requirements, acquisitions, and general
 corporate or other purposes

Our 2018 credit facility places restrictions on our ability, and the ability of many of our subsidiaries, dependent on meeting specified financial ratios, to, among other things:

- incur more debt
- make certain investments
- execute transactions with affiliates
- merge or consolidate

- $\ensuremath{\bullet}$ pay dividends, make distributions, and repurchase capital stock
- create liens
- execute sale lease-back transactions
- · transfer or sell assets

Our ability to make scheduled payments on and/or to refinance our indebtedness depends on, and is subject to, our financial and operating performance, which is influenced in part by general economic, financial, competitive, legislative, regulatory, counterparty business, and other risks that are beyond our control, including the availability of financing in the U.S. banking system and capital markets. We cannot assure you that our business will generate sufficient cash flow from operations or that future borrowings will be available to us in an amount sufficient to enable us to service our debt, to refinance our debt, or to fund our other liquidity needs on commercially reasonable terms or at all.

If we were unable to meet our debt service obligations or to fund our other liquidity needs, we would need to restructure or refinance all or a portion of our debt, which could cause us to default on our debt obligations and impair our liquidity. Our ability to restructure or refinance our debt will depend on the condition of the capital markets and our financial condition at such time. Even if refinancing indebtedness were available, any refinancing of our indebtedness could be at higher interest rates and may require us to comply with more onerous covenants that could further restrict our business operations.

Moreover, in the event of a default under any of our indebtedness, the holders of the defaulted debt could elect to declare all the funds borrowed to be due and payable, together with accrued and unpaid interest, which in turn could result in cross defaults under our other indebtedness. The lenders under the 2018 credit facility could also elect to terminate their commitments thereunder and cease making further loans, and such lenders could institute foreclosure proceedings against their collateral, and we could be forced into bankruptcy or liquidation. If we breach our covenants under the 2018 credit facility, we would be in default thereunder. Such lenders could exercise their rights, as described above, and we could be forced into bankruptcy or liquidation.

Although our debt instruments contain certain restrictions, these restrictions are subject to a number of qualifications and exceptions, including that certain trade payables do not constitute indebtedness. Additional indebtedness incurred in compliance with these restrictions could be substantial. To the extent we incur additional indebtedness or other obligations, the risks described above and others described herein may increase.

The convertible note hedge and warrant transactions may affect the value our common stock.

In connection with the issuance of the Convertible Notes, we entered into convertible note hedge transactions with certain financial institutions, which we refer to as "hedge counterparties". We also entered into warrant transactions with the hedge counterparties pursuant to which we sold warrants for the purchase of our common stock. The convertible note hedge transactions are generally to reduce the potential dilution upon any conversion of Convertible Notes and/or offset any cash payments we are required to make in excess of the principal amount of converted notes, as the case may be. The warrant transactions would separately have a dilutive effect to the extent that the market price per share of our common stock exceeds the strike price of any warrants unless, subject to the terms of the warrant transactions, we elect to cash settle the warrants.

The hedge counterparties or their respective affiliates may modify their hedge positions by entering into or unwinding various derivatives with respect to our common stock and/or purchasing or selling our common stock or other securities of ours in secondary market transactions prior to the maturity of the Convertible Notes (and are likely to do so during any observation period related to a conversion of Convertible Notes or following any repurchase of Convertible Notes by us in connection with any fundamental change repurchase date or otherwise). This activity could also cause or avoid an increase or a decrease in the market price of our common stock.

The potential effect, if any, of these transactions and activities on the market price of our common stock or the Convertible Notes will depend in part on market conditions and cannot be ascertained at this time. Any of these activities could adversely affect the value of our common stock.

Future sales of our stock in the public market, or the issuance of stock upon conversion of the Convertible Notes, could cause our stock price to decline.

We cannot predict the effect, if any, that market sales of shares of our common stock or the availability of shares for sale will have on the prevailing trading price of our common stock from time to time. Sales of a substantial number of shares of our common stock could cause the price of our common stock to decline. In addition, a substantial number of shares of our common stock will be reserved for issuance upon conversion of the Convertible Notes. We may in the future also issue shares of common stock for financings, acquisitions, or equity incentives. If we issue additional shares of common stock in the future, such issuances would have a dilutive effect on the economic interest of our common stock.

Our strategy includes acquisitions, divestitures, and investments, which we may not be able to execute or integrate successfully.

In pursuing our business strategy, we may conduct discussions, evaluate companies, and enter into agreements regarding possible acquisitions, divestitures, or equity investments. We have completed acquisitions and may make investments in the future, both within and outside of the United States. We may also, if appropriate opportunities present themselves, make divestitures. Acquisitions, investments, and divestitures involve numerous risks such as the diversion of senior management's attention; unsuccessful integration of the acquired or disintegration of the divested entity's personnel, operations, technologies, and products; unidentified or identified but non-indemnified pre-closing liabilities that we may be responsible for; incurrence of significant expenses to meet an acquiree's customer contractual commitments; lack of market acceptance of new services and technologies; difficulties in operating businesses in international legal jurisdictions; or transaction-related or other litigation, and other liabilities. Failure to adequately address these issues could result in the diversion of resources and adversely impact our ability to manage our business. In addition, acquisitions and investments in third parties may involve the assumption of obligations, significant write-offs, or other charges associated with the acquisition or investment. Impairment of an investment, goodwill, or an intangible asset may result if these risks were to materialize. For investments in entities that are not wholly

owned by Itron, such as joint ventures, a loss of control as defined by GAAP could result in a significant change in accounting treatment and a change in the carrying value of the entity. There can be no assurance that an acquired business will perform as expected, accomplish our strategic objectives, or generate significant revenues, profits, or cash flows. Any divestiture could result in disruption to other parts of our business, potential loss of employees or customers, exposure to unanticipated liabilities, or result in ongoing obligations and liabilities following any such divestiture. For example, in connection with a divestiture, we may enter into transition services agreements or other strategic relationships, including long-term commercial arrangements, sales arrangements, or agree to provide certain indemnities to the purchaser in any such transaction, which may result in additional expense and may adversely affect our financial condition and results of operations.

Our customer contracts are complex and contain provisions that could cause us to incur penalties, be liable for damages, and/or incur unanticipated expenses with respect to the functionality, deployment, operation, and availability of our products and services.

In addition to the risk of unanticipated warranty or recall expenses, our customer contracts may contain provisions that could cause us to incur penalties, be liable for damages including liquidated damages, or incur other expenses if we experience difficulties with respect to the functionality, deployment, operation, or availability of our products and services. Some of these contracts contain long-term commitments to a set schedule of delivery or performance and require us to deliver standby letters of credit or bonds as a guarantee to the customer for our future performance. If we fail in our estimated schedule or we fail in our management of the project, this may cause delays in completion. In the event of late deliveries, late or improper installations or operations, failure to meet product or performance specifications or other product defects, or interruptions or delays in our managed service offerings, our customer contracts may expose us to penalties, liquidated damages, and other liabilities. In the event we were to incur contractual penalties, such as liquidated damages or other related costs that exceed our expectations, our business, financial condition, and operating results could be materially and adversely affected. Additionally, if we were to determine that products and/or services to be delivered under a specific component of a customer contract would result in a loss due to expected revenues estimated to be less than expected costs, we could be required to recognize a reduction of revenue in the period we made such determination, and such reduction could be material to our results of operations.

We are subject to international business uncertainties, obstacles to the repatriation of earnings, and foreign currency fluctuations.

A portion of our revenues is derived from operations conducted outside the United States. International sales and operations may be subjected to risks such as the imposition of government controls, government expropriation of facilities, lack of a well-established system of laws and enforcement of those laws, access to a legal system free of undue influence or corruption, political instability, terrorist activities, restrictions on the import or export of critical technology, or adverse tax burdens.

Our business is also subject to foreign currency exchange rates fluctuations, particularly with respect to the euro, Canadian dollar, Indonesian rupiah, and Pound sterling, as well as various other currencies. Change in the value of currencies of the countries in which we do business relative to the value of the U.S. dollar or euro could affect our ability to sell products competitively and control our cost structure, which could have an adverse effect on our business, financial condition, and results of operations. Additionally, we are subject to foreign exchange translation risk due to changes in the value of foreign currencies in relation to our reporting currency, the U.S. dollar. The translation risk is primarily concentrated in the exchange rate between the U.S. dollar and the euro. As the U.S. dollar fluctuates against other currencies in which we transact business, revenue and income can be impacted, include revenue decreases due to unfavorable foreign currency impacts. Strengthening of the U.S. dollar relative to the euro and the currencies of the other countries in which we do business, could materially and adversely affect our ability to compete in international markets and our sales growth in future periods.

Other risks related to our international operations include lack of availability of qualified third-party financing, generally longer receivable collection periods than those commonly practiced in the United States, trade restrictions, changes in tariffs, labor disruptions, difficulties in staffing and managing international operations, difficulties in imposing and enforcing operational and financial controls at international locations, potential insolvency of international distributors, preference for local vendors, burdens of complying with different permitting standards and a wide variety of foreign laws, and obstacles to the repatriation of earnings and cash.

International expansion and market acceptance depend on our ability to modify our technology to take into account such factors as the applicable regulatory and business environment, labor costs, and other economic conditions. In addition, the laws of certain countries do not protect our products or technologies in the same manner as the laws of the United States. Further, foreign regulations or restrictions, e.g., opposition from unions or works councils, could delay, limit, or disallow significant operating decisions made by our management, including decisions to exit certain businesses, close certain manufacturing

locations, or other restructuring actions. There can be no assurance that these factors will not have a material adverse effect on our future international sales and, consequently, on our business, financial condition, and results of operations.

We may not achieve the anticipated savings and benefits from current or any future restructuring projects and such activities could cause us to incur additional charges in our efforts to improve profitability.

We have implemented multiple restructuring projects to improve our cost structure, and we may engage in similar restructuring activities in the future. These restructuring activities reduce our available employee talent, assets, and other resources, which could slow research and development, impact ability to respond to customers, increase quality issues, temporarily reduce manufacturing efficiencies, and limit our ability to increase production quickly. In addition, delays in implementing restructuring projects, unexpected costs, unfavorable negotiations with works councils or matters involving third-party service providers, our failure to retain key employees, changes in governmental policies or regulatory matters, adverse market conditions, or failure to meet targeted improvements could change the timing or reduce the overall savings realized from the restructuring project.

The successful implementation and execution of our restructuring projects are critical to achieving our expected cost savings as well as effectively competing in the marketplace and positioning us for future growth. If our restructuring projects were not executed successfully, it could have a material adverse effect on our competitive position, business, financial condition, cash flow, and results of operations.

If we fail to maintain an effective system of internal controls, we may not be able to accurately report our financial results, prevent fraud, or maintain investor confidence.

Effective internal controls are necessary for us to provide reliable and accurate financial reports and effectively prevent fraud. We have devoted significant resources and time to comply with the internal control over financial reporting requirements of the Sarbanes-Oxley Act. In addition, Section 404 under the Sarbanes-Oxley Act requires that our auditors attest to the operating effectiveness of our controls over financial reporting. Our compliance with the annual internal control report requirement for each fiscal year will depend on the effectiveness of our financial reporting, data systems, and controls across our operating subsidiaries. Furthermore, an important part of our growth strategy has been, and will likely continue to be, the acquisition of complementary businesses, and we expect these systems and controls to become increasingly complex to the extent that we integrate acquisitions and our business grows. Likewise, the complexity of our transactions, systems, and controls may become more difficult to manage. In addition, new accounting standards may have a significant impact on our financial statements in future periods, requiring new or enhanced controls. We cannot be certain that we won't experience deficiencies in the design, implementation, and maintenance of adequate controls over our financial processes and reporting in the future, especially for acquisition targets that may not have been required to comply with Section 404 of the Sarbanes-Oxley Act prior to the date of acquisition.

Failure to implement new controls or enhancements to controls, difficulties encountered in control implementation or operation, or difficulties in the assimilation of acquired businesses into our control system could result in additional errors, material misstatements, or delays in our financial reporting obligations. Inadequate internal controls could also cause investors to lose confidence in our reported financial information, which could have an unfavorable effect on the trading price of our stock and our access to capital.

We may encounter strikes or other labor disruptions that could adversely affect our financial condition and results of operations.

We have significant operations throughout the world. In a number of countries outside the U.S., our employees are covered by collective bargaining agreements. As the result of various corporate or operational actions, which our management has undertaken or may be made in the future, we could encounter labor disruptions. These disruptions may be subject to local media coverage, which could damage our reputation. Additionally, the disruptions could delay our ability to meet customer orders and could adversely affect our results of operations. Any labor disruptions could also have an impact on our other employees. Employee morale and productivity could suffer, and we may lose valued employees whom we wish to retain.

We may not realize the expected benefits from strategic alliances, which could adversely affect our operations.

We have several strategic alliances with large, complex organizations and other companies with which we work to offer complementary products and services. There can be no assurance we will realize the expected benefits from these strategic alliances. If successful, these relationships may be mutually beneficial and result in shared growth. However, alliances carry an element of risk because, in most cases, we must both compete and collaborate with the same company from one market to the next. Should our strategic partnerships fail to perform, we could experience delays in research and development or experience other operational difficulties.

We are exposed to counterparty default risks with our financial institutions and insurance providers.

If one or more of the depository institutions in which we maintain significant cash balances were to fail, our ability to access these funds might be temporarily or permanently limited, and we could face material liquidity problems and financial losses.

The lenders of our 2018 credit facility include several participating financial institutions. Our revolving line of credit allows us to provide letters of credit in support of our obligations for customer contracts and provides additional liquidity. If our lenders were unable to honor their line of credit commitments due to the loss of a participating financial institution or other circumstance, we would need to seek alternative financing, which may not be under acceptable terms, and therefore could adversely impact our ability to successfully bid on future sales contracts and adversely impact our liquidity and ability to fund some of our internal initiatives or future acquisitions.

Risks Related to Our Technology and Intellectual Property

If we are unable to adequately protect our intellectual property, we may need to expend significant resources to enforce our rights or suffer competitive injury.

While we believe our patents and other intellectual property have significant value, it is uncertain that this intellectual property or any intellectual property acquired or developed by us in the future will provide meaningful competitive advantages. There can be no assurance our patents or pending applications will not be challenged, invalidated, or circumvented by competitors or that rights granted thereunder will provide meaningful proprietary protection. Moreover, competitors may infringe on our patents or successfully avoid them through design innovation. To combat infringement or unauthorized use of our intellectual property, we may initiate litigation, which can be expensive and time-consuming. In addition, in an infringement proceeding a court may decide that a patent or other intellectual property right of ours is not valid or is unenforceable or may refuse to stop the other party from using the technology or other intellectual property right at issue on the grounds that it is non-infringing or the legal requirements for an injunction have not been met. Policing unauthorized use of our intellectual property is difficult and expensive, and we cannot provide assurance that we will be able to prevent misappropriation of our proprietary rights, particularly in countries that do not protect such rights in the same manner as in the United States.

We may face losses associated with alleged unauthorized use of third-party intellectual property.

We may be subject to claims or inquiries regarding alleged unauthorized use of a third-party's intellectual property. An adverse outcome in any intellectual property litigation or negotiation could subject us to significant liabilities to third parties, require us to license technology or other intellectual property rights from others, require us to comply with injunctions to cease marketing or the use of certain products or brands, or require us to redesign, re-engineer, or rebrand certain products or packaging, any of which could affect our business, financial condition, and results of operations. If we are required to seek licenses under patents or other intellectual property rights of others, we may not be able to acquire these licenses at acceptable terms, if at all. In addition, the cost of responding to an intellectual property infringement claim, in terms of legal fees, expenses, and the diversion of management resources, whether or not the claim is valid, could have a material adverse effect on our business, financial condition, and results of operations.

If our products infringe the intellectual property rights of others, we may be required to indemnify our customers for any damages they suffer. We generally indemnify our customers with respect to infringement by our products of the proprietary rights of third parties. Third parties may assert infringement claims against our customers. These claims may require us to initiate or defend protracted and costly litigation on behalf of our customers, regardless of the merits of these claims. If any of these claims succeed, we may be forced to pay damages on behalf of our customers or may be required to obtain licenses for the products they use. If we cannot obtain all necessary licenses on commercially reasonable terms, our customers may be forced to stop using our products.

If we are unable to protect our information technology infrastructure and network against data corruption, cyber-based attacks or network security incidents caused by unauthorized access, we could be exposed to an increased risk of customer liability and reputational damage.

We rely on various information technology systems to capture, process, store, and report data and interact with customers, vendors, and employees. Despite taking steps to secure all information and transactions, our information technology systems, and those of our third-party providers, may be subject to corruption from cyber-attacks, or other network security incidents. Any unauthorized access to data could result in misappropriation of the data or disruption of operations. In addition, hardware, operating system software, software libraries, and applications that we procure from third parties may contain defects in design or manufacturing that could interfere with the operation of the systems. Misuse of internal applications; theft of intellectual property, trade secrets, or other corporate assets; and inappropriate disclosure of confidential or personal information could stem from such incidents.

In addition, an increasing number of our products and services connect to and are part of the IIoT, the Internet, telecommunications networks, and public cloud services. As such, the products and services we offer may involve the transmission of large amounts of sensitive and proprietary information over public and private communications networks, as well as the processing and storage of confidential and personal customer data. While we attempt to provide adequate security measures to safeguard our products and services, techniques used to gain unauthorized access to or to sabotage systems are constantly evolving and therefore may not be recognized before they take effect. Unauthorized access, remnant data exposure, computer viruses, denial of service attacks, accidents, employee error or malfeasance, intentional misconduct by computer "hackers", and other disruptions can occur. This can lead to gaps in infrastructure, hardware and software vulnerabilities, and security controls. The exposed or unprotected data can (i) interfere with the delivery of services to our customers, (ii) impede our customers' ability to do business, or (iii) compromise the security of systems and data, which exposes information to unauthorized third parties. Like many companies, we are the target of cyber-attacks of varying degrees of severity. Although such cyber-attacks have not had a material adverse effect on our operating results, there can be no assurance of a similar result in future security incidents.

Security incidents that occur could expose us to an increased risk of lawsuits, loss of existing or potential customers, harm to our reputation, and increases in our security costs. Depending on the jurisdiction, security incidents could trigger notice requirements to impacted individuals and regulatory investigations leading to penalties and increased reputational harm.

Any such operational disruption and/or misappropriation of information could result in lost sales, unfavorable publicity, product recalls, or business delays and could have a material adverse effect on our business.

We rely on information technology systems that may fail to operate effectively, require upgrades and replacements, or experience breaches.

Our industry requires the continued operation of sophisticated information technology systems and network infrastructures, which may be subject to disruptions arising from events that are beyond our control. We are dependent on information technology systems, including, but not limited to, networks, applications, and outsourced services. We continually enhance and implement new systems and processes throughout our global operations.

We offer managed services and software utilizing several data center facilities located worldwide. Any damage to, or failure of, these systems could result in interruptions in the services we provide to our utility customers. As we continue to add capacity to our existing and future data centers, we may move or transfer data. Despite precautions taken during this process, any delayed or unsuccessful data transfers may impair the delivery of our services to our utility customers. We also sell vending and pre-payment systems with security features that, if compromised, may lead to claims against us.

We have a primary enterprise resource planning (ERP) system that maintains sales and transactional information to facilitate processes. This system may require updates and upgrades periodically that could be expensive and time consuming undertakings. Successful upgrades and updates provide many benefits, while unsuccessful upgrades and updates may cost us significant time and resources.

The failure of these systems to operate effectively, problems with transitioning to upgraded or replacement systems, or a breach in security of these systems due to computer viruses, hacking, acts of terrorism, and other causes could materially and adversely affect our business, financial condition, and results of operations by harming our ability to accurately forecast sales demand, manage our supply chain and production facilities, achieve accuracy in the conversion of electronic data and records, and report

financial and management information on a timely and accurate basis. In addition, due to the systemic internal control features within ERP systems, we may experience difficulties that could affect our internal control over financial reporting.

Financial and Market Risks

Our variable rate indebtedness could subject us to interest rate risk, which could cause our debt service obligations to increase significantly.

The 2018 credit facility bears, and other indebtedness we may incur in the future may bear, interest at a variable rate. As a result, at any given time interest rates on the 2018 credit facility and any other variable rate debt could be higher or lower than current levels. If interest rates increase, our debt service obligations on our variable rate indebtedness may increase even though the amount borrowed remains the same, and therefore net income and associated cash flows, including cash available for servicing our indebtedness, may correspondingly decrease. While we continually monitor and assess our interest rate risk relative to the value of related debt and have previously entered into derivative instruments to manage such risk, these instruments could be ineffective at mitigating all or a part of our risk, including changes to the applicable margin under our 2018 credit facility.

The alteration or discontinuation of LIBOR may adversely affect our borrowing costs.

Certain of our interest rate derivatives and a portion of our indebtedness bear interest at variable interest rates, primarily based on LIBOR, which is subject to regulatory guidance and/or reform that could cause interest rates under our current or future debt agreements to perform differently than in the past or cause other unanticipated consequences. In July 2017, the Chief Executive of the U.K. Financial Conduct Authority (FCA), which regulates LIBOR, announced that the FCA will no longer persuade or compel banks to submit rates for the calculation of LIBOR after 2021. However, on November 30, 2020, the ICE Benchmark Administration Limited announced its plan to extend the date that most U.S. LIBOR values would cease being computed from December 31, 2021 to June 30, 2023. Such announcement indicates that the continuation of LIBOR on the current basis cannot and will not be guaranteed, and the timing of such discontinuation, modifications or other reforms to LIBOR is uncertain. However, the discontinuation of LIBOR as a reference rate will require any debt referencing LIBOR to be amended or modified to utilize an alternative reference rate, require an adjustment to the applicable margin and/or require adjustments to other terms or covenants, any of which may unfavorably impact borrowing costs. The 2018 credit facility was amended in the fourth quarter of 2022 to replace LIBOR with Term Secured Overnight Financing Rate (SOFR) plus a credit spread of 10 basis points.

Disruption and turmoil in global credit and financial markets, which may be exacerbated by the inability of certain countries to continue to service their sovereign debt obligations, and the possible unfavorable implications of such events for the global economy, may unfavorably impact our business, liquidity, operating results, and financial condition.

The current economic conditions, including volatility in the availability of credit and foreign exchange rates and extended economic slowdowns, have contributed to the instability in some global credit and financial markets. Additionally, at-risk financial institutions in certain countries may, without forewarning, seize a portion of depositors' account balances. The seized funds would be used to recapitalize the at-risk financial institution and would no longer be available for the depositors' use. If such seizure were to occur at financial institutions where we have funds on deposit, it could have a significant impact on our overall liquidity. While the ultimate outcome of these events cannot be predicted, it is possible that such events may have an unfavorable impact on the global economy and our business, liquidity, operating results, and financial condition.

We have pension benefit obligations, which could have a material impact on our earnings, liabilities, and shareholders' equity and could have significant adverse impacts in future periods.

We sponsor both funded and unfunded defined benefit pension plans for our international employees, primarily in Germany, France, Indonesia, India, and Italy. Our general funding policy for these qualified pension plans is to contribute amounts sufficient to satisfy regulatory funding standards of the respective countries for each plan.

The determination of pension plan expense, benefit obligation, and future contributions depends heavily on market factors such as the discount rate and the actual return on plan assets. We estimate pension plan expense, benefit obligation, and future contributions to these plans using assumptions with respect to these and other items. Changes to those assumptions could have a significant effect on future contributions, as well as on our annual pension costs and/or result in a significant change to shareholders' equity.

Legal and Regulatory Risks

Changes in tax laws, valuation allowances, and unanticipated tax liabilities could adversely affect our effective income tax rate and profitability.

We are subject to income tax in the United States and numerous foreign jurisdictions. Significant judgment is required in evaluating our tax positions and determining our provision for income taxes. During the ordinary course of business, there are many transactions and calculations for which the ultimate tax determination is uncertain. We establish reserves for tax-related uncertainties based on estimates of whether, and the extent to which, additional taxes will be due. These reserves may be established when we believe that certain positions might be challenged despite our belief that our tax return positions are fully supportable. We adjust these reserves in light of changing facts and circumstances. The provision for income taxes includes the impact of reserve positions and changes to reserves that are considered appropriate, as well as valuation allowances when we determine it is more likely than not that a deferred tax asset cannot be realized. In addition, future changes in tax laws in the jurisdictions in which we operate could have a material impact on our effective income tax rate and profitability. We regularly assess these matters to determine the adequacy of our tax provision, which is subject to significant judgment.

Beginning January 1, 2022, the Tax Cuts and Jobs Act of 2017 eliminated the option to deduct research and development expenditures currently and requires taxpayers to capitalize and amortize them over five or fifteen years, dependent upon the geography in which the expenditures are incurred. Although Congress has considered legislation that would defer, modify, or repeal the capitalization and amortization requirement, as of year-end no such deferral has been passed. The income tax provision has been prepared according to currently enacted tax legislation.

In August 2022, the Inflation Reduction Act was signed into law, which made a number of changes to the Internal Revenue Code, including adding a 1% excise tax on stock buybacks by publicly traded corporations and a 15% minimum tax on adjusted financial statement income of certain large companies. We are subject to the new 1% excise tax beginning January 1, 2023, but the amount will vary depending upon various factors. The 15% minimum tax only applies to corporations with average book income in excess of \$1 billion, so is not currently applicable.

The Organization for Economic Cooperation and Development (OECD) guidance under the Base Erosion and Profit Shifting (BEPS) initiative aims to minimize perceived tax abuses and modernize global tax policy. The Anti-Tax Avoidance Directives (ATAD), issued by the Council of the European Union (EU), provide further recommendations for legislative changes under these tax policies. These BEPS recommendations and ATAD measures are being implemented through legislative changes in countries throughout the world. The OECD has also proceeded with the advancement under Action 1 ("Addressing the Tax Challenges of the Digital Economy") of the 'BEPS 2.0 initiative', which proposes further fundamental changes to the international tax system. This project includes a framework for providing taxing rights to jurisdictions based on the location of the consumer regardless of current physical presence of a company. A second component would implement a global minimum tax of 15%. On October 8, 2021, the G20/OECD Inclusive Framework on BEPS published a statement on the components of global tax reform agreed to by most member countries. The key components would allocate a portion of profits of the largest businesses amongst their markets, curtail new digital services taxes, and introduce a new global minimum tax of 15%. On December 20, 2021, the OECD released model rules to guide countries on implementing and calculating the 15% global minimum tax, and on December 12, 2022, the EU member states agreed to implement the OECD Pillar 2 global minimum tax rate of 15% on companies with revenues of at least 750 million euro, which would go into effect in 2024. Certain countries including the United Kingdom, Switzerland, Canada, Australia, and South Korea are actively considering changes to their tax laws to adopt certain parts of the OECD's proposals. These components do not result in any financial impact until enacted. The Company is monitoring developments and additional details as they are released to determine the impacts these new compon

A significant number of our products are affected by the availability and regulation of radio spectrum and could be affected by interference with the radio spectrum that we use.

A significant number of our products use radio spectrum, which are subject to regulation by the U.S. Federal Communications Commission (FCC). The FCC may adopt changes to the rules for our licensed and unlicensed frequency bands that are incompatible with our business. In the past, the FCC has adopted changes to the requirements for equipment using radio spectrum, and it is possible that the FCC or the U.S. Congress will adopt additional changes.

Although radio licenses are generally required for radio stations, Part 15 of the FCC's rules permits certain low-power radio devices (Part 15 devices) to operate on an unlicensed basis. Part 15 devices are designed for use on frequencies used by others. These other users may include licensed users, which have priority over Part 15 users. Part 15 devices may not cause harmful interference to licensed users and must be designed to accept interference from licensed radio devices. In the United States, our

smart metering solutions are typically Part 15 devices that transmit information to (and receive information from, if applicable) handheld, mobile, or fixed network systems pursuant to these rules.

We depend upon sufficient radio spectrum to be allocated by the FCC for our intended uses. As to the licensed frequencies, there is some risk that there may be insufficient available frequencies in some markets to sustain our planned operations. The unlicensed frequencies are available for a wide variety of uses and may not be entitled to protection from interference by other users who operate in accordance with FCC rules. The unlicensed frequencies are also often the subject of proposals to the FCC requesting a change in the rules under which such frequencies may be used. If the unlicensed frequencies become crowded to unacceptable levels, restrictive, or subject to changed rules governing their use, our business could be materially adversely affected.

We have committed, and will continue to commit, significant resources to the development of products that use particular radio frequencies. Action by the FCC could require modifications to our products. The inability to modify our products to meet such requirements, the possible delays in completing such modifications, and the cost of such modifications all could have a material adverse effect on our future business, financial condition, and results of operations.

Outside of the United States, certain of our products require the use of RF and are subject to regulations in those jurisdictions where we have deployed such equipment. In some jurisdictions, radio station licensees are generally required to operate a radio transmitter, and such licenses may be granted for a fixed term and must be periodically renewed. In other jurisdictions, the rules permit certain low power devices to operate on an unlicensed basis. Our smart metering solutions typically transmit to (and receive information from, if applicable) handheld, mobile, or fixed network reading devices in license-exempt bands pursuant to rules regulating such use. In Europe, we generally use the 169 megahertz (MHz), 433/4 MHz, and 868 MHz bands. In the rest of the world, we primarily use the 433/4 MHz, 920 MHz and 2.4000-2.4835 gigahertz (GHz) bands, as well as other local license-exempt bands. To the extent we introduce new products designed for use in the United States or another country into a new market, such products may require significant modification or redesign to meet frequency requirements and other regulatory specifications. In some countries, limitations on frequency availability or the cost of making necessary modifications may preclude us from selling our products in those jurisdictions. In addition, new consumer products may create interference with the performance of our products, which could lead to claims against us.

Changes in environmental regulations, violations of such regulations, or future environmental liabilities could cause us to incur significant costs and could adversely affect our operations.

Our business and our facilities are subject to numerous laws, regulations, and ordinances governing, among other things, the storage, discharge, handling, emission, generation, manufacture, disposal, remediation of and exposure to toxic or other hazardous substances, and certain waste products. Many of these environmental laws and regulations subject current or previous owners or operators of land to liability for the costs of investigation, removal, or remediation of hazardous materials. In addition, these laws and regulations typically impose liability regardless of whether the owner or operator knew of, or was responsible for, the presence of any hazardous materials and regardless of whether the actions that led to the presence were conducted in compliance with the law. In the ordinary course of our business, we use metals, solvents, and similar materials, which are stored on-site. The waste created by the use of these materials is transported off-site on a regular basis by unaffiliated waste haulers. Many environmental laws and regulations require generators of waste to take remedial actions at, or in relation to, the off-site disposal location even if the disposal was conducted in compliance with the law. The requirements of these laws and regulations are complex, change frequently, and could become more stringent in the future. Failure to comply with current or future environmental regulations could result in the imposition of substantial fines, suspension of production, alteration of our production processes, cessation of operations, or other actions, which could materially and adversely affect our business, financial condition, and results of operations. There can be no assurance that a claim, investigation, or liability would not arise with respect to these activities or that the cost of complying with governmental regulations in the future, either for an individual claim or in aggregate of multiple claims, would not have a material adverse effect on us.

Our international sales and operations are subject to complex laws relating to foreign corrupt practices and anti-bribery laws, among many others, and a violation of, or change in, these laws could adversely affect our operations.

The U.S. Foreign Corrupt Practices Act requires U.S. companies to comply with an extensive legal framework to prevent bribery of foreign officials. The laws are complex and require that we closely monitor local practices of our overseas offices. The U.S. Department of Justice continues to heighten enforcement of these laws. In addition, other countries continue to implement similar laws that may have extra-territorial effect. In the United Kingdom, where we have operations, the U.K. Bribery Act imposes significant oversight obligations on us and could impact our operations outside the United Kingdom. The costs for complying with these and similar laws may be significant and could require significant management time and focus.

Any violation of these or similar laws, intentional or unintentional, could result in fines and/or criminal penalties and have a material adverse effect on our business, financial condition, or results of operations. Further, we operate in some parts of the world that have experienced governmental corruption, and, in certain circumstances, local customs and practice might not be consistent with the requirements of anti-corruption laws. We remain subject to the risk that our employees, third party partners, or agents will engage in business practices that are prohibited by our policies and violate such laws and regulations.

Regulations related to "conflict minerals" may force us to incur additional expenses, may result in damage to our business reputation, and may adversely impact our ability to conduct our business.

The SEC has adopted rules regarding disclosure for companies that use certain minerals and derivative metals (referred to as "conflict minerals", regardless of their actual country of origin) in their products. Some of these metals are commonly used in electronic equipment and devices, including our products. These requirements require companies to investigate, disclose and report whether such metals originated from the Democratic Republic of Congo or adjoining countries and required due diligence efforts. We may not be able to sufficiently verify the origins for all minerals used in our products, and our reputation may suffer if we determine that our products contain conflict minerals that are not determined to be conflict free or if we are unable to sufficiently verify the origins for all conflict minerals used in our products. At times, our customers also request or require that we confirm whether our products contain conflict-free minerals, and this may result in challenges in timely satisfying such customers' requests, if at all. There are costs associated with complying with these disclosure requirements, including for diligence to determine the sources of conflict minerals used in our products and related components and other potential changes to products, processes or sources of supply as a consequence of such verification activities. Further interpretation and implementation of these rules could adversely affect the sourcing, supply, and pricing of materials used in our products.

Item	1B:U	J nreso l	lved	Staff	Comments
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None.

Item 2: Properties

We own our headquarters facility, which is located in Liberty Lake, Washington.

The following table lists our major manufacturing facilities by region and location as of December 31, 2022:

Region	Location	Square Footage
North America	Oconee, SC (O) Waseca, MN (L)	325,840 110,000
Europe, Middle East, and Africa	Chasseneuil, France (O) Macon, France (O) Massy, France (L) Oldenburg, Germany (L) Asti, Italy (O)	160,027 203,513 64,357 90,212 55,834
Asia/Pacific	Bekasi, Indonesia (O)	113,222

- (O) Manufacturing facility is owned
- (L) Manufacturing facility is leased

Our principal properties are in good condition, and we believe our current facilities are sufficient to support our operations.

In addition to our manufacturing facilities, we have numerous sales offices, research and development facilities, and distribution centers, which are located throughout the world.

Item 3: Legal Proceedings

SEC regulations require us to disclose certain information about proceedings arising under federal, state or local environmental provisions if we reasonably believe that such proceedings may result in monetary sanctions above a stated threshold. Pursuant to the SEC regulations, Itron uses a threshold of \$1 million or more for purposes of determining whether disclosure of any such environmental proceedings is required.

In conjunction with the Actaris S.p.A. (Actaris) acquisition in April 2007, Itron assumed Actaris's environmental cleanup liability and the related legal recourse for the Frosinone site in Italy. This site was originally owned and operated by Schlumberger before Schlumberger contributed it to Actaris in the course of the spin off of Actaris from Schlumberger Industries S.p.A on August 1, 2001. Since 2001, Schlumberger has fully reimbursed Actaris, and Itron as successor to Actaris's interests, for the Frosinone site remediation costs pursuant to an indemnification agreement. In December 2022, Itron was presented with a remediation plan, which addressed the water contamination issues, with an estimated cost of \$1.9 million. Schlumberger will fully reimburse Itron. The proposal will be submitted to the Italian Authorities in the first quarter of 2023.

In 2007-2008, Itron acquired an industrial site located at 1310 Emerald Road, Greenwood, South Carolina. Previous site owners used various chlorinated solvents and potential contaminants at the site. In 2013, Itron entered into a voluntary cleanup contract with the South Carolina Department of Health and Environmental Control (DHEC). Itron completed that process in 2019. In October 2021, DHEC sent Itron and three other potentially responsible parties (PRPs) a proposed site remediation plan with an estimated cost of \$3.7 million. Itron objected to the proposed plan at a public hearing on November 4, 2021, and again in a letter to DHEC dated January 13, 2022. Given that the contamination arose from activities prior to Itron's ownership of the property and past remediation efforts, Itron has disputed its responsibility for any alleged contamination and suggested alternative proposals. Itron will continue to seek a reasonable resolution with DHEC and the other PRPs.

Item 4: Mine Safety Disclosures

Not applicable.

PART II

Item 5: Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

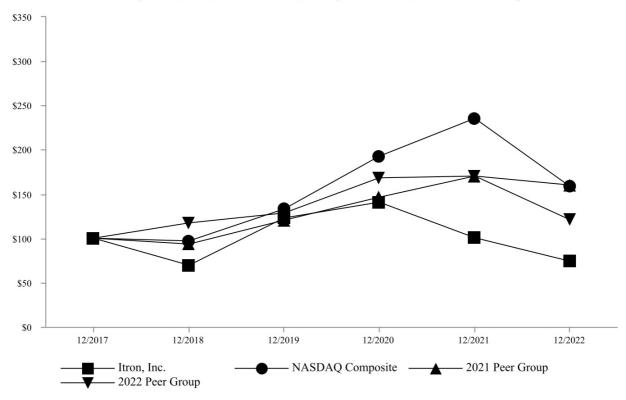
Market Information for Common Stock

Our common stock is traded on the NASDAQ Global Select Market under the symbol ITRI.

Performance Graph

The following graph compares the five-year cumulative total return to shareholders on our common stock with the five-year cumulative total return of our peer group of companies used for the year ended December 31, 2022, peer group of companies used for the year ended December 31, 2021, and the NASDAQ Composite Index.

COMPARIS ON OF 5 YEAR CUMULATIVE TOTAL RETURN* Among Itron, Inc., the NASDAQ Composite Index, and Peer Groups



^{* \$100} invested on December 31, 2017, in stock or index, including reinvestment of dividends. Fiscal years ending December 31.

The performance graph above is being furnished solely to accompany this Report pursuant to Item 201(e) of Regulation S-K and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any of our filings, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

The above presentation assumes \$100 invested on December 31, 2017 in the common stock of Itron, Inc., the peer groups, and the NASDAQ Composite Index, with all dividends reinvested. With respect to companies in the peer groups, the returns of each such corporation have been weighted to reflect relative stock market capitalization at the beginning of each annual period plotted. The historical stock prices shown above for our common stock are not necessarily indicative of future price performance.

Each year, we reassess our peer group to identify global companies that are either direct competitors or have similar industry and business operating characteristics. Our 2022 peer group includes the following publicly traded companies: LM Ericsson Telephone Company, Landis+Gyr, Mueller Water Products, and Xylem, Inc. (formerly Sensus). Our 2021 peer group includes the following publicly trade companies: Badger Meter, Inc., Landis+Gyr, Mueller Water Products, and Xylem, Inc. (formerly Sensus).

Issuer Repurchase of Equity Securities

Period	Total Number of Shares Purchased ⁽¹⁾	Average Price Paid per Share (2)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs
				In thousands
October 1, 2022 through October 31, 2022	_	\$ —	_	\$ 75,000
November 1, 2022 through November 30, 2022	_	_	_	75,000
December 1, 2022 through December 31, 2022	_	_	_	75,000
Total				

Effective November 1, 2021, Itron's Board of Directors authorized a new share repurchase program of up to \$100 million of Itron's common stock over an 18-month period. Repurchases are made in the open market or in privately negotiated transactions and in accordance with applicable securities laws.

Holders

At February 22, 2023, there were 152 holders of record of our common stock.

Dividends

Since the inception of the Company, we have not declared or paid cash dividends. We intend to retain future earnings for the development of our business and do not anticipate paying cash dividends in the foreseeable future.

Item 6: [Reserved]

⁽²⁾ Excludes commissions.

Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis compares the change in the consolidated financial statements for fiscal years 2022 and 2021 and should be read in conjunction with Item 8: Financial Statements and Supplementary Data. For comparisons of fiscal years 2021 and 2020, see our Management's Discussion and Analysis of Financial Condition and Results of Operations in Part II, Item 7 of our 2021 Annual Report on Form 10-K, filed with the Securities and Exchange Commission (SEC) on February 28, 2022, and incorporated herein by reference.

The objective of Management's Discussion and Analysis is to provide our assessment of the financial condition and results of operations, including an evaluation of our liquidity and capital resources along with material events occurring during the year. The discussion and analysis focuses on material events and uncertainties known to management that are reasonably likely to cause reported financial information not to be necessarily indicative of future operating results or of future financial condition. In addition, we address matters that are reasonably likely, based on management's assessment, to have a material impact on future operations. We expect the analysis will enhance a reader's understanding of our financial condition, cash flows, and other changes in financial condition and results of operations.

Overview

We are a technology and service company, and we are a leader in the Industrial Internet of Things (IIoT). We offer solutions that enable utilities and municipalities to safely, securely and reliably operate their critical infrastructure. Our solutions include the deployment of smart networks, software, services, devices, sensors, and data analytics that allow our customers to manage assets, secure revenue, lower operational costs, improve customer service, improve safety, and enable efficient management of valuable resources. Our comprehensive solutions and data analytics address the unique challenges facing the energy, water, and municipality sectors, including increasing demand on resources, non-technical loss, leak detection, environmental and regulatory compliance, and improved operational reliability.

We operate under the Itron brand worldwide and manage and report under three operating segments: Device Solutions, Networked Solutions, and Outcomes. The product and operating definitions of the three segments are as follows:

Device Solutions – This segment primarily includes hardware products used for measurement, control, or sensing that do not have communications capability embedded for use with our broader Itron systems, i.e., hardware-based products not part of a complete end-to-end solution. Examples from the Device Solutions portfolio include: standard endpoints that are shipped without Itron communications, such as our standard gas, electricity, and water meters for a variety of global markets and adhering to regulations and standards within those markets, as well as our heat and allocation products; communicating meters that are not a part of an Itron end-to-end solution, such as Smart Spec meters; and the implementation and installation of non-communicating devices.

Networked Solutions – This segment primarily includes a combination of communicating devices (e.g., smart meters, modules, endpoints, and sensors), network infrastructure, and associated application software designed and sold as a complete solution for acquiring and transporting robust application-specific data. Networked Solutions includes products and software for the implementation, installation, and management of communicating devices and data networks. The Industrial Internet of Things (IIoT) solutions supported by this segment include automated meter reading (AMR), advanced metering infrastructure (AMI), distributed energy resource management (DERMs), smart grid and distribution automation, smart street lighting, and an ever-growing set of smart city applications such as traffic management, smart parking, air quality monitoring, electric vehicle charging, customer engagement, digital signage, acoustic (e.g., gunshot) detection, and leak detection and mitigation for both gas and water systems. Our IIoT platform allows all these utility and smart city applications to be run and managed on a single, multi-purpose network.

Outcomes – This segment primarily includes our value-added, enhanced software and services in which we manage, organize, analyze, and interpret raw, anonymized and aggregated data to improve decision making, maximize operational profitability, drive resource efficiency, improve grid analytics, and deliver results for consumers, utilities, and smart cities. Outcomes supports high-value use cases such as data management, grid operations, distributed intelligence, operations management, gas distribution and safety, water operations management, revenue assurance, DERMs, energy forecasting, consumer engagement, smart payment, and fleet energy resource management. Utilities leverage these outcomes to capitalize on the power of networks and devices, empower their workforce, maximize their operations and enhance the customer experience. The revenues from these offerings are primarily recurring in nature and would include any direct management of Device Solutions, Networked Solutions, and other products on behalf of our end customers.

We have three measures of segment performance: revenues, gross profit (margin), and operating income (margin). Intersegment revenues are minimal. Certain operating expenses are allocated to the operating segments based upon internally established allocation methodologies. Interest income, interest expense, other income (expense), the income tax provision (benefit), and certain corporate operating expenses are neither allocated to the segments nor included in the measures of segment performance.

Non-GAAP Measures

To supplement our consolidated financial statements, which are prepared in accordance with accounting principles generally accepted in the United States (GAAP), we use certain adjusted or non-GAAP financial measures, including non-GAAP operating expense, non-GAAP operating income, non-GAAP net income, non-GAAP diluted earnings per share (EPS), adjusted EBITDA, free cash flow, and constant currency. We provide these non-GAAP financial measures because we believe they provide greater transparency and represent supplemental information used by management in its financial and operational decision making. We exclude certain costs in our non-GAAP financial measures as we believe the net result is a measure of our core business. We believe these measures facilitate operating performance comparisons from period to period by eliminating potential differences caused by the existence and timing of certain expense items that would not otherwise be apparent on a GAAP basis. Non-GAAP performance measures should be considered in addition to, and not as a substitute for, results prepared in accordance with GAAP. We strongly encourage investors and shareholders to review our financial statements and publicly-filed reports in their entirety and not to rely on any single financial measure. Our non-GAAP financial measures may be different from those reported by other companies.

In our discussions of the operating results below, we may refer to the impact of foreign currency exchange rate fluctuations, which are references to the differences between the foreign currency exchange rates we use to convert operating results from local currencies into U.S. dollars for reporting purposes. We also use the term "constant currency", which represents results adjusted to exclude foreign currency exchange rate impacts. We calculate the constant currency change as the difference between the current period results translated using the current period currency exchange rates and the comparable prior period's results restated using current period currency exchange rates. We believe the reconciliations of changes in constant currency provide useful supplementary information to investors in light of fluctuations in foreign currency exchange rates.

Refer to the *Non-GAAP Measures* section below on pages 43-46 for information about these non-GAAP measures and the detailed reconciliation of items that impacted non-GAAP operating expenses, non-GAAP operating income, non-GAAP net income, non-GAAP diluted EPS, adjusted EBITDA, and free cash flow in the periods presented.

Total Company Highlights

Highlights and significant developments for the year ended December 31, 2022 compared with the year ended December 31, 2021

- Revenues were \$1.8 billion compared with \$2.0 billion last year, a decrease of \$186.0 million, or 9%
- Gross margin was 29.1% compared with 28.9% last year
- Operating expenses decreased \$122.8 million, or 19%, compared with 2021
- Net loss attributable to Itron, Inc. was \$9.7 million compared with \$81.3 million in 2021
- GAAP loss per share was \$0.22 compared with loss per share of \$1.83 in 2021
- Non-GAAP net income attributable to Itron, Inc. was \$51.0 million compared with \$78.1 million in 2021
- Non-GAAP diluted EPS was \$1.13 compared with \$1.75 in 2021
- Adjusted EBITDA decreased \$20.1 million, or 17%, to \$95.1 million compared with adjusted EBITDA of \$115.2 million in 2021
- Total backlog was \$4.6 billion, and 12-month backlog was \$2.1 billion at December 31, 2022, compared with \$4.0 billion and \$1.5 billion at December 31, 2021

Goodwill Impairment

As the result of increases in raw material, component, labor and other costs, coupled with a decrease in forecasted revenue within the Device Solutions operating segment and reporting unit, which we determined during the second quarter of 2022, we performed an interim goodwill impairment test. At the conclusion of the test, a goodwill impairment of \$38.5 million was recognized in our Corporate unallocated segment as of June 30, 2022. No interim impairment test was determined to be necessary for the Networked Solutions or Outcomes reporting units. Refer to Item 8: Financial Statements and Supplementary Data, Note 1: Summary of Significant Accounting Policies for a description of our reporting units and our method used to determine the fair values of our reporting units and to determine the amount of any goodwill impairment.

Stock Repurchase Program

Effective November 1, 2021, Itron's Board of Directors authorized a share repurchase program of up to \$100 million of our common stock over an 18-month period (the 2021 Stock Repurchase Program). Repurchases are made in the open market or in privately negotiated transactions, and in accordance with applicable securities laws. During the first quarter of 2022, we repurchased 279,968 shares of our common stock under the 2021 Stock Repurchase Program. The average price paid per share was \$60.60 (excluding commissions) for a total of \$17.0 million. No shares were repurchased for the remainder of 2022. Following the announcement of the program and through 2022, we repurchased 405,282 shares at an average price paid per share of \$61.67 (excluding commissions) for total of \$25.0 million. As of December 31, 2022, we are authorized to repurchase up to an additional \$75 million before May 1, 2023.

Sale of Business

On November 2, 2021, Itron entered into a definitive securities and asset purchase agreement to sell certain Gas product lines from our Device Solutions manufacturing and business operations in Europe and North America to Dresser Utility Solutions (Dresser). The sale included one German subsidiary – Itron GmbH along with its business operations, personnel, and the owned manufacturing facility in Karlsruhe; the business operations, personnel, and assets associated with the leased manufacturing facility in Argenteuil, France; and the business and manufacturing assets maintained at one of our contract manufacturers in North America. The base sale price of this divestiture was \$75.0 million, with adjustments for (1) pension liabilities assumed by Dresser for related active employees and (2) the final working capital balance. Cash proceeds from the sale were \$55.9 million.

The transaction closed on February 28, 2022. The final sales price and loss on sale were determined after the finalization of the working capital adjustment, recognized in the fourth quarter of 2022. As of December 31, 2021, we recognized a pre-tax impairment loss of \$34.4 million as well as \$3.1 million for professional services in conjunction with the planned sale to Dresser (classified within loss on sale of businesses within the Consolidated Statements of Operations). In determining the amount of the impairment loss for the assets of this transaction during the fourth quarter of 2021, we included \$59.7 million of accumulated foreign currency translation losses and \$0.9 million in unrealized loss on defined benefit pension plans, both classified within accumulated other comprehensive income (AOCI). Upon closing of the sale transaction in the first quarter of 2022, the then outstanding amounts in AOCI were reclassified to net income through loss on sale of businesses for a total of \$55.4 million, with a corresponding reversal of the impairment loss originally booked in the fourth quarter of 2021. The difference between the amounts included for the impairment loss in the fourth quarter of 2021 and the first quarter of 2022 was driven by the change in the euro to U.S. dollar exchange rate, and operating results for the period owned in 2022.

In the first quarter of 2022, we recognized additional loss of \$2.2 million related to changes in the working capital balances and additional professional services. In the second quarter of 2022, the loss increased by \$0.2 million for professional services related to the divestiture. In the third quarter of 2022, we recognized additional loss of \$0.8 million related primarily to a true-up in the working capital balances. In the fourth quarter of 2022, we recognized additional loss of \$0.3 million related to changes in the working capital balance and other charges related to the finalization of the transaction. We recognized a total loss of \$3.5 million in 2022.

Credit Facility Amendment

On February 21, 2023, we entered into a sixth amendment to our credit facility that was initially entered on January 5, 2018 (the 2018 credit facility). This amendment modifies provisions to allow for the addback for debt covenant calculations of non-recurring cash expenses related to restructuring charges to be incurred during the quarter ended March 31, 2023. Refer to Item 8: Financial Statements and Supplementary Data, Note 6: Debt for further details.

2023 Restructuring Projects

On February 23, 2023, the Board of Directors of Itron approved a restructuring plan (the 2023 Projects). The 2023 Projects include activities that continue the Company's efforts to optimize its global supply chain and manufacturing operations, sales and marketing organizations, and other overhead. These projects are to be substantially complete by early 2025. Itron estimates pre-tax restructuring charges of \$40-45 million. Of the total estimated charge, approximately 95% will result in cash expenditures, and the remainder to non-cash impairment charges. The majority of the expense will be recognized during the

first quarter of 2023. Once the 2023 Projects are substantially completed, Itron estimates \$14-17 million in annualized savings. Certain of Itron's employees are represented by unions or works councils, which requires consultation, and potential restructuring projects may be subject to regulatory approval, both of which could impact the timing of planned savings in certain jurisdictions.

Impact of COVID-19, Supply Chain Challenges, and the Conflict in Ukraine

The COVID-19 pandemic has had global economic impacts including disrupting customer demand and global supply chains, resulting in market volatility. The extent of the recent pandemic and its ongoing impact on our operations is volatile, but is being monitored closely by our management. New variants of the virus may cause previously lifted restrictions to be reinstated, which could result in more disruptions. As economies have reopened, global supply chains have struggled to keep pace with rapidly changing demand. The resulting supply constraints have manifested across a variety of areas including mechanical, electrical and logistics portions of the supply chain, which has impacted our ability to ship products in a timely manner. In particular, our ability to obtain adequate supply of semiconductor components has impacted our ability to service recovering customer demand. While we believe the current imbalance in supply and demand is temporal, the timeline to recovery is uncertain. Efforts are ongoing with suppliers to increase supply, including the approval of alternate sources. Recently, inflation in our raw materials and component costs, freight charges, and labor costs have increased above historical levels, due to, among other things, the continuing impacts of the pandemic and uncertain economic environment. We may or may not be able to fully recover these increased costs through pricing actions with our customers. At this time, we have not identified any significant decrease in long-term customer demand for our products and services. However, certain of our customer projects have experienced delay in deliveries, with revenue originally forecasted in prior periods shifting to future periods. For more information on risks associated with the COVID-19 pandemic, please see our risk in Part I, Item 1A: Risk Factors.

While we have limited direct business exposure in Russia, Belarus and Ukraine, the Russian military actions and the resulting sanctions could adversely affect the global economy, as well as further disrupt the supply chain. A major disruption in the global economy and supply chain could have a material adverse effect on our business, prospects, financial condition, results of operations, and cash flows. The extent and duration of the military action, sanctions, and resulting market and/or supply disruptions are impossible to predict, but could be substantial. During the third quarter of 2022, we substantially liquidated our legal entity in Russia, recognizing a loss of \$1.9 million for the reclassification of the currency translation adjustment from accumulated other comprehensive income. The loss was classified within sales, general and administrative expense within the Consolidated Statements of Operations.

Total Company GAAP and Non-GAAP Highlights and Unit Shipments

	Year Ended December 31,						
In thousands, except margin and per share data		2022	% Change		2021		
GAAP							
Revenues							
Product revenues	\$	1,500,243	(11)%	\$	1,678,195		
Service revenues		295,321	(3)%		303,377		
Total revenues		1,795,564	(9)%		1,981,572		
Gross profit		522,189	(9)%		573,169		
Operating expenses		529,628	(19)%		652,468		
Operating loss		(7,439)	91%		(79,299)		
Other income (expense)		(8,304)	81%		(44,511)		
Income tax benefit		6,196	(86)%		45,512		
Net loss attributable to Itron, Inc.		(9,732)	88%		(81,255)		
Non-GAAP ⁽¹⁾							
Non-GAAP operating expenses	\$	463,766	(7)%	\$	497,604		
Non-GAAP operating income		58,423	(23)%		75,565		
Non-GAAP net income attributable to Itron, Inc.		50,987	(35)%		78,103		
Adjusted EBITDA		95,071	(17)%		115,211		
GAAP Margins and EPS							
Gross margin							
Product gross margin		26.5 %			26.6 %		
Service gross margin		42.1 %			41.6 %		
Total gross margin		29.1 %			28.9 %		
Operating margin		(0.4)%			(4.0)%		
Net loss per common share - Basic	\$	(0.22)		\$	(1.83)		
Net loss per common share - Diluted	\$	(0.22)		\$	(1.83)		
N. CAAD TRO (I)							
Non-GAAP EPS (1)	ф	1 10		¢.	1.75		
Non-GAAP diluted EPS	\$	1.13		\$	1.75		

⁽¹⁾ These measures exclude certain expenses that we do not believe are indicative of our core operating results. See pages 43-46 for information about these non-GAAP measures and reconciliations to the most comparable GAAP measures.

Definition of an Endpoint Under Management

An "endpoint under management" is a unique endpoint, or data from that endpoint, which Itron manages via our networked platform or a third party's platform that is connected to one or multiple types of endpoints. Itron's management of an endpoint occurs when on behalf of our client, we manage one or more of the physical endpoints, operating system, data, application, data analytics, and/or outcome deriving from this unique endpoint. Itron has the ability to monitor and/or manage endpoints or the data from the endpoints via Network-as-a-Service (NaaS), Software-as-a-Service (SaaS), and/or a licensed offering at a remote location designated by our client. Our offerings typically, but not exclusively, provide an Itron product or Itron certified partner product to our clients that has the capability of one-way communication or two-way communication of data that may include remote product configuration and upgradability. Examples of these offerings include our Temetra, OpenWay®, OpenWay® Riva and Gen X.

This metric primarily includes Itron or third-party endpoints deployed within the electricity, water, and gas utility industries, as well as within cities and municipalities around the globe. Endpoints under management also include smart communication modules and network interface cards (NICs) within Itron's platforms. At times, these NICs are communicating modules that

were sold separately from an Itron product directly to our customers or to third party manufacturers for use in endpoints such as electric, water, and gas meters; streetlights and other types of IIoT sensors and actuators; sensors and other capabilities that the end customer would like Itron to connect and manage on their behalf.

The "endpoint under management" metric only accounts for the specific, unique endpoint itself, though that endpoint may have multiple applications, services, outcomes, and higher margin recurring offerings associated with it. This metric does not reflect the multi-application value that can be derived from the individual endpoint itself. Additionally, this metric excludes those endpoints that are non-communicating, non-Itron system hardware component sales or licensed applications that Itron does not manage the unit or the data from that unit directly.

While the one-time sale of the platform and endpoints are primarily delivered via our Networked Solutions segment, our enhanced solutions, on-going monitoring, maintenance, software, analytics, and distributed intelligent applications are predominantly recognized in our Outcomes segment. We anticipate the opportunity to increase our penetration of Outcomes applications, software, and managed applications will increase as our endpoints under management increases. Management believes using the endpoints under management metric enhances insight to the strategic and operational direction of our Networked Solutions and Outcomes segments to serve clients for years after their one-time installation of an endpoint.

A summary of our endpoints under management is as follows:

_	Ye	ear Ended December 31,	
Units in thousands	2022	2021	2020
Endpoints under management	93,941	82,354	74,184

Results of Operations

Revenues and Gross Margin

The actual results of and effects of changes in foreign currency exchange rates on revenues and gross profit were as follows:

	Year Ended December 31,				Effect of Changes in Foreign Currency		Constant Currency				
In thousands		2022		2021		Exchange Rates		Change		Total Change	
Total Company										_	
Revenues	\$	1,795,564	\$	1,981,572	\$	(70,849)	\$	(115,159)	\$	(186,008)	
Gross profit		522,189		573,169		(15,348)		(35,632)		(50,980)	

Revenues

Revenues decreased \$186.0 million in 2022 compared with 2021. We have been unfavorably impacted by global component constraints, which limited our ability to fulfill customer demand, as well as the sale of certain Gas product lines from our Device Solutions manufacturing and business operations in Europe and North America to Dresser during the first quarter of 2022. Product revenues decreased \$178.0 million in 2022 and service revenues decreased \$8.1 million in 2022 as compared with 2021. Device Solutions decreased by \$206.4 million; Networked Solutions increased by \$26.6 million; and Outcomes decreased by \$6.3 million when compared with the same period last year. Changes in currency exchange rates unfavorably impacted revenues by \$70.8 million in 2022, primarily in Device Solutions.

No single customer represented more than 10% of total revenues for the years ended December 31, 2022 and 2021. Our 10 largest customers accounted for 32% of total revenues in 2022 and 25% of total revenues in 2021.

Gross Margin

Gross margin was 29.1% for 2022, compared with 28.9% in 2021. We were favorably impacted by product and solution mix partially offset by higher component costs and manufacturing inefficiencies in 2022 compared with 2021. Product sales gross margin decreased to 26.5% in 2022 from 26.6% in 2021. Gross margin on service revenues increased to 42.1% from 41.6% in 2021.

Refer to Operating Segment Results section below for further detail on total company revenues and gross margin.

Operating Expenses

The actual results of and effects of changes in foreign currency exchange rates on operating expenses were as follows:

	Year Ended December 31,			nber 31,	Effect of Changes in Foreign Currency			nstant Currency	
In thousands		2022	2021		Exchange Rates		Change		Total Change
Total Company						_		_	
Sales, general and administrative	\$	290,453	\$	300,520	\$	(13,013)	\$	2,946	\$ (10,067)
Research and development		185,098		197,235		(946)		(11,191)	(12,137)
Amortization of intangible assets		25,717		35,801		(730)		(9,354)	(10,084)
Restructuring		(13,625)		54,623		265		(68,513)	(68,248)
Loss on sale of businesses		3,505		64,289		(3,467)		(57,317)	(60,784)
Goodwill impairment		38,480		_		_		38,480	38,480
Total operating expenses	\$	529,628	\$	652,468	\$	(17,891)	\$	(104,949)	\$ (122,840)

Operating expenses decreased \$122.8 million for the year ended December 31, 2022 as compared with the same period in 2021. This was due to a decrease of \$68.2 million in restructuring related primarily to the 2021 Projects. The loss on sale of businesses of \$64.3 million in 2021 includes the impairment resulting from the sale of certain Gas product lines from our Device Solutions manufacturing and business operations in Europe and North America to Dresser and an increase to the loss related to the 2020 Latin America divestiture. There was also a decrease of \$12.1 million in research and development, \$10.1 million in sales, general and administrative, and \$10.1 million in amortization of intangible assets. The reduction in sales, general and administrative and research and development expenses were primarily driven by management's cost saving actions, as well as reductions in labor costs and variable compensation. The decreases were partially offset by \$38.5 million in goodwill impairment, recognized in 2022. Refer to Item 8: Financial Statements and Supplementary Data, Note 5: Goodwill, Note 13: Restructuring, and Note 18: Sale of Businesses for more details.

Other Income (Expense)

The following table shows the components of other income (expense):

	Year Ended December 31,						
In thousands	2022		% Change		2021		
Interest income	\$	2,633	69%	\$	1,557		
Amortization of prepaid debt fees		(3,499)	(81)%		(18,253)		
Other interest expense		(3,225)	(69)%		(10,385)		
Interest expense		(6,724)	(77)%		(28,638)		
Other income (expense), net		(4,213)	(76)%		(17,430)		
Total other income (expense)	\$	(8,304)	(81)%	\$	(44,511)		

Total other income (expense) for the year ended December 31, 2022 was a net expense of \$8.3 million compared with \$44.5 million in 2021.

The change in other income (expense), net, for the year ended December 31, 2022 as compared with the same period in 2021 was primarily driven by 2021 activity: \$12.2 million write-off of prepaid debt fees associated with the repayment of senior subordinated notes, \$2.6 million in lower debt fee amortization, \$11.7 million related to the extinguishment of debt in other income (expense), net, as well as lower interest costs of \$5.4 million for bonds and \$2.2 million for the term loan, with such borrowings fully repaid in 2021.

Income Tax Provision

Our income tax benefit was \$6.2 million and \$45.5 million for the years ended December 31, 2022 and 2021. Our tax rate for the year ended December 31, 2022 differed from the U.S. federal statutory tax rate of 21% due to losses in jurisdictions for which no benefit is recognized because of valuation allowances on deferred tax assets, the level of profit or losses in domestic and international jurisdictions, stock-based compensation, and uncertain tax positions. The 2021 tax benefit related largely to the release of a valuation allowance on U.S. foreign tax credit deferred tax assets that were utilized in 2021.

For additional discussion related to income taxes, refer to Item 8: Financial Statements and Supplementary Data, Note 11: Income Taxes.

Operating Segment Results

Networked Solutions

Total gross profit and margin

Outcomes

For a description of our operating segments, refer to Part I, Item 1: Business, Our Operating Segments included in this Annual Report on Form 10-K and the above Overview section. The following tables and discussion highlight significant changes in trends or components of each operating segment:

Year Ended December 31,

32.3%

41.4%

29.1%

378,633

95,181

573,169

34.7%

39.0%

28.9%

361,975

98,436 522,189

In thousands	2022 % Chan			2021	
Segment revenues	· ·				
Device Solutions	\$ 438,710	(32)%	\$	645,104	
Networked Solutions	1,119,268	2%		1,092,631	
Outcomes	237,586	(3)%		243,837	
Total revenues	\$ 1,795,564	(9)%	\$	1,981,572	
		Year Ende	d Decen	nber 31,	
	202	2		202 1	l
In thousands	Gross Profit	Gross Margin		Gross Profit	Gross Margii
Segment gross profit and margin					•
Device Solutions	\$ 61,778	14.1%	\$	99,355	15.4%

		Year Ended December 31,						
In thousands		2022	% Change		2021			
Segment operating expenses		· ·						
Device Solutions	\$	35,075	(17)%	\$	42,138			
Networked Solutions		113,707	(8)%		124,199			
Outcomes		52,189	17%		44,550			
Corporate unallocated		328,657	(26)%		441,581			
Total operating expenses	\$	529,628	(19)%	\$	652,468			

	Year Ended December 31,						
		2022	2	2021			
In thousands	Operating Income (Loss)		Operating Margin	Operating Income (Loss)		Operating Margin	
Segment operating income (loss) and operating margin							
Device Solutions	\$	26,703	6.1%	\$	57,217	8.9%	
Networked Solutions		248,268	22.2%		254,434	23.3%	
Outcomes		46,247	19.5%		50,631	20.8%	
Corporate unallocated		(328,657)	NM		(441,581)	NM	
Total operating loss and operating margin	\$	(7,439)	(0.4)%	\$	(79,299)	(4.0)%	

Device Solutions

The effects of changes in foreign currency exchange rates and the constant currency changes in certain Device Solutions segment financial results were as follows:

	 Year Ended	d December 31,			Effect of Changes in - Foreign Currency Exchange Rates		Constant Currency Change		
In thousands	2022		2021						Total Change
Device Solutions Segment							_		
Revenues	\$ 438,710	\$	645,104	\$	(55,417)	\$	(150,977)	\$	(206,394)
Gross profit	61,778		99,355		(8,076)		(29,501)		(37,577)
Operating expenses	35,075		42,138		(1,498)		(5,565)		(7,063)

Revenues

Revenues decreased by \$206.4 million in 2022, or 32%, compared with 2021. The decrease was mainly due to the sale of certain Gas product lines from our manufacturing and business operations in Europe and North America to Dresser during the first quarter of 2022, accounting for \$82.0 million of the decline. The decrease was also due to the discontinuation of some legacy products and component shortages resulting in unfulfilled customer demand. Changes in foreign currency exchange rates unfavorably impacted revenues by \$55.4 million.

Gross Margin

Gross margin was 14.1% in 2022 compared with 15.4% in 2021. The 130 basis point decrease was primarily due to higher input costs and manufacturing inefficiencies related to component shortages, partially offset by favorable mix.

Operating Expenses

Operating expenses decreased \$7.1 million, or 17%, in 2022 compared with 2021. The decrease was primarily due to management's cost savings actions resulting in a \$4.0 million decrease in marketing costs and a \$3.1 million decrease in research and development costs.

Networked Solutions

The effects of changes in foreign currency exchange rates and the constant currency changes in certain Networked Solutions segment financial results were as follows:

	 Year Ended December 31,		nber 31,	Effect of Changes in Foreign Currency		Constant Currency			
In thousands	2022		2021		Exchange Rates		Change		Total Change
Networked Solutions Segment									
Revenues	\$ 1,119,268	\$	1,092,631	\$	(8,396)	\$	35,033	\$	26,637
Gross profit	361,975		378,633		(3,947)		(12,711)		(16,658)
Operating expenses	113,707		124,199		(377)		(10,115)		(10,492)

Revenues

Revenues increased by \$26.6 million, or 2%, in 2022 compared with 2021. The increase was primarily due to the ramp of new and existing customer deployments, partially offset by global component shortages that limited our ability to fulfill our customer demand. Higher product revenue of \$27.6 million was partially offset by lower maintenance service revenue of \$1.0 million.

Gross Margin

Gross margin was 32.3% in 2022 compared with 34.7% in 2021. The decrease of 240 basis points was primarily due to inflationary pressures driving higher input costs, less favorable product mix, and manufacturing inefficiencies related to component shortages.

Operating Expenses

Operating expenses decreased by \$10.5 million, or 8%, in 2022 compared with 2021. The decrease was primarily driven by reduced research and development costs.

Outcomes

The effects of changes in foreign currency exchange rates and the constant currency changes in certain Outcomes segment financial results were as follows:

Year Ended December 31,						Effect of Changes in Foreign Currency	Cons	stant Currency		
In thousands		2022		2021		Exchange Rates		Change		Total Change
Outcomes Segment										
Revenues	\$	237,586	\$	243,837	\$	(7,036)	\$	785	\$	(6,251)
Gross profit		98,436		95,181		(3,325)		6,580		3,255
Operating expenses		52,189		44,550		(226)		7,865		7,639

Revenues

Revenues decreased \$6.3 million, or 3%, in 2022 compared with 2021. Decreases in prepay business and consulting were offset by increases in managed services and grid operations. Changes in foreign currency exchange rates unfavorably impacted revenues by \$7.0 million.

Gross Margin

Gross margin increased to 41.4% in 2022 compared with 39.0% for last year. The 240 basis point increase was driven by favorable managed services mix and other cost efficiencies.

Operating Expenses

Operating expenses increased \$7.6 million, or 17%, in 2022 compared with 2021. This increase was primarily related to increased research and development investment.

Corporate unallocated

Operating expenses not directly associated with an operating segment are classified as Corporate unallocated. These expenses decreased \$112.9 million in 2022 as compared with 2021. This was due to a decrease of \$68.2 million in restructuring related primarily to the 2021 Projects. The loss on sale of businesses of \$64.3 million in 2021 includes the impairment resulting from the sale of certain Gas product lines from our Device Solutions manufacturing and business operations in Europe and North America to Dresser and an increase to the loss related to the 2020 Latin America divestiture. Amortization of intangible assets decreased \$10.1 million as compared with 2021. The decreases were partially offset by \$38.5 million in goodwill impairment within our Device Solutions reporting unit, recognized in 2022. Refer to Item 8: Financial Statements and Supplementary Data, Note 13: Restructuring and Note 18: Sale of Businesses for more details.

Financial Condition

Cash Flow Information

		,			
In thousands		2022	2021		2020
Cash provided by operating activities	\$	24,500	\$ 154,794	\$	109,514
Cash provided by (used in) investing activities		40,516	(34,884)		(41,036)
Cash used in financing activities		(18,737)	(152,887)		(11,576)
Less: Cash classified within assets held for sale		_	(9,750)		_
Effect of exchange rates on cash and cash equivalents		(6,851)	(1,627)		127
Increase (decrease) in cash and cash equivalents	\$	39,428	\$ (44,354)	\$	57,029

Cash, cash equivalents, and restricted cash at December 31, 2022 was \$202.0 million compared with \$162.6 million at December 31, 2021. The \$39.4 million increase in cash and cash equivalents in the 2022 period was primarily the result of proceeds from the sale of certain Gas product lines from our Device Solutions manufacturing and business operations in Europe and North America to Dresser and cash flows from operating activities, offset by cash paid for shares repurchased and acquisition of property, plant, and equipment.

Operating activities

Cash provided by operating activities in 2022 was \$130.3 million lower than in 2021. This decrease was primarily due to an increase in working capital (current assets less current liabilities) compared to 2021 and higher variable compensation payouts, partially offset by increased earnings in 2022.

Investing activities

Cash provided by investing activities during 2022 was \$75.4 million higher than in 2021. This increase was primarily related to net cash proceeds received from the sale of certain Gas product lines from our Device Solutions manufacturing and business operations in Europe and North America to Dresser for \$55.9 million, along with \$14.9 million less purchases of property, plant, and equipment in 2022.

Financing activities

Net cash used in financing activities during 2022 was \$18.7 million, compared with net cash used in 2021 of \$152.9 million. In March 2021, we received \$389.4 million from issuance of common stock related to the equity offering, after deducting underwriters' discounts of the offering, purchased \$84.1 million of the convertible note hedge contracts, and proceeds of \$45.3 million from the sale of warrants. Also in March 2021, we closed the sale of the Convertible Notes with gross proceeds of \$460 million, which was used to pay off the outstanding term loan balance of \$536.1 million. In April 2021, we repaid the senior notes totaling \$410 million (including \$10 million early repayment premium) with proceeds from the equity offering and cash on hand. In 2022, we repurchased \$17.0 million of our stock, compared with \$8.0 million in 2021.

Cash classified within assets held for sale

Cash classified within assets held for sale was \$9.8 million as of December 31, 2021, which was related to the sale of certain Gas product lines from our Device Solutions manufacturing and business operations in Europe and North America to Dresser, which closed on February 28, 2022.

Effect of exchange rates on cash and cash equivalents

The effect of exchange rates on the cash balances of currencies held in foreign denominations resulted in a decrease of \$6.9 million in 2022 and a decrease of \$1.6 million in 2021. Our foreign currency exposure relates to non-U.S. dollar denominated balances in our international subsidiary operations.

Free cash flow (Non-GAAP)

To supplement our Consolidated Statements of Cash Flows presented on a GAAP basis, we use the non-GAAP measure of free cash flow to analyze cash flows generated from our operations. The presentation of non-GAAP free cash flow is not meant to be considered in isolation or as an alternative to net income as an indicator of our performance, or as an alternative to cash flows from operating activities as a measure of liquidity. We calculate free cash flows, using amounts from our Consolidated Statements of Cash Flows, as follows:

	Year Ended December 31,						
In thousands		2022		2021			
Cash provided by operating activities	\$	24,500	\$	154,794			
Acquisitions of property, plant, and equipment		(19,747)		(34,682)			
Free cash flow	\$	4,753	\$	120,112			

Free cash flow decreased due to lower operating cash flow, partially offset by lower spending for property, plant, and equipment. See the cash flow discussion of operating and investing activities above.

Liquidity and Capital Resources

Our principal sources of liquidity are cash flows from operations, borrowings, and the sale of our common stock. Cash flows may fluctuate and are sensitive to many factors including changes in working capital and the timing and magnitude of capital expenditures and payments of debt. Working capital, which represents current assets less current liabilities, continues to be in a net favorable position. We expect existing cash, cash flows from operations, and access to capital markets to continue to be sufficient to fund our operating activities and cash commitments, such as material capital expenditures and debt obligations, for at least the next 12 months and into the foreseeable future.

Stock Offering

On March 12, 2021, we closed the sale of 4,472,222 shares of our common stock in a public offering, resulting in net proceeds to us of \$389.4 million, after deducting underwriters' discounts of the offering, and we closed the sale of the Convertible Notes

in a private placement to qualified institutional buyers, resulting in net proceeds to us of \$448.5 million after deducting initial purchasers' discounts of the offering. Concurrently with the issuance of the Convertible Notes, we entered into the Convertible Note Hedge Transactions and Warrant Transactions. For further description of these transactions, refer to Item 8: Financial Statements and Supplementary Data, Note 6: Debt and Note 7: Derivative Financial Instruments.

Borrowings

Our 2018 credit facility, as amended, provides a multicurrency revolving line of credit (the revolver) with a principal amount of up to \$500 million. The revolver also contains a \$300 million standby letter of credit sub-facility and a \$50 million swingline sub-facility. At December 31, 2022, no amount was outstanding under the 2018 credit facility, and \$56.0 million was utilized by outstanding standby letters of credit, resulting in \$444.0 million available for borrowing or standby letters of credit under the revolver. At December 31, 2022, \$244.0 million was available for additional standby letters of credit under the letter of credit sub-facility, and no amounts were outstanding under the swingline sub-facility. Amounts borrowed under the revolver may be repaid and reborrowed until the revolver's maturity on October 18, 2024, at which time all outstanding loans together with all accrued and unpaid interest must be repaid.

On March 12, 2021, we closed the sale of \$460 million in Convertible Notes in a private placement to qualified institutional buyers. The Convertible Notes do not bear regular interest, and the principal amount does not accrete. The Convertible Notes will mature on March 15, 2026, unless earlier repurchased, redeemed, or converted in accordance with their terms.

For further description of our borrowings, refer to Item 8: Financial Statements and Supplementary Data, Note 6: Debt. Refer to Item 8: Financial Statements and Supplementary Data, Note 7: Derivative Financial Instruments for further details of the Convertible Note Hedge Transactions and Warrant Transactions.

For a description of our letters of credit and performance bonds, and the amounts available for additional borrowings or letters of credit under our lines of credit, including the revolver that is part of our credit facility, refer to Item 8: Financial Statements and Supplementary Data, Note 12: Commitments and Contingencies.

Restructuring

On September 17, 2020, our Board of Directors approved a restructuring plan (the 2020 Projects). The 2020 Projects include activities that continue our efforts to optimize global supply chain and manufacturing operations, sales and marketing organizations, and other overhead. These projects are scheduled to be substantially complete by the end of 2023, with an estimated \$8 million in cash payments remaining as of December 31, 2022 with cash outflows expected through 2024.

On October 29, 2021, our Board of Directors approved a restructuring plan (the 2021 Projects), which in conjunction with the announcement of the sale of certain Gas product lines from our Device Solutions manufacturing and business operations in Europe and North America to Dresser, (refer to Item 8: Financial Statements and Supplementary Data, Note 18: Sale of Businesses), includes activities to drive reductions in certain locations and functional support areas. These projects are expected to be substantially complete by the end of 2024, with an estimated \$34 million in cash payments remaining as of December 31, 2022 with cash outflows expected through 2025.

For the year ended December 31, 2022, we paid out a net \$25.8 million related to all our restructuring projects. As of December 31, 2022, \$42.4 million was accrued for these restructuring projects, of which \$14.5 million is expected to be paid within the next 12 months.

On February 23, 2023, the Board of Directors of Itron approved a restructuring plan (the 2023 Projects). The 2023 Projects include activities that continue the Company's efforts to optimize its global supply chain and manufacturing operations, sales and marketing organizations, and other overhead. These projects are to be substantially complete by early 2025. Itron estimates pre-tax restructuring charges of \$40-45 million. Of the total estimated charge, approximately 95% will result in cash expenditures, and the remainder to non-cash impairment charges. The majority of the expense will be recognized during the first quarter of 2023. Once the 2023 Projects are substantially completed, Itron estimates \$14-17 million in annualized savings. Certain of Itron's employees are represented by unions or works councils, which requires consultation, and potential restructuring projects may be subject to regulatory approval, both of which could impact the timing of planned savings in certain jurisdictions.

For further details regarding our restructuring activities, refer to Item 8: Financial Statements and Supplementary Data, Note 13: Restructuring.

Stock Repurchase Program

Effective November 1, 2021, Itron's Board of Directors authorized a share repurchase program of up to \$100 million of our common stock over an 18-month period (the 2021 Stock Repurchase Program). Repurchases are made in the open market or in privately negotiated transactions, and in accordance with applicable securities laws. Following the announcement of the program and through December 31, 2022, we have repurchased 405,282 shares at an average share price of \$61.67 (excluding commissions) for a total of \$25 million. As of December 31, 2022, we are authorized to repurchase up to an additional \$75 million before May 1, 2023.

Other contractual obligations and commitments

Operating lease obligations are disclosed in Item 8: Financial Statements and Supplementary Data, Note 19: Leases and do not include common area maintenance charges, real estate taxes, and insurance charges for which we are obligated. Amounts due under operating lease liabilities for the next 12 months are \$18.2 million and beyond the next 12 months are \$47.4 million.

We regularly enter into standard purchase orders in the ordinary course of business that may obligate us to purchase materials and other items but may not yet qualify for recognition in our Consolidated Balance Sheets. Purchase orders and other purchase obligations can include open-ended agreements that provide for estimated quantities over an extended delivery period. At December 31, 2022, purchase orders and other purchase obligations were \$728.2 million, which includes capital expenditures of \$10.1 million. The purchase orders may include durations longer than one year, but these long-term agreements generally contain termination clauses that could require payment if the commitments were canceled, and as such the total above is considered short-term as of December 31, 2022.

Other long-term liabilities consist of warranty obligations, estimated pension benefit payments, and other obligations. Estimated pension benefit payments include amounts to be paid from our assets for unfunded plans and reflect expected future service. The following table summarizes our known obligations to make future payments pursuant to certain contracts as of December 31, 2022.

In thousands	I	Next 12 months	12 months
Warranty obligations	\$	18,203	\$ 7,495
Estimated pension benefit payments		3,805	57,839

The period of cash settlement for long-term unrecognized tax benefits, which include accrued interest and penalties, cannot be reasonably estimated with the respective taxing authorities. For further information on defined benefit pension plans, income taxes, warranty obligations, and unearned revenue for extended warranties, refer to Item 8: Financial Statements and Supplementary Data, Note 8: Defined Benefit Pension Plans, Note 11: Income Taxes, Note 12: Commitments and Contingencies, and Note 17: Revenues.

Income Tax

Our tax provision as a percentage of income before tax typically differs from the U.S. federal statutory rate of 21%. Changes in our actual tax rate are subject to several factors, including fluctuations in operating results, new or revised tax legislation and accounting pronouncements, changes in the level of business in domestic and foreign jurisdictions, research and development tax credits, state income taxes, adjustments to valuation allowances, settlement of tax audits, and uncertain tax positions, among other items. Changes in tax laws, valuation allowances, and unanticipated tax liabilities could significantly impact our tax rate.

Our cash income tax payments were as follows:

	Year Ended Decem							
In thousands	 2022		2021					
U.S. federal taxes paid	\$ 1,128	\$	_					
State income taxes paid	3,658		817					
Foreign and local income taxes paid	7,129		6,256					
Total income taxes paid	\$ 11,915	\$	7,073					

Based on current projections, we expect to pay, net of refunds, approximately \$27 million in U.S. federal and state taxes and \$11 million in foreign and local income taxes in 2023.

As of December 31, 2022, there was \$41.8 million of cash and short-term investments held by certain foreign subsidiaries in which we are permanently reinvested for tax purposes. As a result of recent changes in U.S. tax legislation, any repatriation in

the future would not result in U.S. federal income tax. Accordingly, there is no provision for U.S. deferred taxes on this cash. If this cash were repatriated to fund U.S. operations, additional withholding tax costs may be incurred. Tax is only one of many factors that we consider in the management of global cash. Accordingly, the amount of taxes that we would need to accrue and pay to repatriate foreign cash could vary significantly.

Other Liquidity Considerations

In several of our consolidated international subsidiaries, we have joint venture partners who are minority shareholders. Although these entities are not wholly-owned by Itron, Inc., we consolidate them because we have a greater than 50% ownership interest and/or because we exercise control over the operations. The noncontrolling interest balance in our Consolidated Balance Sheets represents the proportional share of the equity of the joint venture entities, which is attributable to the minority shareholders. At December 31, 2022, \$9.1 million of our consolidated cash balance was held in our joint venture entities. As a result, the minority shareholders of these entities have rights to their proportional share of this cash balance, and there may be limitations on our ability to repatriate cash to the United States from these entities.

As of December 31, 2022, we expect to pay approximately \$20 million for variable compensation in cash during the first quarter of 2023.

General Liquidity Overview

Notwithstanding the expected short to mid-term impacts of the COVID-19 related component shortages, we expect to grow through a combination of internal new research and development, licensing technology from and to others, distribution agreements, partnering arrangements, and acquisitions of technology or other companies. We expect these activities to be funded with existing cash, cash flow from operations, borrowings, or the sale of our common stock or other securities. We believe existing sources of liquidity will be sufficient to fund our existing operations and obligations for the next 12 months and into the foreseeable future but offer no assurances. Our liquidity could be affected by the stability of the electricity, gas, and water utility industries, competitive pressures, our dependence on certain key vendors and components, changes in estimated liabilities for product warranties and/or litigation, duration of the COVID-19 pandemic and resulting supply constraints, future business combinations, capital market fluctuations, international risks, and other factors described under Part I, Item 1A: Risk Factors, as well as Item 7A: Quantitative and Qualitative Disclosures About Market Risk.

Contingencies

Refer to Item 8: Financial Statements and Supplementary Data, Note 12: Commitments and Contingencies.

Critical Accounting Estimates and Policies

Our consolidated financial statements and accompanying notes are prepared in accordance with GAAP. Preparing consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, and expenses. These estimates and assumptions are affected by management's application of accounting policies. Our critical accounting policies include revenue recognition, warranty, restructuring, income taxes, goodwill and intangible assets, defined benefit pension plans, contingencies, and stock-based compensation. Refer to Item 8: Financial Statements and Supplementary Data, Note 1: Summary of Significant Accounting Policies for further disclosures regarding accounting policies and new accounting pronouncements.

Revenue Recognition

Many of our revenue arrangements involve multiple performance obligations, consisting of hardware, software, and professional services such as implementation, project management, installation, and consulting services. These arrangements require us to determine the standalone selling price of the promised goods or services underlying each performance obligation and then allocate the total arrangement consideration among the separate performance obligations based on their relative standalone selling price. Revenues for each performance obligation are then recognized upon transfer of control to the customer at a point in time as products are shipped or received by a customer, or over time as services are delivered. The majority of our revenue is recognized at a point in time when products are shipped to or received by a customer. Certain contracts that contain multiple performance obligations may contain customer-specific terms and conditions that govern service level commitments, transfer of control, and variable consideration that may involve complex accounting considerations.

Professional services revenues are recognized over time. We measure progress towards satisfying these performance obligations using input methods, most commonly based on the costs incurred in relation to the total expected costs to provide the service. The estimate of expected costs to provide services requires judgment. Cost estimates take into consideration past history and the specific scope requested by the customer and are updated quarterly. Other variables impacting our estimate of costs to complete

include length of time to complete, changes in wages, subcontractor performance, supplier information, and business volume assumptions. Changes in underlying assumptions and estimates may adversely or favorably affect financial performance.

If we estimate that the completion of a performance obligation will result in a loss, then the loss is recognized in the period in which the loss becomes evident. We reevaluate the estimated loss through the completion of the performance obligation and adjust the estimated loss for changes in facts and circumstances.

Many of our contracts with customers include variable consideration, which can include liquidated damage provisions, rebates and volume and early payment discounts, or software licenses sold where the amount of consideration is dependent on the number of endpoints deployed. We estimate variable consideration using the expected value method, taking into consideration contract terms, historical customer behavior, and historical sales. Some of our contracts with customers contain clauses for liquidated damages related to the timing of delivery or milestone accomplishments, which could become material in an event of failure to meet the contractual deadlines. At the inception of the arrangement and on an ongoing basis, we evaluate the probability of having to pay liquidated damages and the magnitude of such damages. In the case of liquidated damages, we also take into consideration progress towards meeting contractual milestones, including whether milestones have not been achieved, specified rates, if applicable, stated in the contract, and history of paying liquidated damages to the customer or similar customers.

Certain of our revenue arrangements include an extended or customer-specific warranty provision that covers all or a portion of a customer's replacement or repair costs beyond the standard warranty period. Whether or not the extended warranty is separately priced in the arrangement, a portion of the arrangement's total consideration is allocated to this extended warranty deliverable. This revenue is deferred and recognized over the extended warranty coverage period. Extended or customer-specific warranties do not represent a significant portion of our revenue.

We allocate consideration to each performance obligation in an arrangement based on its relative standalone selling price. For goods or services where we have observable standalone sales, the observable standalone sales are used to determine the standalone selling price. For the majority of our goods and services, we do not have observable standalone sales. As a result, we estimate the standalone selling price using either the adjusted market assessment approach or the expected cost plus a margin approach. Approaches used to estimate the standalone selling price for a given good or service maximize the use of observable inputs and consider several factors, including our pricing practices, costs to provide a good or service, the type of good or service, and availability of other transactional data, among others.

We determine the estimated standalone selling prices of goods or services used in our allocation of arrangement consideration on an annual basis or more frequently if there is a significant change in our business or if we experience significant variances in our transaction prices.

Our contracts may be modified to add, remove, or change existing performance obligations or change contract price. The accounting for modifications to our contracts involves assessing whether the products or services added to an existing contract are distinct and whether the pricing is at the standalone selling price. Products or services added that are not distinct are accounted for as if it were part of the existing contract. The effect of the modification on the transaction price and on the measure of progress is recognized as an adjustment to revenue as of the date of the modification (i.e., on a cumulative catch-up basis). Those products or services that are distinct are accounted for prospectively, either as a separate contract if the additional services are priced at the standalone selling price, or as a termination of the existing contract and creation of a new contract if not priced at the standalone selling price.

Warranty

We offer standard warranties on our hardware products and large application software products. We accrue the estimated cost of product warranties based on historical and projected product performance trends and costs during the warranty period. Testing of new products in the development stage helps identify and correct potential warranty issues prior to manufacturing. Quality control efforts during manufacturing reduce our exposure to warranty claims. When testing or quality control efforts fail to detect a fault in our products, we may experience an increase in warranty claims. We track warranty claims to identify potential warranty trends. If an unusual trend is identified, an additional warranty accrual would be recognized if a failure event is probable and the cost can be reasonably estimated. When new products are introduced, our process relies on historical averages of similar products until sufficient data are available. As actual experience on new products becomes available, it is used to modify the historical averages to ensure the expected warranty costs are within a range of likely outcomes. Management regularly evaluates the sufficiency of the warranty provisions and makes adjustments when necessary. The warranty allowances may fluctuate due to changes in estimates for material, labor, and other costs we may incur to repair or replace projected product failures, and we may incur additional warranty and related expenses in the future with respect to new or established products, which could adversely affect our financial position and results of operations.

Restructuring

We recognize a liability for costs associated with an exit or disposal activity under a restructuring project at its fair value in the period in which the liability is incurred. Employee termination benefits considered post-employment benefits are accrued when the obligation is probable and estimable, such as benefits stipulated by human resource policies and practices or statutory requirements. If the employee must provide future service greater than 60 days, such benefits are recognized ratably over the future service period. For contract termination costs, we recognize a liability upon the later of when we terminate a contract in accordance with the contract terms or when we cease using the rights conveyed by the contract.

Asset impairments associated with a restructuring project are determined at the asset group level. An impairment may be recognized for assets that are to be abandoned, are to be sold for less than net book value, or are held for sale in which the estimated proceeds are less than the net book value less costs to sell. We may also recognize impairment on an asset group, which is held and used, when the carrying value is not recoverable and exceeds the asset group's fair value. If an asset group is considered a business, a portion of our goodwill balance is allocated to it based on relative fair value. If the sale of an asset group under a restructuring project results in proceeds that exceed the net book value of the asset group, the resulting gain is recognized within restructuring expense in the Consolidated Statements of Operations.

In determining restructuring charges, we analyze our future operating requirements, including the required headcount by business functions and facility space requirements. Our restructuring costs and any resulting accruals involve significant estimates using the best information available at the time the estimates are made. Our estimates involve a number of risks and uncertainties, some of which are beyond our control, including real estate market conditions and local labor and employment laws, rules, and regulations. If the amounts and timing of cash flows from restructuring activities are significantly different from what we have estimated, the actual amount of restructuring and asset impairment charges could be materially different, either higher or lower, than those we have recognized.

Income Taxes

We estimate income tax expense in each of the taxing jurisdictions in which we operate. Changes in our actual tax rate are subject to several factors, including fluctuations in operating results, new or revised tax legislation and accounting pronouncements, changes in the level of business in domestic and foreign jurisdictions, research and development tax credits, state income taxes, adjustments to valuation allowances, settlement of tax audits, and uncertain tax positions, among other items. Changes in tax laws, valuation allowances, and unanticipated tax liabilities could significantly impact our tax rate.

We recognize valuation allowances to reduce deferred tax assets to the extent we believe it is more likely than not that a portion of such assets will not be realized. In making such determinations, we consider all available favorable and unfavorable evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies, and our ability to carry back losses to prior years. We are required to make assumptions and judgments about potential outcomes that lie outside our control. Our most sensitive and critical factors are the projection, source, and character of future taxable income. Although realization is not assured, management believes it is more likely than not that deferred tax assets, net of valuation allowance, will be realized. The amount of deferred tax assets considered realizable, however, could be reduced in the near term if estimates of future taxable income during the carryforward periods are reduced.

We are subject to audits in multiple taxing jurisdictions in which we operate. These audits may involve complex issues, which may require an extended period of time to resolve. We believe we have recognized adequate income tax provisions and reserves for uncertain tax positions.

In evaluating uncertain tax positions, we consider the relative risks and merits of positions taken in tax returns filed and to be filed, considering statutory, judicial, and regulatory guidance applicable to those positions. We make assumptions and judgments about potential outcomes that lie outside management's control. To the extent the tax authorities disagree with our conclusions and depending on the final resolution of those disagreements, our actual tax rate may be materially affected in the period of final settlement with the tax authorities.

Goodwill and Intangible Assets

Goodwill and intangible assets may result from our business acquisitions. Intangible assets may also result from the purchase of assets and intellectual property where we do not acquire a business. We use estimates, including estimates of useful lives of intangible assets, the amount and timing of related future cash flows, and fair values of the related operations, in determining the value assigned to goodwill and intangible assets. Our finite-lived intangible assets are amortized over their estimated useful lives based on estimated discounted cash flows. In-process research and development is considered an indefinite-lived intangible asset and is not subject to amortization until the associated projects are completed or terminated. Finite-lived intangible assets are tested for impairment at the asset group level when events or changes in circumstances indicate the carrying value may not be recoverable. Indefinite-lived intangible assets are tested for impairment annually, when events or

changes in circumstances indicate the asset may be impaired, or when their useful lives are determined to be no longer indefinite.

Goodwill is assigned to our reporting units based on the expected benefit from the synergies arising from each business combination, determined by using certain financial metrics, including the forecast discounted cash flows associated with each reporting unit. Each reporting unit corresponds with its respective operating segment.

We test goodwill for impairment each year as of October 1, or more frequently should a significant impairment indicator occur. As part of the impairment test, we may elect to perform an assessment of qualitative factors. If this qualitative assessment indicates that it is more likely than not that the fair value of a reporting unit, including goodwill, is less than its carrying amount, or if we elect to bypass the qualitative assessment, we would then proceed with the impairment test. The impairment test involves comparing the fair values of the reporting units to their carrying amounts. If the carrying amount of a reporting unit exceeds its fair value, we first evaluate the long-lived assets within the reporting unit for impairment and then recognize a goodwill impairment loss in an amount equal to any excess.

Determining the fair value of a reporting unit is judgmental in nature and involves the use of significant estimates and assumptions. We forecast discounted future cash flows at the reporting unit level using risk-adjusted discount rates and estimated future revenues and operating costs, which take into consideration factors such as existing backlog, expected future orders, supplier contracts, and expectations of competitive, business and economic environments. We also identify similar publicly traded companies and develop a correlation, referred to as a multiple, to apply to the operating results of the reporting units. These combined fair values are then reconciled to the aggregate market value of our common stock on the date of valuation, while considering a reasonable control premium.

Changes in market demand, fluctuations in the markets in which we operate, the volatility and decline in the worldwide equity markets, and a decline in our market capitalization could unfavorably impact the remaining carrying value of our goodwill, which could have a significant effect on our current and future results of operations and financial position. As the result of increases in raw material, component, labor and other costs, coupled with a decrease in forecasted revenue within the Device Solutions operating segment and reporting unit, which we determined during the second quarter of 2022, we performed an interim goodwill impairment test. At the conclusion of the test, a goodwill impairment of \$38.5 million was recognized in our Corporate unallocated segment as of June 30, 2022. No interim impairment test was determined to be necessary for the Networked Solutions or Outcomes reporting units. Refer to Item 8: Financial Statements and Supplementary Data, Note 5: Goodwill for further details.

Defined Benefit Pension Plans

We sponsor both funded and unfunded defined benefit pension plans for our international employees, primarily in Germany, France, Indonesia, India, and Italy. We recognize a liability for the projected benefit obligation in excess of plan assets or an asset for plan assets in excess of the projected benefit obligation. We also recognize the funded status of our defined benefit pension plans on our Consolidated Balance Sheets and recognize as a component of other comprehensive income (loss) (OCI), net of tax, the actuarial gains or losses and prior service costs or credits, if any, which arise during the period but are not recognized as components of net periodic benefit cost.

Several economic assumptions and actuarial data are used in calculating the expense and obligations related to these plans. The assumptions are updated annually at December 31 and include the discount rate, the expected remaining service life, the expected rate of return on plan assets, and the rate of future compensation increases. The discount rate is a significant assumption used to value our pension benefit obligation. We determine a discount rate for our plans based on the estimated duration of each plan's liabilities. For euro denominated defined benefit pension plans, which represent 85% of our projected benefit obligation, we use discount rates with consideration of the duration of each of the plans, using a hypothetical yield curve developed from euro-denominated AA-rated corporate bond issues. These bonds are assigned different weights to adjust their relative influence on the yield curve, and the highest and lowest yielding 10% of bonds are excluded within each maturity group. The discount rate used was 3.75%. The weighted average discount rate used to measure the projected benefit obligation for all of the plans at December 31, 2022 was 4.14%. A change of 100 basis points in the discount rate would change our projected benefit obligation by approximately \$9.0 million. The financial and actuarial assumptions used at December 31, 2022 may differ materially from actual results due to changing market and economic conditions and other factors. These differences could result in a significant change in the amount of pension expense recognized in future periods.

Contingencies

A loss contingency is recognized if it is probable that an asset has been impaired or a liability has been incurred and the amount of the loss can be reasonably estimated. We evaluate, among other factors, the degree of probability of an unfavorable outcome and our ability to make a reasonable estimate of the amount of the ultimate loss. Loss contingencies that we determine to be

reasonably possible, but not probable, are disclosed but not recognized. Changes in these factors and related estimates could materially affect our financial position and results of operations. Legal costs to defend against contingent liabilities are recognized as incurred.

Stock-Based Compensation

We grant various stock-based compensation awards to our officers, employees, and Board of Directors with service, performance, and market vesting conditions, including restricted stock units, phantom stock units, and unrestricted stock units (awards). Prior to December 31, 2020, stock options were also granted as part of the stock-based compensation awards. We measure and recognize compensation expense for all awards based on estimated fair values. For awards with only a service condition, we expense stock-based compensation using the straight-line method over the requisite service period for the entire award. For awards with service and performance conditions, if vesting is probable, we expense the stock-based compensation on a straight-line basis over the requisite service period for each separately vesting portion of the award. For awards with a market condition, we expense the fair value over the requisite service period.

We measure and recognize compensation expense for all stock-based compensation based on estimated fair values. The fair value of unrestricted stock awards with no market conditions is the market close price of our common stock on the date of grant. For restricted stock units with market conditions, the fair value is estimated at the date of award using a Monte Carlo simulation model, which includes assumptions for dividend yield and expected volatility for our common stock and the common stock for companies within the Russell 3000 index, as well as the risk-free interest rate and expected term of the awards. For phantom stock units, fair value is the market close price of our common stock at the end of each reporting period. For stock options, the fair value was estimated at the date of grant using the Black-Scholes option-pricing model, which included assumptions for the expected volatility, risk-free interest rate, expected term and dividend yield.

In valuing our restricted stock units with a market condition and stock options, significant judgment is required in determining the expected volatility of our common stock and the expected life that individuals will hold their stock options prior to exercising. The volatility for our restricted stock units with a market condition is based on the historical volatility of our own stock and the stock for companies comprising the market index within the market condition. The expected volatility for stock options was based on the historical and implied volatility of our own common stock. The expected life of stock option grants was derived from the historical actual term of option grants and an estimate of future exercises during the remaining contractual period of the option. While volatility and estimated life are assumptions that do not bear the risk of change subsequent to the grant date, these assumptions may be difficult to measure as they represent future expectations based on historical experience. Further, our expected volatility and expected life may change in the future, which could substantially change the grant-date fair value of future awards and ultimately the expense we recognize. Actual results and future estimates may differ substantially from our current estimates.

Non-GAAP Measures

To supplement our consolidated financial statements, which are prepared in accordance with GAAP, we use certain non-GAAP financial measures, including non-GAAP operating expense, non-GAAP operating income, non-GAAP net income, non-GAAP diluted EPS, adjusted EBITDA, free cash flow, and constant currency. The presentation of this financial information is not intended to be considered in isolation or as a substitute for, or superior to, the financial information prepared and presented in accordance with GAAP, and other companies may define such measures differently. For a reconciliation of each non-GAAP measure to the most comparable financial measure prepared and presented in accordance with GAAP, please see the table captioned Reconciliations of Non-GAAP Financial Measures to the Most Directly Comparable GAAP Financial Measures.

We use these non-GAAP financial measures for financial and operational decision making and/or as a means for determining executive compensation. Management believes that these non-GAAP financial measures provide meaningful supplemental information regarding our performance and ability to service debt by excluding certain expenses that may not be indicative of our recurring core operating results. These non-GAAP financial measures facilitate management's internal comparisons to our historical performance, as well as comparisons to our competitors' operating results. Our executive compensation plans exclude non-cash charges related to amortization of intangibles and certain discrete cash and non-cash charges, such as restructuring, loss on sale of businesses, strategic initiative expenses, software project impairment, Russian currency translation write-off, goodwill impairment, or acquisition and integration related expenses. We believe that both management and investors benefit from referring to these non-GAAP financial measures in assessing our performance and when planning, forecasting and analyzing future periods. We believe these non-GAAP financial measures are useful to investors because they provide greater transparency with respect to key metrics used by management in its financial and operational decision making and because they are used by our institutional investors and the analyst community to analyze the health of our business.

Non-GAAP operating expenses and non-GAAP operating income — We define non-GAAP operating expenses as operating expenses excluding certain expenses related to the amortization of intangible assets, restructuring, loss on sale of businesses, strategic initiative expenses, software project impairment, Russian currency translation write-off, goodwill impairment, and acquisition and integration. We define non-GAAP operating income as operating income (loss) excluding the expenses related to the amortization of intangible assets, restructuring, loss on sale of businesses, strategic initiative expenses, software project impairment, Russian currency translation write-off, goodwill impairment, and acquisition and integration. Acquisition and integration related expenses include costs, which are incurred to affect and integrate business combinations, such as professional fees, certain employee retention and salaries related to integration, severances, contract terminations, travel costs related to knowledge transfer, system conversion costs, and asset impairment charges. We consider these non-GAAP financial measures to be useful metrics for management and investors because they exclude the effect of expenses that are not related to our core operating results. By excluding these expenses, we believe that it is easier for management and investors to compare our financial results over multiple periods and analyze trends in our operations. For example, in certain periods, expenses related to amortization of intangible assets may decrease, which would improve GAAP operating margins, yet the improvement in GAAP operating margins due to this lower expense is not necessarily reflective of an improvement in our core business. There are some limitations related to the use of non-GAAP operating expenses and non-GAAP operating income versus operating expenses and operating income calculated in accordance with GAAP. We compensate for these limitations by providing specific information about the GAAP amounts excluded from non-GAAP ope

Non-GAAP net income and non-GAAP diluted EPS – We define non-GAAP net income as net income (loss) attributable to Itron, Inc. excluding the expenses associated with amortization of intangible assets, amortization of debt placement fees, debt extinguishment, restructuring, loss on sale of businesses, strategic initiative expenses, software project impairment, Russian currency translation write-off, goodwill impairment, acquisition and integration, and the tax effect of excluding these expenses. We define non-GAAP diluted EPS as non-GAAP net income divided by diluted weighted-average shares outstanding during the period calculated on a GAAP basis and then reduced to reflect the anti-dilutive impact of the convertible note hedge transaction entered into in connection with the 0% Convertible Notes due 2026 issued in March 2021. We consider these financial measures to be useful metrics for management and investors for the same reasons that we use non-GAAP operating income. The same limitations described above regarding our use of non-GAAP operating income apply to our use of non-GAAP net income and non-GAAP diluted EPS. We compensate for these limitations by providing specific information regarding the GAAP amounts excluded from these non-GAAP measures and evaluating non-GAAP net income and non-GAAP diluted EPS together with GAAP net income attributable to Itron, Inc. and GAAP diluted EPS.

Adjusted EBITDA — We define adjusted EBITDA as net income (loss) (a) minus interest income, (b) plus interest expense, debt extinguishment, depreciation and amortization, restructuring, loss on sale of businesses, strategic initiative expenses, software project impairment, Russian currency translation write-off, goodwill impairment, acquisition and integration, and (c) excluding income tax benefit. Management uses adjusted EBITDA as a performance measure for executive compensation. A limitation to using adjusted EBITDA is that it does not represent the total increase or decrease in the cash balance for the period and the measure includes some non-cash items and excludes other non-cash items. Additionally, the items that we exclude in our calculation of adjusted EBITDA may differ from the items that our peer companies exclude when they report their results. We compensate for these limitations by providing a reconciliation of this measure to GAAP net income (loss).

Free cash flow – We define free cash flow as net cash provided by operating activities less cash used for acquisitions of property, plant and equipment. We believe free cash flow provides investors with a relevant measure of liquidity and a useful basis for assessing our ability to fund our operations and repay our debt. The same limitations described above regarding our use of adjusted EBITDA apply to our use of free cash flow. We compensate for these limitations by providing specific information regarding the GAAP amounts in the reconciliation.

Constant currency — We refer to the impact of foreign currency exchange rate fluctuations in our discussions of financial results, which references the differences between the foreign currency exchange rates used to translate operating results from the entity's functional currency into U.S. dollars for financial reporting purposes. We also use the term "constant currency", which represents financial results adjusted to exclude changes in foreign currency exchange rates as compared with the rates in the comparable prior year period. We calculate the constant currency change as the difference between the current period results and the comparable prior period's results restated using current period foreign currency exchange rates.

Reconciliations of Non-GAAP Financial Measures to the most Directly Comparable GAAP Financial Measures

The tables below reconcile the non-GAAP financial measures of operating expenses, operating income, net income, diluted EPS, adjusted EBITDA, and free cash flow with the most directly comparable GAAP financial measures.

TOTAL COMPANY RECONCILIATIONS

Very Ended December 31

TOTAL COMPANY RECONCILIATIONS	Year Ended December 3		
In thousands, except per share data		2022	2021
NON-GAAP OPERATING EXPENSES			
GAAP operating expenses	\$	529,628 \$	652,468
Amortization of intangible assets		(25,717)	(35,801)
Restructuring		13,625	(54,623)
Loss on sale of businesses		(3,505)	(64,289)
Strategic initiative		(675)	_
Software project impairment		(8,719)	_
Russian currency translation write-off		(1,885)	_
Goodwill impairment		(38,480)	_
Acquisition and integration		(506)	(151)
Non-GAAP operating expenses	\$	463,766 \$	5 497,604
NON-GAAP OPERATING INCOME			
GAAP operating loss	\$	(7,439) \$	(79,299)
Amortization of intangible assets		25,717	35,801
Restructuring		(13,625)	54,623
Loss on sale of businesses		3,505	64,289
Strategic initiative		675	_
Software project impairment		8,719	_
Russian currency translation write-off		1,885	_
Goodwill impairment		38,480	_
Acquisition and integration		506	151
Non-GAAP operating income	\$	58,423 \$	5 75,565
NON-GAAP NET INCOME & DILUTED EPS			
GAAP net loss attributable to Itron, Inc.	\$	(9,732) \$	(81,255)
Amortization of intangible assets		25,717	35,801
Amortization of debt placement fees		3,323	18,078
Debt extinguishment		_	11,681
Restructuring		(13,625)	54,623
Loss on sale of businesses		3,505	64,289
Strategic initiative		675	_
Software project impairment		8,719	_
Russian currency translation write-off		1,885	_
Goodwill impairment		38,480	_
Acquisition and integration		506	151
Income tax effect of non-GAAP adjustments (1)		(8,466)	(25,265)
Non-GAAP net income attributable to Itron, Inc.	\$	50,987 \$	78,103
Non-GAAP diluted EPS	\$	1.13 \$	3 1.75
		4F 20F	44.617
Non-GAAP weighted average common shares outstanding - Diluted		45,305	44,617

TOTAL COMPANY RECONCILIATIONS	Year End	Year Ended December 31,				
In thousands	2022		2021			
ADJUSTED EBITDA						
GAAP net loss attributable to Itron, Inc.	\$ (9,73	32) \$	(81,255)			
Interest income	(2,63	3)	(1,557)			
Interest expense	6,72	<u>'</u> 4	28,638			
Income tax benefit	(6,19	6)	(45,512)			
Debt extinguishment	-	_	11,681			
Depreciation and amortization	66,76	i3	84,153			
Restructuring	(13,62	.5)	54,623			
Loss on sale of businesses	3,50	15	64,289			
Strategic initiative	67	'5	_			
Software project impairment	8,71	.9	_			
Russian currency translation write-off	1,88	35	_			
Goodwill impairment	38,48	30	_			
Acquisition and integration	50	16	151			
Adjusted EBITDA	\$ 95,07	71 \$	115,211			
FREE CASH FLOW						
Net cash provided by operating activities	\$ 24,50	00 \$	154,794			
Acquisitions of property, plant, and equipment	(19,74	.7)	(34,682)			
Free Cash Flow	\$ 4,75	53 \$	120,112			

⁽¹⁾ The income tax effect of non-GAAP adjustments is calculated using the statutory tax rates for the relevant jurisdictions if no valuation allowance exists. If a valuation allowance exists, there is no tax impact to the non-GAAP adjustment.

Item 7A: Quantitative and Qualitative Disclosures About Market Risk

In the normal course of business, we are exposed to interest rate and foreign currency exchange rate risks that could impact our financial position and results of operations. As part of our risk management strategy, we may use derivative financial instruments to hedge certain foreign currency and interest rate exposures. Our objective is to offset gains and losses resulting from these exposures with losses and gains on the derivative contracts used to hedge them, therefore reducing the impact of volatility on earnings or protecting the fair values of assets and liabilities. We use derivative contracts only to manage existing underlying exposures. Accordingly, we do not use derivative contracts for trading or speculative purposes.

Interest Rate Risk

We may be exposed to interest rate risk through our variable rate debt instruments. On August 12, 2021, the U.S. dollar term loan under the credit facility was fully paid. At December 31, 2022, we had no outstanding variable rate debt.

We continually monitor and assess our interest rate risk and may institute additional interest rate swaps or other derivative instruments to manage such risk in the future if we were to have variable rate debt outstanding.

Foreign Currency Exchange Rate Risk

We conduct business in a number of countries. Revenues denominated in functional currencies other than the U.S. dollar were 30% of total revenues for the year ended December 31, 2022, compared with 38% for the year ended December 31, 2021 and 37% for the year ended December 31, 2020. These transactions expose our account balances to movements in foreign currency exchange rates that could have a material effect on our financial results. Our primary foreign currency exposure relates to non-U.S. dollar denominated transactions in our international subsidiary operations, the most significant of which is the euro.

We are also exposed to foreign exchange risk when we enter into non-functional currency transactions, both intercompany and third party. At each periodend, non-functional currency monetary assets and liabilities are revalued with the change recognized within other income (expense) in our Consolidated Statements of Operations. We enter into monthly foreign exchange forward contracts, which are not designated for hedge accounting, with the intent to reduce earnings volatility associated with currency exposures. As of December 31, 2022, a total of 36 contracts were offsetting our exposures from the euro, pound sterling,

Indonesian rupiah, Canadian dollar, Australian dollar, and various other currencies, with notional amounts ranging from \$117,000 to \$57.9 million. Based on a sensitivity analysis as of December 31, 2022, we estimate that, if foreign currency exchange rates average 10 percentage points higher in 2023 for these financial instruments, our financial results in 2023 would not be materially impacted.

In future periods, we may use additional derivative contracts to protect against foreign currency exchange rate risks.

Item 8: Financial Statements and Supplementary Data

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Itron, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Itron, Inc. and subsidiaries (the "Company") as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income (loss), equity, and cash flows, for each of the three years in the period ended December 31, 2022, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements 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.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), 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 and our report dated February 27, 2023, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the 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 audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the 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 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 financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Revenue Recognition ASC 606 — Revenue arrangements involving multiple performance obligations consisting of hardware, software, and professional services such as implementation, project management, installation, and consulting services — Refer to Notes 1 and 17 to the financial statements

Critical Audit Matter Description

Many of the Company's revenue arrangements involve multiple performance obligations consisting of hardware, software, and professional services such as implementation, project management, installation, and consulting services. These contracts may contain customer-specific business terms and conditions, including service level commitments, variable consideration, and terms that govern when the customer has taken control. Additionally, these contracts may be modified from time to time as the Company delivers under the contract. These customer-specific business terms and conditions and modifications may involve complex accounting considerations, including determining whether the Company has enforceable rights and obligations, whether contract modifications represent new contracts or modification of existing contracts, whether certain performance obligations are distinct, and other considerations that may impact the timing of revenue recognition.

The evaluation of these factors is executed in accordance with the ASC 606 revenue recognition framework and requires significant management judgment that could affect the amount and timing of revenue recognition over the contractual period. The computations to recognize revenue under the ASC 606 revenue recognition framework can be complex and require a significant volume of data input. Additionally, there can be complexity in the computations and entries made to record the related contract assets and liabilities at the balance sheet date. Given the challenge in auditing the judgments and computations made in determining revenue recognition for these multiple performance obligation arrangements with customer-specific business terms and conditions and modifications, we identified revenue recognition as a critical audit matter.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to (1) determining whether the Company has enforceable rights and obligations, whether contract modifications represent new contracts or modifications, whether certain performance obligations are distinct and other considerations that may impact the timing of revenue recognition and (2) the completeness and accuracy of the revenue recognition computations and entries used to recognize revenue included the following, among others:

- We tested the effectiveness of controls over contract reviews, including management's use of checklists and other review procedures to determine
 whether customer-specific business terms are evident in the contract and whether accounting conclusions regarding enforceable rights and
 obligations, contract modifications, distinct products and services, and other considerations that may impact the timing of revenue recognition are
 appropriately applied.
- We tested the effectiveness of controls over revenue recognition computations and entries to determine whether the computations and entries appropriately reflect the accounting conclusions for these contracts. Such controls included (1) the review of the completeness and accuracy of data input into the computations and entries and (2) the review of the mathematical accuracy of the computations and entries.
- · For a sample of contracts with customers that included existing contracts, new contracts and contract modifications, we:
 - Tested management's identification of customer-specific terms, whether the Company had enforceable rights and obligations, whether contract modifications represented new contracts or modifications to existing contracts, whether customer-specific terms introduced new or implied performance obligations, or other factors influencing the timing, nature and amount of revenue recognized, and assessed management's conclusions regarding accounting treatment. Our procedures included reading the selected contracts and inquiring of the Company's operational personnel to understand the nature of the contract and its business purpose, as well as evaluating management's conclusions.
 - Evaluated whether the identified accounting conclusions were appropriately reflected in the revenue recognition computations and entries.
 - Tested the accuracy and completeness of the data used in the computations and entries to record revenue.
 - Tested mathematical accuracy of revenue recognition computations and entries.

Deferred Tax Assets — Valuation Allowance — Refer to Note 11 to the financial statements

Critical Audit Matter Description

As described in Note 11 to the consolidated financial statements, the Company has recorded deferred tax assets totaling \$686.4 million, and deferred tax liabilities totaling \$47.8 million, at December 31, 2022. The Company has recorded a valuation allowance of \$427.4 million at December 31, 2022 against its deferred tax assets, primarily associated with foreign loss carryforwards. The net deferred tax asset is \$211.2 million. Deferred tax assets are reduced by a tax valuation allowance when, management believes, it is more likely than not that some portion of the deferred tax assets will not be realized. In evaluating the Company's ability to realize its deferred tax assets, management considers all available favorable and unfavorable evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies, and the ability to carry losses to prior years. The most sensitive and critical factors are the projection, source, and character of future taxable income.

We identified the Company's determination of the realizability of U.S. deferred tax assets as a critical audit matter because there is significant judgment required by management, specifically considering the realization of losses before income taxes in recent years, to conclude that it is more likely than not that these deferred tax assets will be realized in future periods. In addition, the auditing of these elements involved complex and subjective auditor judgment, including the need to involve personnel with specialized skill and knowledge.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures to evaluate management's determination that sufficient taxable income will be generated to realize deferred tax assets included the following, among others:

- We evaluated the design and operating effectiveness of internal controls over income taxes, specifically those controls over the evaluation of the realizability of deferred tax assets.
- We evaluated the reasonableness of management's estimates in regard to the ability to generate future taxable income and utilize the deferred tax assets by evaluating the forecast of future taxable income, including testing of management's forecasts against the Company's historical performance as adjusted for nonrecurring items, and evaluating total backlog supporting future revenues.
- · We evaluated whether the estimates of future taxable income were consistent with evidence obtained in other areas of the audit.
- We utilized personnel with specialized knowledge and skill in income taxes and accounting for income taxes under ASC 740 to assist in the
 evaluation of management's assessment of positive and negative evidence and their conclusion that it is more likely than not that the Company
 will realize the benefit of its deferred tax assets.

/s/ DELOITTE & TOUCHE LLP

Seattle, Washington February 27, 2023

We have served as the Company's auditor since 2016.

ITRON, INC. CONSOLIDATED STATEMENTS OF OPERATIONS

CONSOLIDATED ST		ear Ei	ear Ended December 31,							
In thousands, except per share data		2022		2021		2020				
Revenues										
Product revenues	\$	1,500,243	\$	1,678,195	\$	1,889,173				
Service revenues		295,321		303,377		284,177				
Total revenues		1,795,564		1,981,572		2,173,350				
Cost of revenues										
Product cost of revenues		1,102,475		1,231,230		1,408,615				
Service cost of revenues		170,900		177,173		162,568				
Total cost of revenues		1,273,375		1,408,403		1,571,183				
Gross profit		522,189		573,169		602,167				
Operating expenses										
Sales, general and administrative		290,453		300,520		276,920				
Research and development		185,098		197,235		194,101				
Amortization of intangible assets		25,717		35,801		44,711				
Restructuring		(13,625)		54,623		37,013				
Loss on sale of businesses		3,505		64,289		59,817				
Goodwill impairment		38,480		_		_				
Total operating expenses		529,628		652,468		612,562				
Operating loss		(7,439)		(79,299)		(10,395)				
Other income (expense)				,						
Interest income		2,633		1,557		2,998				
Interest expense		(6,724)		(28,638)		(44,001)				
Other income (expense), net		(4,213)		(17,430)		(5,241)				
Total other income (expense)		(8,304)		(44,511)		(46,244)				
Loss before income taxes		(15,743)		(123,810)		(56,639)				
Income tax benefit (provision)		6,196		45,512		(238)				
Net loss		(9,547)		(78,298)		(56,877)				
Net income attributable to noncontrolling interests		185		2,957		1,078				
Net loss attributable to Itron, Inc.	\$	(9,732)	\$	(81,255)	\$	(57,955)				
Net loss per common share - Basic	\$	(0.22)	\$	(1.83)	\$	(1.44)				
Net loss per common share - Diluted	\$	(0.22)	\$	(1.83)						
The 1999 per common smarc Direct	D	(0.22)	Ф	(1.03)	Φ	(1.44)				
Weighted average common shares outstanding - Basic		45,101		44,301		40,253				
Weighted average common shares outstanding - Diluted		45,101		44,301		40,253				

ITRON, INC. CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	Year Ended December 31,									
In thousands		2022		2021	2020					
Net loss	\$	(9,547)	\$	(78,298)	\$ (56,877)					
Other comprehensive income (loss), net of tax:										
Foreign currency translation adjustments		(28,748)		(26,923)	21,082					
Foreign currency translation adjustment reclassified to net loss on sale or disposal of businesses		57,321		_	52,074					
Net unrealized gain (loss) on derivative instruments, designated as cash flow hedges		_		1,411	(898)					
Pension benefit obligation adjustment		24,851		15,940	(6,112)					
Total other comprehensive income (loss), net of tax		53,424		(9,572)	66,146					
Total comprehensive income (loss), net of tax		43,877		(87,870)	9,269					
Comprehensive income attributable to noncontrolling interests, net of tax		185		2,957	1,078					
Comprehensive income (loss) attributable to Itron, Inc.	\$	43,692	\$	(90,827)	\$ 8,191					

ITRON, INC. CONSOLIDATED BALANCE SHEETS

In thousands	Decemb	er 31, 2022	December 31, 2021
ASSETS			
Current assets			
Cash and cash equivalents	\$	202,007	\$ 162,579
Accounts receivable, net		280,435	298,459
Inventories		228,701	165,799
Other current assets		118,441	123,092
Total current assets		829,584	749,929
Property, plant, and equipment, net		140,123	163,184
Deferred tax assets, net		211,982	181,472
Other long-term assets		39,901	42,178
Operating lease right-of-use assets, net		52,826	65,523
Intangible assets, net		64,941	92,529
Goodwill		1,038,721	1,098,975
Total assets	\$	2,378,078	\$ 2,393,790
LIABILITIES AND EQUITY			
Current liabilities			
Accounts payable	\$	237,178	\$ 193,129
Other current liabilities		42,869	81,253
Wages and benefits payable		89,431	113,532
Taxes payable		15,324	12,208
Current portion of warranty		18,203	18,406
Unearned revenue		95,567	82,816
Total current liabilities		498,572	501,344
Long-term debt, net		452,526	450,228
Long-term warranty		7,495	13,616
Pension benefit obligation		57,839	87,863
Deferred tax liabilities, net		833	2,000
Operating lease liabilities		44,370	57,314
Other long-term obligations		124,887	138,666
Total liabilities		1,186,522	1,251,031
Equity			
Preferred stock, no par value, 10,000 shares authorized, no shares issued or outstanding		_	<u> </u>
Common stock, no par value, 75,000 shares authorized, 45,186 and 45,152 shares issued and outstanding		1,788,479	1,779,775
Accumulated other comprehensive loss, net		(94,674)	(148,098)
Accumulated other comprehensive loss, net Accumulated deficit		(525,332)	(515,600)
Total Itron, Inc. shareholders' equity		1,168,473	1,116,077
Noncontrolling interests		23,083	26,682
Total equity		1,191,556	1,142,759
Total liabilities and equity	¢		
rotai navinues and equity	\$	2,378,078	\$ 2,393,790

ITRON, INC. CONSOLIDATED STATEMENTS OF EQUITY

	Comn	non S	Stock		Accumulated Other Comprehensive		Accumulated	,	Fotal Itron, Inc. Shareholders'	Noncontrolling		
In thousands	Shares		Amount		Income (Loss)		Deficit		Equity	Interests	To	tal Equity
Balances at January 1, 2020	39,941	\$	1,357,600	9	(204,672)	\$	(376,390)	\$	776,538	\$ 24,277	\$	800,815
Net income (loss)							(57,955)		(57,955)	1,078		(56,877)
Other comprehensive income (loss), net of tax					66,146				66,146	_		66,146
Distributions to noncontrolling interests										(1,630)		(1,630)
Stock options exercised	103		5,551						5,551			5,551
Restricted stock awards released net of repurchased shares for taxes	334		(2,120)						(2,120)			(2,120)
Issuance of stock-based compensation awards	12		824						824			824
Employee stock purchase plan	54		3,335						3,335			3,335
Stock-based compensation expense			24,229						24,229			24,229
Balances at December 31, 2020	40,444	_	1,389,419	-	(138,526)	_	(434,345)	_	816,548	23,725		840,273
				_	((-))	_				
Net income (loss)							(81,255)		(81,255)	2,957		(78,298)
Other comprehensive income (loss), net of tax					(9,572)				(9,572)	_		(9,572)
Stock options exercised	30		1,924						1,924			1,924
Restricted stock awards released net of repurchased shares for taxes	285		(804)						(804)			(804)
Issuance of stock-based compensation awards	9		856						856			856
Employee stock purchase plan	37		3,156						3,156			3,156
Stock-based compensation expense			22,762						22,762			22,762
Stock issued related to equity offering	4,472		389,419						389,419			389,419
Proceeds from sale of warrants			45,349						45,349			45,349
Purchases of convertible note hedge contracts, net of tax			(63,576)						(63,576)			(63,576)
Registration fee			(359)						(359)			(359)
Stock repurchase program	(125)		(8,028)						(8,028)			(8,028)
Other			(343)						(343)			(343)
Balances at December 31, 2021	45,152		1,779,775		(148,098)		(515,600)		1,116,077	26,682		1,142,759
							(0.500)		(0 - 00)	40=		(0.7.47)
Net income (loss)							(9,732)		(9,732)	185		(9,547)
Other comprehensive income (loss), net of tax					53,424				53,424	_		53,424
Distributions to noncontrolling interests									_	(3,784)		(3,784)
Stock options exercised	1		30						30			30
Restricted stock awards released net of repurchased shares for taxes	227		_						_			_
Issuance of stock-based compensation awards	16		952						952			952
Employee stock purchase plan	70		3,422						3,422			3,422
Stock-based compensation expense			20,929						20,929			20,929
Stock repurchase program	(280)		(16,629)						(16,629)			(16,629)
Balances at December 31, 2022	45,186	\$	1,788,479	9	(94,674)	\$	(525,332)	\$	1,168,473	\$ 23,083	\$	1,191,556

ITRON, INC. CONSOLIDATED STATEMENTS OF CASH FLOWS

Year Ended December 31. 2022 2020 In thousands 2021 Operating activities \$ (78,298) \$ (9,547) \$ (56,877) Net loss Adjustments to reconcile net loss to net cash provided by operating activities: Depreciation and amortization of intangible assets 66,763 84,153 97,290 Non-cash operating lease expense 16,257 17,107 18,178 Stock-based compensation 21,881 23,618 25,053 Amortization of prepaid debt fees 3,499 18,253 4,130 (32,635)(85,574)(12,939)Deferred taxes, net Loss on sale of businesses 64,289 59,817 3,505 Loss on extinguishment of debt, net 10,000 Goodwill impairment 38,480 8,744 5,888 Restructuring, non-cash (624)Other adjustments, net 11,678 2.930 10,392 Changes in operating assets and liabilities, net of acquisitions and sale of businesses: 108,256 Accounts receivable 5,064 60,242 Inventories (68,124)(3,721)35,403 Other current assets (16,695)41,461 (11,832) Other long-term assets (5,436)4.515 (11,391)Accounts payable, other current liabilities, and taxes payable 45,085 (23,330)(122,890)Wages and benefits payable (21,749)30,915 (34,664)Unearned revenue 18,466 (29,366)8,212 Warranty (5,497)(8,169)(13,538)Restructuring (40,981)15.967 11.767 (4,890)1,058 (10,741)Other operating, net Net cash provided by operating activities 24,500 154,794 109,514 Investing activities Net proceeds related to the sale of businesses 55,933 3,142 1,133 (19,747)(34,682) (46,208) Acquisitions of property, plant, and equipment Business acquisitions, net of cash and cash equivalents acquired 23 (8,670)5,326 Other investing, net 4.307 4.039 Net cash provided by (used in) investing activities 40,516 (34,884) (41,036) Financing activities Proceeds from borrowings 460,000 400,000 Payments on debt (946,094)(414,063)8,886 3.452 5.080 Issuance of common stock Proceeds from common stock offering 389,419 45.349 Proceeds from sale of warrants Purchases of convertible note hedge contracts (84,139)Repurchase of common stock (16,972)(8,028)(1,571)(697)(12,031)Prepaid debt fees (4,828) Other financing, net (4,520)(2,443)Net cash used in financing activities (18,737)(152,887)(11,576)Less: Cash classified within assets held for sale (9,750)Effect of foreign exchange rate changes on cash and cash equivalents (6,851)(1,627)127 Increase (decrease) in cash and cash equivalents 39,428 (44,354)57,029 Cash and cash equivalents at beginning of period 162,579 206,933 149,904 206,933 Cash and cash equivalents at end of period 202.007 \$ 162,579 \$ Supplemental disclosure of cash flow information: Cash paid during the period for: 2.688 Income taxes, net \$ 11.915 \$ 7.073 \$ 47,241 Interest 1,622 8,983 Non-cash operating, investing and financing activities: 20,563

The accompanying notes are an integral part of these consolidated financial statements.

Deferred tax on purchase of convertible note hedge contracts

ITRON, INC. NOTES TO CONSOLIDATED FINANCIAL STATEMENTS DECEMBER 31, 2022

In this Annual Report, the terms "we", "us", "our", "Itron", and the "Company" refer to Itron, Inc.

Note 1: Summary of Significant Accounting Policies

We were incorporated in the state of Washington in 1977 and are a technology company, offering end-to-end solutions to enhance productivity and efficiency, primarily focused on utilities and municipalities around the globe. We operate under the Itron brand worldwide and manage and report under three operating segments: Device Solutions, Networked Solutions, and Outcomes.

Financial Statement Preparation

The consolidated financial statements presented in this Annual Report include the Consolidated Statements of Operations, Consolidated Statements of Comprehensive Income (Loss), Consolidated Statements of Equity, and Consolidated Statements of Cash Flows for the years ended December 31, 2022, 2021, and 2020 and the Consolidated Balance Sheets as of December 31, 2022 and 2021 of Itron, Inc. and its subsidiaries, prepared in accordance with U.S. generally accepted accounting principles (GAAP).

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions. These estimates and assumptions affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Examples of significant estimates include revenue recognition, warranty, restructuring, income taxes, business combinations, goodwill and intangible assets, defined benefit pension plans, contingencies, and stock-based compensation. Due to various factors affecting future costs and operations, actual results could differ materially from these estimates.

Risks and Uncertainties

The COVID-19 pandemic has had global economic impacts including disrupting customer demand and global supply chains, resulting in market volatility. The extent of the recent pandemic and its ongoing impact on our operations is volatile, but is being monitored closely by our management. New variants of the virus may cause previously lifted restrictions to be reinstated, which could result in more disruptions. As economies have reopened, global supply chains have struggled to keep pace with rapidly changing demand. The resulting supply constraints have manifested across a variety of areas including mechanical, electrical and logistics portions of the supply chain, which has impacted our ability to ship products in a timely manner. In particular, our ability to obtain adequate supply of semiconductor components has impacted our ability to service recovering customer demand. While we believe the current imbalance in supply and demand is temporal, the timeline to recovery is uncertain. Efforts are ongoing with suppliers to increase supply, including the approval of alternate sources. Recently, inflation in our raw materials and component costs, freight charges, and labor costs have increased above historical levels, due to, among other things, the continuing impacts of the pandemic and uncertain economic environment. We may or may not be able to fully recover these increased costs through pricing actions with our customers. At this time, we have not identified any significant decrease in long-term customer demand for our products and services. However, certain of our customer projects have experienced delay in deliveries, with revenue originally forecasted in prior periods shifting to future periods.

While we have limited direct business exposure in Russia, Belarus and Ukraine, the Russian military actions and the resulting sanctions could adversely affect the global economy, as well as further disrupt the supply chain. A major disruption in the global economy and supply chain could have a material adverse effect on our business, prospects, financial condition, results of operations, and cash flows. The extent and duration of the military action, sanctions, and resulting market and/or supply disruptions are impossible to predict, but could be substantial. During the third quarter of 2022, we substantially liquidated our legal entity in Russia, recognizing a loss of \$1.9 million for the reclassification of the currency translation adjustment from accumulated other comprehensive income. The loss was classified within sales, general and administrative expense within the Consolidated Statements of Operations.

Basis of Consolidation

We consolidate all entities in which we have a greater than 50% ownership interest or in which we exercise control over the operations. We use the equity method of accounting for entities in which we have a 20% to 50% investment and exercise significant influence. Entities in which we have less than a 20% investment and where we do not exercise significant influence are accounted for under the fair value method. Intercompany transactions and balances are eliminated upon consolidation.

Noncontrolling Interests

In several of our consolidated international subsidiaries, we have joint venture partners, who are minority shareholders. Although these entities are not wholly owned by Itron, we consolidate them because we have a greater than 50% ownership interest or because we exercise control over the operations. The noncontrolling interest balance is adjusted each period to reflect the allocation of net income (loss) and other comprehensive income (loss) attributable to the noncontrolling interests, as shown in our Consolidated Statements of Operations and our Consolidated Statements of Comprehensive Income (Loss), as well as contributions from and distributions to the owners. The noncontrolling interest balance in our Consolidated Balance Sheets represents the proportional share of the equity of the joint venture entities, which is attributable to the minority shareholders.

Cash and Cash Equivalents

We consider all highly liquid instruments with remaining maturities of three months or less at the date of acquisition to be cash equivalents.

Restricted Cash and Cash Equivalents

Cash and cash equivalents that are contractually restricted from operating use are classified as restricted cash and cash equivalents. We have no restricted cash in all periods presented.

Accounts Receivable, net

Accounts receivable are recognized for invoices issued to customers in accordance with our contractual arrangements. Interest and late payment fees are minimal. Unbilled receivables are recognized when revenues are recognized upon product shipment or service delivery and invoicing occurs at a later date. We recognize an allowance for credit losses representing our estimate of the expected losses in accounts receivable at the date of the balance sheet based on our historical experience of bad debts, our specific review of outstanding receivables, and our review of current and expected economic conditions. Accounts receivable are written-off against the allowance when we believe an account, or a portion thereof, is no longer collectible.

Inventories

Inventories are stated at the lower of cost or net realizable value using the first-in, first-out method. Cost includes raw materials and labor, plus applied direct and indirect overhead costs. Net realizable value is the estimated selling price in the normal course of business, minus the cost of completion, disposal and transportation.

Derivative Instruments

All derivative instruments, whether designated in hedging relationships or not, are recognized on the Consolidated Balance Sheets at fair value as either assets or liabilities. The fair values of our derivative instruments are determined using the fair value measurements of significant other observable inputs (Level 2), as defined by GAAP. The fair value of our derivative instruments may switch between an asset and a liability depending on market circumstances at the end of the period. We include the effect of our counterparty credit risk based on current published credit default swap rates when the net fair value of our derivative instruments is in a net asset position and the effect of our own nonperformance risk when the net fair value of our derivative instruments is in a net liability position.

For any derivative designated as a fair value hedge, the changes in the fair value of the derivative and of the hedged item attributable to the hedged risk are recognized in earnings. For any derivative designated as a cash flow hedge, changes in the fair value of the derivative are recognized as a component of other comprehensive income (loss) (OCI) and are recognized in earnings when the hedged item affects earnings. For a hedge of a net investment, any unrealized gain or loss from the foreign currency revaluation of the hedging instrument is reported in OCI as a net unrealized gain or loss on derivative instruments. Upon termination of a net investment hedge, the net derivative gain/loss will remain in accumulated other comprehensive income (loss) (AOCI) until such time when earnings are impacted by a sale or liquidation of the associated operations. We classify cash flows from our derivative programs as cash flows from operating activities in the Consolidated Statements of Cash Flows.

Derivatives are not used for trading or speculative purposes. Our derivatives are with credit-worthy multinational commercial banks, with which we have master netting agreements; however, our derivative positions are not recognized on a net basis in the Consolidated Balance Sheets. There are no credit-risk related contingent features within our derivative instruments. Refer to Note 7: Derivative Financial Instruments and Note 14: Shareholders' Equity for further disclosures of our derivative instruments and their impact on OCI.

Property, Plant, and Equipment

Property, plant, and equipment are stated at cost less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, generally 30 years for buildings and improvements and three years to 10 years for machinery and equipment, computers and software, and furniture. Leasehold improvements are capitalized and depreciated over the term of the applicable lease, including renewable periods if reasonably certain, or over the useful lives, whichever is shorter. Construction in process represents capital expenditures incurred for assets not yet placed in service. Costs related to internally developed software and software purchased for internal uses are capitalized and are amortized over the estimated useful lives of the assets. Repair and maintenance costs are recognized as incurred. We have no major planned maintenance activities.

We review long-lived assets for impairment whenever events or circumstances indicate the carrying amount of an asset group may not be recoverable. Assets held for sale are classified within other current assets in the Consolidated Balance Sheets, are reported at the lower of the carrying amount or fair value less costs to sell, and are no longer depreciated. Gains and losses from asset disposals and impairment losses are classified within the Consolidated Statements of Operations according to the use of the asset, except those gains and losses recognized in conjunction with our restructuring activities, which are classified within restructuring expense, or impairment losses recognized in conjunction with an announced or completed sale of a business, which are classified within loss on sale of businesses.

Prepaid Debt Fees

Prepaid debt fees for term debt represent the capitalized direct costs incurred related to the issuance of debt and are recognized as a deduction from the carrying amount of the corresponding debt liability. We have elected to present prepaid debt fees for revolving debt within other long-term assets in the Consolidated Balance Sheets. These costs are amortized to interest expense over the terms of the respective borrowings, including any contingent maturity or call features, using the effective interest method or the straight-line method when associated with a revolving credit facility. When debt is repaid early, the related portion of unamortized prepaid debt fees is written off and included in interest expense.

Business Combinations

On the date of acquisition, the assets acquired, liabilities assumed, and any noncontrolling interests in the acquiree are recognized at their fair values. The acquiree's results of operations are also included as of the date of acquisition in our consolidated results. Intangible assets that arise from contractual/legal rights, or are capable of being separated, are measured and recognized at fair value, and amortized over the estimated useful life. If practicable, assets acquired and liabilities assumed arising from contingencies are measured and recognized at fair value. If not practicable, such assets and liabilities are measured and recognized when it is probable that a gain or loss has occurred and the amount can be reasonably estimated. The residual balance of the purchase price, after fair value allocations to all identified assets and liabilities, represents goodwill. Acquisition-related costs are recognized as incurred. Integration costs associated with an acquisition are generally recognized in periods subsequent to the acquisition date, and changes in deferred tax asset valuation allowances and acquired income tax uncertainties, including penalties and interest, after the measurement period are recognized as a component of the provision for income taxes. Our acquisitions may include contingent consideration, which requires us to recognize the fair value of the estimated liability at the time of the acquisition. Subsequent changes in the estimate of the amount to be paid under the contingent consideration arrangement are recognized in the Consolidated Statements of Operations.

We estimate the preliminary fair value of acquired assets and liabilities as of the date of acquisition based on information available at that time utilizing either a cost or income approach. The determination of the fair value is judgmental in nature and involves the use of significant estimates and assumptions. Contingent consideration is recognized at fair value as of the date of the acquisition with adjustments occurring after the purchase price allocation period, which could be up to one year, recognized in earnings. Changes to valuation allowances on acquired deferred tax assets that occur after the acquisition date are recognized in the provision for, or benefit from, income taxes. The valuation of these tangible and identifiable intangible assets and liabilities is subject to further management review and may change materially between the preliminary allocation and end of the purchase price allocation period. Any changes in these estimates may have a material effect on our consolidated operating results or financial position.

Leases

We determine if an arrangement is a lease at inception. A lease exists when a contract conveys to the customer the right to control the use of identified property, plant, or equipment for a period of time in exchange for consideration. The definition of a lease embodies two conditions: (1) there is an identified asset in the contract that is land or a depreciable asset (i.e., property, plant, and equipment), and (2) the customer has the right to control the use of the identified asset.

Operating leases are included in operating lease right-of-use (ROU) assets, other current liabilities, and operating lease liabilities on our Consolidated Balance Sheets. Finance leases are included in property, plant, and equipment, other long-term assets, other current liabilities, and other long-term obligations on our Consolidated Balance Sheets.

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. We use the rate implicit in the lease agreement when readily determinable. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate, which is the estimated rate of interest we expect to pay on a collateralized basis over a similar term, based on the information available at the lease commencement date. The Operating lease ROU asset also includes any lease payments made and is reduced by lease incentives received and initial direct costs incurred. Our lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Lease expense for operating lease payments is recognized on a straight-line basis over the lease term.

We have lease agreements that include lease and nonlease components. When nonlease components are fixed, we have elected the practical expedient to account for lease and nonlease components as a single lease component, except for leases embedded in service contracts.

All leases with a lease term that is greater than one month are subject to recognition and measurement on the balance sheet, except where we have leases in service contracts with contract manufacturers. For leases with contract manufacturers, we have elected to utilize the short-term lease exemption.

Lease expense for variable lease payments, where the timing or amount of the payment is not fixed, are recognized when the obligation is incurred. Variable lease payments generally arise in our net lease arrangements where executory and other lease-related costs are billed to Itron when incurred by the lessor.

Goodwill and Intangible Assets

Goodwill and intangible assets may result from our business acquisitions. Intangible assets may also result from the purchase of assets and intellectual property in a transaction that does not qualify as a business combination. We use estimates, including estimates of useful lives of intangible assets, the amount and timing of related future cash flows, and fair values of the related operations, in determining the value assigned to goodwill and intangible assets. Our finite-lived intangible assets are amortized over their estimated useful lives based on estimated discounted cash flows, generally three years to 10 years for core-developed technology and customer contracts and relationships. Finite-lived intangible assets are tested for impairment at the asset group level when events or changes in circumstances indicate the carrying value may not be recoverable. Indefinite-lived intangible assets are determined to be no longer indefinite.

Goodwill is assigned to our reporting units based on the expected benefit from the synergies arising from each business combination, determined by using certain financial metrics, including the forecasted discounted cash flows associated with each reporting unit. Each reporting unit corresponds with its respective operating segment. We test goodwill for impairment each year as of October 1, or more frequently should a significant impairment indicator occur. As part of the impairment test, we may elect to perform an assessment of qualitative factors. If this qualitative assessment indicates that it is more likely than not that the fair value of a reporting unit, including goodwill, is less than its carrying amount, or if we elect to bypass the qualitative assessment, we would then proceed with the quantitative impairment test. The impairment test involves comparing the fair values of the reporting units to their carrying amounts. If the carrying amount of a reporting unit exceeds its fair value, we first evaluate the long-lived assets within the reporting unit for impairment and then recognize goodwill impairment loss in an amount equal to any excess.

Determining the fair value of a reporting unit is judgmental in nature and involves the use of significant estimates and assumptions. We forecast discounted future cash flows at the reporting unit level using risk-adjusted discount rates and estimated future revenues and operating costs, which take into consideration factors such as existing backlog, expected future orders, supplier contracts, and expectations of competitive and economic environments. We also identify similar publicly traded companies and develop a correlation, referred to as a multiple, to apply to the operating results of the reporting units. These combined fair values are then reconciled to the aggregate market value of our common stock on the date of valuation, while considering a reasonable control premium.

Contingencies

A loss contingency is recognized if it is probable that an asset has been impaired or a liability has been incurred, and the amount of the loss can be reasonably estimated. We evaluate, among other factors, the degree of probability of an unfavorable outcome

and our ability to make a reasonable estimate of the amount of the ultimate loss. Loss contingencies that we determine to be reasonably possible, but not probable, are disclosed but not recognized. Legal costs to defend against contingent liabilities are recognized as incurred.

Bonus and Profit Sharing

We have various employee bonus and profit sharing plans, which provide award amounts for the achievement of financial and nonfinancial targets. If management determines it is probable that the discretionary targets will be achieved and the amounts can be reasonably estimated, a compensation accrual is recognized based on the proportional achievement of the financial and nonfinancial targets. In addition, management or the Board of Directors may decide to grant monetary bonus awards, at their discretion, and accrue such awards when it becomes probable they will be paid.

Warranty

We offer standard warranties on our hardware products and large application software products. We accrue the estimated cost of new product warranties based on historical and projected product performance trends and costs during the warranty period. Testing of new products in the development stage helps identify and correct potential warranty issues prior to manufacturing. Quality control efforts during manufacturing reduce our exposure to warranty claims. When testing or quality control efforts fail to detect a fault in one of our products, we may experience an increase in warranty claims. We track warranty claims to identify potential warranty trends. If an unusual trend is noted, an additional warranty accrual would be recognized if a failure event is probable and the cost can be reasonably estimated. When new products are introduced, our process relies on historical averages of similar products until sufficient data is available. As actual experience on new products becomes available, it is used to modify the historical averages to ensure the expected warranty costs are within a range of likely outcomes. Management regularly evaluates the sufficiency of the warranty provisions and makes adjustments when necessary. The long-term warranty balance includes estimated warranty claims beyond one year. Warranty expense is classified within cost of revenues.

Restructuring

We recognize a liability for costs associated with an exit or disposal activity under a restructuring project in the period in which the liability is incurred. Employee termination benefits considered postemployment benefits are accrued when the obligation is probable and estimable, such as benefits stipulated by human resource policies and practices or statutory requirements. If the employee must provide future service greater than 60 days, such benefits are recognized ratably over the future service period. For contract termination costs, we recognize a liability upon the termination of a contract in accordance with the contract terms or the cessation of the use of the rights conveyed by the contract, whichever occurs later.

Asset impairments associated with a restructuring project are determined at the asset group level. An impairment may be recognized for assets that are to be abandoned, are to be sold for less than net book value, or are held for sale in which the estimated proceeds less costs to sell are less than the net book value. We may also recognize impairment on an asset group, which is held and used, when the carrying value is not recoverable and exceeds the asset group's fair value. If an asset group is considered a business, a portion of our goodwill balance is allocated to it based on relative fair value. If the sale of an asset group under a restructuring project results in proceeds that exceed the net book value of the asset group, the resulting gain is recognized within restructuring expense in the Consolidated Statements of Operations.

Defined Benefit Pension Plans

We sponsor both funded and unfunded defined benefit pension plans for certain international employees. We recognize a liability for the projected benefit obligation in excess of plan assets. We recognize an asset when plan assets exceed the projected benefit obligation. We also recognize the funded status of our defined benefit pension plans on our Consolidated Balance Sheets and recognize as a component of OCI, net of tax, the actuarial gains or losses and prior service costs or credits, if any, which arise during the period but that are not recognized as components of net periodic benefit cost. If actuarial gains and losses exceed 10 percent of the greater of plan assets or plan liabilities, we amortize them over the employees' average future service period.

Share Repurchase Plans

From time to time, we may repurchase shares of Itron common stock under programs authorized by our Board of Directors. Share repurchases are made in the open market or in privately negotiated transactions and in accordance with applicable securities laws. Under applicable Washington State law, shares repurchased are retired and not displayed separately as treasury stock on the financial statements; the value of the repurchased shares is deducted from common stock.

Product Revenues and Service Revenues

Product revenues include sales from standard and smart meters, systems or software, and any associated implementation and installation revenue. Service revenues include sales from post-sale maintenance support, consulting, outsourcing, and managed services.

Revenue Recognition

The majority of our revenues consist primarily of hardware sales, but may also include the license of software, software implementation services, cloud services and Software-as-a-Service (SaaS), project management services, installation services, consulting services, post-sale maintenance support, and extended or customer-specific warranties. We account for a contract when it has approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance, and collectability of consideration is probable. In determining whether the definition of a contract has been met, we consider whether the arrangement creates enforceable rights and obligations, which involves evaluation of contractual terms that would allow for the customer to terminate the agreement. If the customer has the unilateral right to terminate the agreement without providing further consideration to us, the agreement would not be considered to meet the definition of a contract.

Many of our revenue arrangements involve multiple performance obligations as our hardware and services are often sold together. Separate contracts entered into with the same customer (or related parties of the customer) at or near the same time are accounted for as a single contract when one or more of the following criteria are met:

- The contracts are negotiated as a package with a single commercial objective;
- · The amount of consideration to be paid in one contract depends on the price or performance of the other contract; or
- The goods or services promised in the contracts (or some goods or services promised in each of the contracts) are a single performance obligation.

Once the contract has been defined, we evaluate whether the promises in the contract should be accounted for as more than one performance obligation. This evaluation requires significant judgment, and the decision to separate the combined or single contract into multiple performance obligations could change the amount of revenue and profit recognized in a given period. Some of our contracts contain a significant service of integrating, customizing or modifying goods or services in the contract, in which case the goods or services would be combined into a single performance obligation. It is common that we may promise to provide multiple distinct goods or services, in which case we separate the contract into more than one performance obligation. If a contract is separated into more than one performance obligation, we allocate the total transaction price to each performance obligation in an amount based on the estimated relative standalone selling prices of the promised goods or services. For goods or services where we have observable standalone sales, the observable standalone sales are used to determine the standalone selling price. For the majority of our goods and services, we do not have observable standalone sales. As a result, we estimate the standalone selling price using either the adjusted market assessment approach or the expected cost plus a margin approach. Approaches used to estimate the standalone selling price for a given good or service will maximize the use of observable inputs and considers several factors, including our pricing practices, costs to provide a good or service, the type of good or service, and availability of other transactional data, among others.

We determine the estimated standalone selling prices of goods or services used in our allocation of arrangement consideration on an annual basis or more frequently if there is a significant change in our business or if we experience significant variances in our transaction prices.

Many of our contracts with customers include variable consideration, which can include liquidated damage provisions, rebates and volume and early payment discounts. Some of our contracts with customers contain clauses for liquidated damages related to the timing of delivery or milestone accomplishments, which could become material in an event of failure to meet the contractual deadlines. At the inception of the arrangement and on an ongoing basis, we evaluate the probability and magnitude of having to pay liquidated damages. We estimate variable consideration using the expected value method, taking into consideration contract terms, historical customer behavior, and historical sales. In the case of liquidated damages, we also take into consideration progress towards meeting contractual milestones, including whether milestones have not been achieved, specified rates, if applicable, stated in the contract, and history of paying liquidated damages to the customer or similar customers. Variable consideration is included in the transaction price if, in our judgment, it is probable that a significant future reversal of cumulative revenue under the contract will not occur.

In the normal course of business, we do not accept product returns unless the item is defective as manufactured. We establish provisions for estimated returns and warranties. In addition, we do not typically provide customers with the right to a refund.

Hardware revenue is recognized at a point in time. Transfer of control is typically at the time of shipment, receipt by the customer, or, if applicable, upon receipt of customer acceptance provisions. We will recognize revenue prior to receipt of customer acceptance for hardware in cases where the customer acceptance provision is determined to be a formality. Transfer of control would not occur until receipt of customer acceptance in hardware arrangements where such provisions are subjective or where we do not have history of meeting the acceptance criteria.

Perpetual software licenses are considered to be a right to use intellectual property and are recognized at a point in time. Transfer of control is considered to be at the point at which it is available to the customer to download and use or upon receipt of customer acceptance. In certain contracts, software licenses may be sold with implementation services that include a significant service of integrating, customizing or modifying the software. In these instances, the software license is combined into single performance obligation with the implementation services and recognized over time as the implementation services are performed.

Hardware and software licenses (when not combined with professional services) are typically billed when shipped and revenue recognized at a point-intime. As a result, the timing of revenue recognition and invoicing does not have a significant impact on contract assets and liabilities.

Professional services, which include implementation, project management, installation, and consulting services are recognized over time. We measure progress towards satisfying these performance obligations using input methods, most commonly based on the costs incurred in relation to the total expected costs to provide the service. We expect this method to best depict our performance in transferring control of services promised to the customer or represents a reasonable proxy for measuring progress. The estimate of expected costs to provide services requires judgment. Cost estimates take into consideration our historical experience and the specific scope requested by the customer and are updated quarterly. We may also offer professional services on a stand-ready basis over a specified period of time, in which case revenue would be recognized ratably over the term. Invoicing of these services is commensurate with performance and occurs on a monthly basis. As such, these services do not have a significant impact on contract assets and contract liabilities.

Cloud services and SaaS arrangements where customers have access to certain of our software within a cloud-based IT environment that we manage, host, and support are offered to customers on a subscription basis. Revenue for the cloud services and SaaS offerings are generally recognized over time, ratably over the contact term commencing with the date the services are made available to the customer.

Services, including professional services, cloud services, and SaaS arrangements, are commonly billed on a monthly basis in arrears and typically result in an unbilled receivable, which is not considered a contract asset as our right to consideration is unconditional.

Certain of our revenue arrangements include an extended or customer-specific warranty provision that covers all or a portion of a customer's replacement or repair costs beyond the standard warranty period. Whether or not the extended warranty is separately priced in the arrangement, such warranties are considered to be a separate good or service, and a portion of the transaction price is allocated to this extended warranty performance obligation. This revenue is recognized ratably over the extended warranty coverage period.

Hardware and software post-sale maintenance support fees are recognized over time, ratably over the life of the related service contract. Support fees are typically billed on an annual basis, resulting in a contract liability. Shipping and handling costs and incidental expenses billed to customers are recognized as revenue, with the associated cost charged to cost of revenues. We recognize sales, use, and value added taxes billed to our customers on a net basis.

Payment terms with customers can vary by customer; however, amounts billed are typically payable within 30 to 90 days, depending on the destination country. We do not typically offer financing as part of our contracts with customers.

We incur certain incremental costs to obtain contracts with customers, primarily in the form of sales commissions. Where the amortization period is one year or less, we have elected to apply the practical expedient and recognize the related commissions expense as incurred. Otherwise, such incremental costs are capitalized and amortized over the contract period. Capitalized incremental costs are not material.

Product and Software Development Costs

Product and software development costs primarily include employee compensation and third-party contracting fees. We do not capitalize product development costs, and we do not generally capitalize development expenses for computer software to be sold, leased, or otherwise marketed as the costs incurred are immaterial for the relatively short period of time between technological feasibility and the completion of software development.

Stock-Based Compensation

We grant various stock-based compensation awards to our officers, employees, and Board of Directors with service, performance, and market vesting conditions, including restricted stock units, phantom stock units, and unrestricted stock units (awards). Prior to December 31, 2020, stock options were also granted as part of the stock-based compensation awards. We measure and recognize compensation expense for all awards based on estimated fair values. For awards with only a service condition, we expense stock-based compensation using the straight-line method over the requisite service period for the entire award. For awards with service and performance conditions where vesting is probable, we expense the stock-based compensation on a straight-line basis over the requisite service period for each separately vesting portion of the award. For awards with a market condition, we expense the fair value over the requisite service period. We have elected to account for forfeitures of any awards in stock-based compensation expense prospectively as they occur.

The fair value of a restricted stock unit is the market close price of our common stock on the date of grant. Restricted stock units vest over a maximum period of three years. After vesting, the restricted stock units are converted into shares of our common stock on a one-for-one basis and issued to employees. Certain restricted stock units are issued under the Long-Term Performance Restricted Stock Unit Award Agreement and include performance and market conditions. The final number of shares issued will be based on the achievement of financial targets and our total shareholder return relative to the Russell 3000 Index during the performance periods. Due to the presence of a market condition, we utilize a Monte Carlo valuation model to determine the fair value of the awards at the grant date. Expected volatility is based on the historical volatility of our common stock for the related expected term. We believe this approach is reflective of current and historical market conditions and is an appropriate indicator of expected volatility. The risk-free interest rate is the rate available as of the grant date on zero-coupon U.S. government issues with a term equal to the expected term of the award. The expected term is the remaining term of an award based on the period of time between the grant date and the date the award is expected to vest.

Phantom stock units are a form of share-based award that are indexed to our stock price and are settled in cash upon vesting and accounted for as liability-based awards. Fair value is remeasured at the end of each reporting period based on the market close price of our common stock. Phantom stock units vest over a maximum period of three years. Since phantom stock units are settled in cash, compensation expense recognized over the vesting period will vary based on changes in the fair value of the awards.

The fair value of unrestricted stock awards is the market close price of our common stock on the date of grant, and the awards are deemed fully vested. We expense stock-based compensation at the date of grant for unrestricted stock awards.

The fair value of stock options was estimated at the date of grant using the Black-Scholes option-pricing model. Options to purchase our common stock were granted with an exercise price equal to the market close price of the stock on the date the Board of Directors approved the grant. Options generally became exercisable in three equal annual installments beginning one year from the date of grant and expiring 10 years from the date of grant. Expected volatility was based on a combination of the historical volatility of our common stock and the implied volatility of our traded options for the related expected term. We believe this combined approach was reflective of current and historical market conditions and was an appropriate indicator of expected volatility. The risk-free interest rate was the rate available as of the award date on zero-coupon U.S. government issues with a term equal to the expected term of the award. The expected term was the weighted average expected term of an award based on the period of time between the date the award was granted and the estimated date the award will be fully exercised. Factors considered in estimating the expected term included historical experience of similar awards, contractual terms, vesting schedules, and expectations of future employee behavior.

Excess tax benefits and deficiencies resulting from employee share-based payment are recognized as income tax provision or benefit in the Consolidated Statements of Operations, and as an operating activity on the Consolidated Statements of Cash Flows.

We also maintain an Employee Stock Purchase Plan (ESPP) for our employees. Under the terms of the ESPP, employees can deduct up to 10% of eligible compensation to purchase our common stock at a 5% discount from the fair market value of the stock at the end of each fiscal quarter, subject to other limitations under the plan. The sale of the stock to the employees occurs at the beginning of the subsequent quarter. The ESPP is not considered compensatory, and no compensation expense is recognized for sales of our common stock to employees.

Income Taxes

We account for income taxes using the asset and liability method of accounting. Deferred tax assets and liabilities are recognized based upon anticipated future tax consequences, in each of the jurisdictions that we operate, attributable to: (1) the differences between the financial statement carrying amounts of existing assets and liabilities and their respective income tax bases; and (2) net operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured annually using

enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The calculation of our tax liabilities involves applying complex tax regulations in different tax jurisdictions to our tax positions. The effect on deferred tax assets and liabilities of a change in tax legislation and/or rates is recognized in the period that includes the enactment date. A valuation allowance is recognized to reduce the carrying amounts of deferred tax assets if it is not more likely than not that such assets will be realized. We do not recognize tax liabilities on undistributed earnings of international subsidiaries that are permanently reinvested.

Foreign Exchange

Our consolidated financial statements are reported in U.S. dollars. Assets and liabilities of international subsidiaries with non-U.S. dollar functional currencies are translated to U.S. dollars at the exchange rates in effect on the balance sheet date, or the last business day of the period, if applicable. Revenues and expenses for each subsidiary are translated to U.S. dollars using an average rate for the relevant reporting period. Translation adjustments resulting from this process are included, net of tax, in OCI. Gains and losses that arise from exchange rate fluctuations for monetary asset and liability balances that are not denominated in an entity's functional currency are included within other income (expense), net in the Consolidated Statements of Operations. Currency gains and losses of intercompany balances deemed to be long-term in nature or designated as a hedge of the net investment in international subsidiaries are included, net of tax, in OCI. Foreign currency losses, net of hedging, of \$2.9 million, \$3.2 million, and \$2.8 million were included in other expenses, net, for the years ended December 31, 2022, 2021, and 2020.

Fair Value Measurements

For assets and liabilities measured at fair value, the GAAP fair value hierarchy prioritizes the inputs used in different valuation methodologies, assigning the highest priority to unadjusted quoted prices for identical assets and liabilities in actively traded markets (Level 1) and the lowest priority to unobservable inputs (Level 3). Level 2 inputs consist of quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in non-active markets; and model-derived valuations in which significant inputs are corroborated by observable market data either directly or indirectly through correlation or other means. Inputs may include yield curves, volatility, credit risks, and default rates.

Reclassification

In the Consolidated Statements of Cash Flows, the following reclassifications have been made to prior year amounts to conform to current year presentation of restructuring liabilities.

	Year Ended December 31, 2021							
In thousands		As Previously Reported		Adjustments		As Reclassified		
Changes in operating assets and liabilities, net of acquisitions and sale of businesses:								
Accounts payable, other current liabilities, and taxes payable	\$	(23,391)	\$	61	\$	(23,330)		
Restructuring		_		15,967		15,967		
Other operating, net		17,086		(16,028)		1,058		

	Year Ended December 31, 2020					
In thousands	As Previously Reported		Adjustments		As Reclassified	
Changes in operating assets and liabilities, net of acquisitions and sale of businesses:					_	
Accounts payable, other current liabilities, and taxes payable	\$ (111,724)	\$	(11,166)	\$	(122,890)	
Restructuring	_		11,767		11,767	
Other operating, net	(10,140)		(601)		(10,741)	

Recently Adopted Accounting Standards

In May 2021, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2021-04 amending *Earnings Per Share (Topic 260)*, *Debt-Modifications and Extinguishments (Subtopic 470-50)*, *Compensation - Stock Compensation (Topic 718)*, and *Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40)*. The amendment affects entities when a freestanding equity-classified written call option is modified or exchanged and remains equity classified after the modification or exchange. We adopted this amendment as of the effective date of January 1, 2022. The adoption of this amendment did not have a material impact on our financial statements.

In July 2021, the FASB issued ASU 2021-05, *Leases (Topic 842): Lessors-Certain Leases with Variable Lease Payments*. The amendments in this update modify the lease classification requirements for lessors to align them with practice under Topic 840, particularly in the area of day-one loss accounting. Lessors should classify and account for a lease with variable lease payments that do not depend on a reference index or a rate as an operating lease if certain criteria are met. The effective date for this amendment was January 1, 2022. The adoption of this amendment did not have a material impact on our financial statements.

In November 2021, the FASB issued ASU 2021-10 amending *Government Assistance: (Topic 832)*. The FASB issued this update to increase the transparency of government assistance including the disclosure of (1) the types of assistance, (2) an entity's accounting for the assistance, and (3) the effect of the assistance on an entity's financial statements. The effective date for this amendment was January 1, 2022. The adoption of this amendment did not have a material impact on our financial statements.

Recent Accounting Standards Not Yet Adopted

In October 2021, the FASB issued ASU 2021-08 amending *Business Combination:* (*Topic 805*), which was necessary due to 2014-09, *Revenue from Contracts with Customers* (*Topic 606*). The FASB issued this update to improve the accounting for acquired revenue contracts with customers in a business combination by addressing diversity in practice and inconsistency related to (1) recognition of an acquired contract liability and (2) payment terms and their effect on subsequent revenue recognized by the acquirer. The effective date for this amendment is January 1, 2023 and all interim periods thereafter. These amendments are to be applied prospectively to business combinations occurring on or after the effective date of the amendments. We plan to apply the practical expedients as needed for any future acquisitions. The practical expedients cover contracts that were modified prior to acquisition date as well as determining which date an acquirer would have to determine the standalone selling price of each performance obligation in an acquired contract.

Note 2: Earnings Per Share

The following table sets forth the computation of basic and diluted earnings (loss) per share (EPS):

Year Ended December 31,									
	2022		2021		2020				
\$	(9,732)	\$	\$ (81,255)		(57,955)				
	45,101		44,301		40,253				
	_		_		_				
					_				
	45,101		44,301		40,253				
\$	(0.22)	\$	(1.83)	\$	(1.44)				
\$	(0.22)	\$	(1.83)	\$	(1.44)				
	\$ 	\$ (9,732) \$ (9,732) 45,101 ———————————————————————————————————	\$ (9,732) \$ 45,101	2022 2021 \$ (9,732) \$ (81,255) 45,101 44,301 — — — — 45,101 44,301 45,101 44,301 \$ (0.22) \$ (1.83)	2022 2021 \$ (9,732) \$ (81,255) 45,101 44,301 — — — — 45,101 44,301 — — 45,101 44,301 \$ (0.22) \$ (1.83)				

Stock-based Awards

For stock-based awards, the dilutive effect is calculated using the treasury stock method. Under this method, the dilutive effect is computed as if the awards were exercised at the beginning of the period (or at time of issuance, if later) and assumes the related proceeds were used to repurchase our common stock at the average market price during the period. Related proceeds include the amount the employee must pay upon exercise and the future compensation cost associated with the stock award. Approximately 0.7 million, 0.5 million, and 0.7 million stock-based awards were excluded from the calculation of diluted EPS for the years ended December 31, 2022, 2021, and 2020, because they were anti-dilutive. These stock-based awards could be dilutive in future periods.

Convertible Notes and Warrants

For our Convertible Notes issued in March 2021, the dilutive effect is calculated using the if-converted method. We are required, pursuant to the indenture governing our Convertible Notes, to settle the principal amount of the Convertible Notes in cash and may elect to settle the remaining conversion obligation (stock price in excess of conversion price) in cash, shares, or a combination thereof. Under the if-converted method, we include the number of shares required to satisfy the remaining conversion obligation, assuming all the Convertible Notes were converted. The average quarterly closing prices of our common stock for the year ended December 31, 2022 were used as the basis for determining the dilutive effect on EPS. The quarterly average closing prices for our common stock did not exceed the conversion price of \$126.00, and therefore all associated shares were anti-dilutive.

In conjunction with the issuance of the Convertible Notes, we sold warrants to purchase 3.7 million shares of Itron common stock. The warrants have a strike price of \$180.00 per share. For calculating the dilutive effect of the warrants, we use the treasury stock method. With this method, we assume exercise of the warrants at the beginning of the period, or at time of issuance if later, and the issuance of common stock upon exercise. Proceeds from the exercise of the warrants are assumed to be used to repurchase shares of our stock at the average market price during the period. The incremental shares, representing the number of shares assumed to be exercised with the warrants less the number of shares repurchased, are included in diluted weighted average common shares outstanding. For periods where the warrants strike price of \$180.00 per share is greater than the average share price of Itron stock for the period, the warrants would be anti-dilutive. For the year ended December 31, 2022, the quarterly average closing prices of our common stock did not exceed the warrant strike price and therefore 3.7 million shares were considered anti-dilutive.

Convertible Note Hedge Transactions

In connection with the issuance of the Convertible Notes, we entered into privately negotiated call option contracts on our common stock (the Convertible Note Hedge Transactions) with certain commercial banks (the Counterparties). The Convertible Note Hedge Transactions cover, subject to anti-dilution adjustments substantially similar to those in the Convertible Notes, approximately 3.7 million shares of our common stock, the same number of shares initially underlying the Convertible Notes, at a strike price of approximately \$126.00, subject to customary adjustments. The Convertible Note Hedge Transactions will expire upon the maturity of the Convertible Notes, subject to earlier exercise or termination. Exercise of the Convertible Note Hedge Transactions would reduce the number of shares of our common stock outstanding and therefore would be anti-dilutive.

Note 3: Certain Balance Sheet Components

A summary of accounts receivable from contracts with customers is as follows:

Accounts receivable, net

Inventories

Total inventories

In thousands]	December 31, 2022	December 31, 2021
Trade receivables (net of allowance of \$4,863 and \$5,730)	\$	249,771	\$ 261,124
Unbilled receivables		30,664	37,335
Total accounts receivable, net	\$	280,435	\$ 298,459

Allowance for credit losses account activity	Year Ended December 31,							
In thousands	 2022		2021		2020			
Beginning balance	\$ 5,730	\$	1,312	\$	3,064			
Provision for (release of) doubtful accounts, net	(258)		4,636		(299)			
Accounts written-off	(492)		(107)		(1,463)			
Effect of change in exchange rates	 (117)		(111)		10			
Ending balance	\$ 4,863	\$	5,730	\$	1,312			

Inventories		
In thousands	December 31, 2022	December 31, 2021
Raw materials	\$ 182,118	\$ 122,434
Work in process	8,386	7,856
Finished goods	38,197	35,509
	 -	·

Property, plant, and equipment, net

In thousands	Dece	mber 31, 2022	Dece	ember 31, 2021
Machinery and equipment	\$	306,699	\$	314,502
Computers and software		119,670		111,540
Buildings, furniture, and improvements		130,301		131,764
Land		8,566		8,952
Construction in progress, including purchased equipment		19,403		39,527
Total cost		584,639		606,285
Accumulated depreciation		(444,516)		(443,101)
Property, plant, and equipment, net	\$	140,123	\$	163,184

Depreciation expense	Year Ended December 31,						
In thousands	 2022 2021 2020						
Depreciation expense	\$ 41,046	\$	48,352	\$	52,579		

On November, 2, 2021, Itron entered into an agreement to sell certain Gas product lines from our Device Solutions manufacturing and business operations in Europe and North America to Dresser Utility Solutions (Dresser). The asset disposal group, which included \$0.8 million of accounts receivable, \$15.4 million of inventories, and \$12.0 million of property, plant, and equipment, was classified as held for sale during the fourth quarter of 2021. The disposal group was removed from the balance sheet when the transaction closed on February 28, 2022. Refer to Note 18: Sale of Businesses for additional information on the transaction.

Note 4: Intangible Assets and Liabilities

The gross carrying amount and accumulated amortization (accretion) of our intangible assets and liabilities, other than goodwill, were as follows:

		De	cember 31, 2022			December 31, 2021					
In thousands	Gross	Accumulated Accumulated (Amortization) (Amortization) (Amortization) (Ass Accretion Accumulated (Accumulated (Accumulated (Amortization)) (Accumulated (Accumulat			Net Gross				Net		
Intangible Assets	_				_		_				
Core-developed technology	\$ 498,601	\$	(492,782)	\$	5,819	\$	505,429	\$	(491,047)	\$	14,382
Customer contracts and relationships	322,360		(265,503)		56,857		336,421		(261,043)		75,378
Trademarks and trade names	72,156		(70,101)		2,055		74,551		(72,133)		2,418
Other	12,017		(11,807)		210		12,021		(11,670)		351
Total intangible assets	\$ 905,134	\$	(840,193)	\$	64,941	\$	928,422	\$	(835,893)	\$	92,529
Intangible Liabilities											
Customer contracts and relationships	\$ (23,900)	\$	23,900	\$		\$	(23,900)	\$	23,441	\$	(459)

A summary of intangible assets and liabilities activity is as follows:

		Year Ended	Decem	ber 31,
In thousands		2022		2021
Intangible assets, gross beginning balance	\$	928,422	\$	1,000,037
Intangible assets acquired		_		2,059
Intangible assets reclassified to held for sale		_		(39,089)
Effect of change in exchange rates		(23,288)		(34,585)
Intangible assets, gross ending balance	\$	905,134	\$	928,422
Intangible liabilities, gross beginning balance	\$	(23,900)	\$	(23,900)
Effect of change in exchange rates		_		_
Intangible liabilities, gross ending balance	\$	(23,900)	\$	(23,900)

Assumed intangible liabilities reflect the present value of the projected cash outflows for an existing contract where remaining costs are expected to exceed projected revenues.

On October 12, 2021, we completed the acquisition of 100% of the shares of SELC Group Limited (SELC), a private limited company incorporated in Ireland. SELC was previously a technology supplier to Itron. The acquisition provides value to Itron through the leverage of SELC's streetlight controls technology coupled with Itron's Smart Cities network and software platform. The acquisition will increase the pace of Smart City growth and innovation within Itron's Networked Solutions business for the benefit of our customers. The purchase was funded through cash on hand and resulted in the additions of intangible assets of \$2.1 million and goodwill. Refer to Note 5: Goodwill for additional information on goodwill.

In conjunction with the business divestiture to Dresser (refer to Note 3: Certain Balance Sheet Components), the asset disposal group, which included \$3.4 million of net intangible assets, was classified as held for sale during the fourth quarter of 2021. The disposal group was removed from the balance sheet when the transaction closed on February 28, 2022. Refer to Note 18: Sale of Businesses for additional information on the transaction.

Estimated future annual amortization is as follows:

Year Ending December 31,	Estimated Annual Amortization		
In thousands			
2023	\$	18,960	
2024		15,027	
2025		14,297	
2026		10,300	
2027		5,630	
Thereafter		727	
Total intangible assets subject to amortization	\$	64,941	

Amortization Expense	Year Ended December 31,							
In thousands	2022 2021							
Amortization expense	\$ 25,717	\$	35,801	\$	44,711			

We have recognized amortization expense within operating expenses in the Consolidated Statements of Operations. These expenses relate to intangible assets acquired and liabilities assumed as part of business combinations.

Note 5: Goodwill

The following table reflects changes in the carrying amount of goodwill for the years ended December 31, 2022 and 2021:

In thousands	Device Solutions	Networked Solutions	Outcomes	Total Company	
Goodwill balance at January 1, 2021	\$ 53,214	\$ 933,814	\$ 144,888	\$ 1,131,916	
Goodwill reclassified to held for sale	(12,800)	_	_	(12,800)	
Goodwill acquired	_	5,440	_	5,440	
Effect of change in exchange rates	(1,037)	(21,249)	(3,295)	(25,581)	
Goodwill balance at December 31, 2021	39,377	918,005	141,593	1,098,975	
Adjustment to goodwill acquired	_	(23)	_	(23)	
Goodwill impairment	(38,480)	_	_	(38,480)	
Effect of change in exchange rates	(897)	(18,095)	(2,759)	(21,751)	
Goodwill balance at December 31, 2022	\$ —	\$ 899,887	\$ 138,834	\$ 1,038,721	

The accumulated goodwill impairment losses at December 31, 2022 were \$714.9 million and at December 31, 2021 were \$676.5 million. The goodwill impairment losses were originally recognized in 2011, 2013, and 2022.

In conjunction with the acquisition of SELC (refer to Note 4: Intangible Assets and Liabilities), the purchase resulted in the recognition of \$5.4 million in goodwill allocated to our Networked Solutions segment. During the year ended December 31, 2022, an immaterial adjustment was recorded to the goodwill acquired.

In conjunction with the business divestiture to Dresser (refer to Note 3: Certain Balance Sheet Components), the asset disposal group, which included \$12.8 million of goodwill, was classified as held for sale during the fourth quarter of 2021. The disposal group was removed from the balance sheet when the transaction closed on February 28, 2022. Refer to Note 18: Sale of Businesses for additional information on the transaction.

As the result of increases in raw material, component, labor and other costs, coupled with a decrease in forecasted revenue within the Device Solutions operating segment and reporting unit, which we determined during the second quarter of 2022, we performed an interim goodwill impairment test. At the conclusion of the test, a goodwill impairment of \$38.5 million was recognized in our Corporate unallocated segment as of June 30, 2022. No interim impairment test was determined to be necessary for the Networked Solutions or Outcomes reporting units. Refer to Note 1: Summary of Significant Accounting Policies for a description of our reporting units and our method used to determine the fair values of our reporting units and to determine the amount of any goodwill impairment.

We test goodwill for impairment each year as of October 1. Changes in market demand, fluctuations in the markets in which we operate, the volatility and decline in the worldwide equity markets, and a decline in our market capitalization could unfavorably impact the remaining carrying value of our goodwill, which could have a significant effect on our current and future results of operations and financial position. Based on the results of the annual impairment testing for our reporting units performed as of October 1, 2022, no adjustments to the carrying value of goodwill were required. Refer to Note 1: Summary of Significant Accounting Policies for further details regarding the annual goodwill impairment process.

Note 6: Debt

The components of our borrowings were as follows:

In thousands	Dece	December 31, 2022		December 31, 2021	
Credit facility					
Multicurrency revolving line of credit	\$	_	\$	_	
Convertible notes		460,000		460,000	
Total debt		460,000		460,000	
Less: unamortized prepaid debt fees - convertible notes		7,474		9,772	
Long-term debt, net	\$	452,526	\$	450,228	

Credit Facility

The credit facility, initially entered on January 5, 2018 (as amended, the 2018 credit facility), provided for committed credit facilities in the amount of \$1.2 billion U.S. dollars. This facility originally consisted of a \$650 million U.S. dollar term loan (the term loan) and a multicurrency revolving line of credit (the revolver) with a principal amount of up to \$500 million. The revolver also contains a \$300 million standby letter of credit sub-facility and a \$50 million swingline sub-facility. The term loan was fully repaid in August 2021.

The 2018 credit facility was amended on October 18, 2019, and this amendment extended the maturity date to October 18, 2024. The amendment also modified the required interest payments and with covenants based on total net leverage instead of total leverage. On October 19, 2020, we entered into a second amendment to obtain temporary covenant relief while also adding an additional level of pricing was added to the existing pricing grid, which is effective throughout the remaining term of the debt. On March 8, 2021, we entered into a third amendment to the 2018 credit facility, which modified provisions to permit cash settlement upon the conversion of the Convertible Notes, the Convertible Note Hedge Transactions and Warrant Transactions and also to adjust certain settlement provisions for convertible indebtedness. Refer to Note 7: Derivative Financial Instruments for further details of the Convertible Note Hedge Transactions and Warrant Transactions.

On February 25, 2022, we entered into a fourth amendment to the 2018 credit facility, which modifies provisions to allow for the addback of non-cash expenses related to restructuring charges incurred during the quarter ended December 31, 2021 and also adjusted the maximum total net leverage ratio thresholds for the period which began with the first quarter of 2022 through the fourth quarter of 2022 to allow for increased operational flexibility. The maximum leverage ratio was increased to 4.75:1 for the first through third quarters of 2022 and 4.50:1 for the fourth quarter of 2022.

The 2018 credit facility permits us and certain of our foreign subsidiaries to borrow in U.S. dollars, euros, or, with lender approval, other currencies readily convertible into U.S. dollars. All obligations under the 2018 credit facility are guaranteed by Itron, Inc. and material U.S. domestic subsidiaries and are secured by a pledge of substantially all of the assets of Itron, Inc. and material U.S. domestic subsidiaries. This includes a pledge of 100% of the capital stock of material U.S. domestic subsidiaries and up to 66% of the voting stock (100% of the non-voting stock) of first-tier foreign subsidiaries. In addition, the obligations of any foreign subsidiary who is a foreign borrower, as defined by the 2018 credit facility, are guaranteed by the foreign subsidiary and by its direct and indirect foreign parents. The 2018 credit facility includes debt covenants, which contain certain financial thresholds and place certain restrictions on the incurrence of debt, investments, and the issuance of dividends. We were in compliance with the debt covenants under the 2018 credit facility at December 31, 2022.

Under the 2018 credit facility, we elect applicable market interest rates for both the term loan and any outstanding revolving loans. We also pay an applicable margin, which is based on our total net leverage ratio as defined in the credit agreement. The applicable rates per annum may be based on either: (1) the LIBOR rate or EURIBOR rate (subject to a floor of 0%), plus an applicable margin, or (2) the Alternate Base Rate, plus an applicable margin. The Alternate Base Rate election is equal to the greatest of three rates: (i) the prime rate, (ii) the Federal Reserve effective rate plus 0.50%, or (iii) one-month LIBOR plus 1.00%. The cessation of LIBOR will occur in June 2023. On November 23, 2022, we entered into a fifth amendment to the 2018 credit facility, which replaces the LIBOR rate with Term Secured Overnight Financing Rate (SOFR) as the base interest rate.

At December 31, 2022 there were no outstanding loan balances under the credit facility, and \$56.0 million was utilized by outstanding standby letters of credit, resulting in \$444.0 million available for additional borrowings or standby letters of credit within the revolver. At December 31, 2022, \$244.0 million was available for additional standby letters of credit under the letter of credit sub-facility, and no amounts were outstanding under the swingline subfacility.

On February 21, 2023, we entered into a sixth amendment to the 2018 credit facility. This amendment modifies provisions to allow for the addback for debt covenant calculations of non-recurring cash expenses related to restructuring charges to be incurred during the quarter ended March 31, 2023.

Convertible Notes

On March 12, 2021, we closed the sale of the Convertible Notes in a private placement to qualified institutional buyers, resulting in net proceeds to us of \$448.5 million after deducting initial purchasers' discounts of the offering. The Convertible Notes do not bear regular interest, and the principal amount does not accrete. The Convertible Notes will mature on March 15, 2026, unless earlier repurchased, redeemed, or converted in accordance with their terms. No sinking fund is provided for the Convertible Notes.

The initial conversion rate of the Convertible Notes is 7.9365 shares of our common stock per \$1,000 principal amount of notes, which is equivalent to an initial conversion price of approximately \$126.00 per share. The conversion rate of the Convertible Notes is subject to adjustment upon the occurrence of certain specified events. In addition, upon the occurrence of a make-whole fundamental change (as defined in the indenture governing the Convertible Notes) or upon a notice of redemption, we will, in certain circumstances, increase the conversion rate for a holder that elects to convert its Convertible Notes in connection with such make-whole fundamental change or notice of redemption, as the case may be.

Prior to the close of business on the business day immediately preceding December 15, 2025, the Convertible Notes are convertible at the option of the holders only under the following circumstances: (1) during any calendar quarter commencing after the calendar quarter ending on June 30, 2021 (and only during such calendar quarter), if the last reported sale price of the common stock for at least 20 trading days (whether or not consecutive) during the period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day; (2) during the five business-day period after any five consecutive trading-day period (the measurement period) in which the trading price per \$1,000 principal amount of Convertible Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of the common stock and the conversion rate on each such trading day; (3) upon the occurrence of specified corporate events; or (4) upon redemption by us. On or after December 15, 2025, until the close of business on the second scheduled trading day immediately preceding March 15, 2026, holders of the Convertible Notes may convert all or a portion of their notes at any time. Upon conversion, we will pay cash up to the aggregate principal amount of Convertible Notes to be converted and pay and/or deliver, as the case may be, cash, shares of common stock or a combination of cash and shares of common stock, at our election, in respect of the remainder, if any, of our conversion obligation in excess of the aggregate principal amount of the Convertible Notes being converted.

On or after March 20, 2024 and prior to December 15, 2025, we may redeem for cash all or part of the Convertible Notes, at our option, if the last reported sales price of common stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive), including the trading day immediately preceding the date on which we provide notice of redemption, during any 30 consecutive trading days ending on, and including, the trading day immediately before the date we send the related notice of the redemption. The redemption price of each Convertible Notes to be redeemed will be the principal amount of such note, plus accrued and unpaid special interest, if any. Upon the occurrence of a fundamental change (as defined in the indenture governing the Convertible Notes), subject to a limited exception described in the indenture governing the Convertible Notes, holders may require us to repurchase all or a portion of their notes for cash at a price equal to plus accrued and unpaid special interest to, but not including, the fundamental change repurchase date (as defined in the indenture governing the Convertible Notes).

The Convertible Notes are senior unsecured obligations and rank equally in right of payment with all of our existing and future unsubordinated debt and senior in right of payment to any future debt that is expressly subordinated in right of payment to the Convertible Notes. The Convertible Notes will be effectively subordinated to any of our existing and future secured debt to the extent of the assets securing such indebtedness. The Convertible Notes will be structurally subordinated to all existing debt and any future debt and any other liabilities of our subsidiaries.

Debt Maturities

The amount of required minimum principal payments on our long-term debt in aggregate over the next five years is as follows:

Year Ending December 31,	Minir	num Payments
In thousands		
2023	\$	_
2024		_
2025		_
2026		460,000
2027		_
Thereafter		_
Total minimum payments on debt	\$	460,000

Note 7: Derivative Financial Instruments

As part of our risk management strategy, we use derivative instruments to hedge certain foreign currency and interest rate exposures. Refer to Note 1: Summary of Significant Accounting Policies, Note 14: Shareholders' Equity, and Note 15: Fair Value of Financial Instruments for additional disclosures on our derivative instruments.

The fair values of our derivative instruments are determined using the income approach and significant other observable inputs (and are classified as "Level 2" in the fair value hierarchy). We have used observable market inputs based on the type of derivative and the nature of the underlying instrument. The key inputs include interest rate yield curves (swap rates and futures) and foreign exchange spot and forward rates, all of which are available in an active market. We have utilized the mid-market pricing convention for these inputs. We include, as a discount to the derivative asset, the effect of our counterparty credit risk based on current published credit default swap rates when the net fair value of our derivative instruments is in a net asset position. We consider our own nonperformance risk when the net fair value of our derivative instruments is in a net liability position by discounting our derivative liabilities to reflect the potential credit risk to our counterparty through applying a current market indicative credit spread to all cash flows.

The fair values of our derivative instruments were as follows:

			Fair Value						
Derivatives Assets	Balance Sheet Location	Dec	cember 31, D 2022	ecember 31, 2021					
Derivatives not designated as hedging instrument	ts under ASC 815-20		In thousands						
Foreign exchange forward contracts	Other current assets	\$	45 \$	37					
Total asset derivatives		\$	45 \$	37					
Derivatives Liabilities			To show and a						
Derivatives not designated as hedging instrument			In thousands						
Foreign exchange forward contracts	Other current liabilities	\$	44 \$	135					
Total liability derivatives		\$	44 \$	135					

The changes in AOCI, net of tax, for our derivative and nonderivative hedging instruments designated as hedging instruments, net of tax, were as follows:

In thousands	2022	2021	2020
Net unrealized loss on hedging instruments at January 1,	\$ (14,590)	\$ (16,001)	\$ (15,103)
Unrealized gain (loss) on derivative instruments	_	1,121	(7,002)
Realized (gains) losses reclassified into net income (loss)	_	290	6,104
Net unrealized loss on hedging instruments at December 31,	\$ (14,590)	\$ (14,590)	\$ (16,001)

Reclassification of amounts related to hedging instruments are included in interest expense in the Consolidated Statements of Operations. Included in the net unrealized gain (loss) on hedging instruments at December 31, 2022 and 2021 is a loss of \$14.4 million, net of tax, related to our nonderivative net investment hedge, which terminated in 2011. This loss on our net investment hedge will remain in AOCI until earnings are impacted by a sale or liquidation of the associated foreign operation.

A summary of the effect of netting arrangements on our financial position related to the offsetting of our recognized derivative assets and liabilities under master netting arrangements or similar agreements is as follows:

Offsetting of Derivative Assets		mounts of zed Assets	Gross Amounts Not Offset in the Consolidated Balance Sheets						
In thousands	Present Consolida	ed in the ted Balance eets	Derivative Financial Instruments Cash Collateral Receive		ollateral Received		Net Amount		
December 31, 2022	\$	45	\$	(43)	\$	_	\$		2
December 31, 2021		37		(37)		_			_
Offsetting of Derivative Liabilities		amounts of Ed Liabilities	Gross	Amounts Not Offset Sh	in the Cor eets	nsolidated Balance			
In thousands	Presen Consolida	ted in the ited Balance neets	Der	ivative Financial Instruments	Cash (Collateral Pledged		Net Amount	
December 31, 2022	\$	44	\$	(43)	\$	_	\$		1
December 31, 2021		135		(37)		_			98

Our derivative assets and liabilities subject to netting arrangements include foreign exchange forward and interest rate contracts with three counterparties at December 31, 2022 and three counterparties at December 31, 2021. No derivative asset or liability balance with any of our counterparties was individually significant at December 31, 2022 or 2021. Our derivative contracts with each of these counterparties exist under agreements that provide for the net settlement of all contracts through a single payment in a single currency in the event of default. We have no pledges of cash collateral against our obligations, and we have not received pledges of cash collateral from our counterparties under the associated derivative contracts.

Cash Flow Hedges

As a result of our forecasted inventory purchases in a non-functional currency, we are exposed to foreign exchange risk. We hedge portions of these purchases. During February 2021, we entered into foreign exchange option contracts for a total notional amount of \$77 million at a cost of \$1.1 million. The contracts matured ratably through the year with final maturity occurring in October 2021. Changes in the fair values of the option contracts are recognized as a component of OCI and are recognized in product cost of revenues when the hedged item affects earnings. We did not enter into any similar arrangements in 2022.

The before-tax effects of our accounting for derivative instruments designated as hedges on AOCI for the year ended December 31, were as follows:

Derivatives in ASC 815-20 Cash	Δ	mount of Ca	in (I	Loss) Recogn	izad	lin OCI on	Gain (Loss) Reclassified from AOCI into Income						
Flow Hedging Relationships	A	inount of Ga		Derivative	izeu	i iii OCi uii	Location				Amount		
In thousands		2022		2021		2020	In thousands		2022		2021		2020
Interest rate swap contract	\$		\$	73	\$	(2,900)	Interest expense	\$	_	\$	(229)	\$	(745)
Interest rate swap contract		_		_		_	Other income (expense), net		_		(1,680)		_
Interest rate cap contracts		_		_		782	Interest expense		_		_		392
Foreign exchange options		_		403		(1,228)	Product cost of revenues		_		403		(1,228)
Cross currency swap contract		_		669		(4,164)	Interest expense		_		94		619
Cross currency swap contract		_		_		_	Other income (expense), net		_		656		(5,228)

Derivatives Not Designated as Hedging Relationships

We are also exposed to foreign exchange risk when we enter into non-functional currency transactions, both intercompany and third party. At each periodend, non-functional currency monetary assets and liabilities are revalued with the change recognized within other income (expense) in our Consolidated Statements of Operations. We enter into monthly foreign exchange forward contracts, which are not designated for hedge accounting, with the intent to reduce earnings volatility associated with currency exposures. As of December 31, 2022, a total of 36 contracts were offsetting our exposures from the euro, pound sterling, Indonesian rupiah, Canadian dollar, Australian dollar, and various other currencies, with notional amounts ranging from \$117,000 to \$57.9 million.

The effect of our derivative instruments not designated as hedges on the Consolidated Statements of Operations for the year ended December 31, was as follows:

Derivatives Not Designated as Hedging Instrument under ASC 815-20	Location	Gain (Loss) Recognized on Derivatives in Location Other Income (Expense)					in
In thousands			2022		2021		2020
Foreign exchange forward contracts	Other income (expense), net	\$	(865)	\$	1,536	\$	(4,538)

We will continue to monitor and assess our interest rate and foreign exchange risk and may institute additional derivative instruments to manage such risk in the future.

Convertible Note Hedge Transactions

We paid an aggregate amount of \$84.1 million for the Convertible Note Hedge Transactions. The Convertible Note Hedge Transactions cover, subject to anti-dilution adjustments substantially similar to those in the Convertible Notes, approximately 3.7 million shares of our common stock, the same number of shares initially underlying the Convertible Notes, at a strike price of approximately \$126.00, subject to customary adjustments. The Convertible Note Hedge Transactions will expire upon the maturity of the Convertible Notes, subject to earlier exercise or termination. The Convertible Note Hedge Transactions are expected generally to reduce the potential dilutive effect of the conversion of the Convertible Notes and/or offset any cash payments we are required to make in excess of the principal amount of the converted notes, as the case may be, in the event that the market price per share of our common stock, as measured under the terms of the Convertible Note Hedge Transactions, is greater than the strike price of those Convertible Note Hedge Transactions. The Convertible Note Hedge Transactions meet the criteria in Accounting Standards Codification (ASC) 815-40 to be classified within Stockholders' Equity, and therefore the transactions are not revalued after their issuance.

We made a tax election to integrate the Convertible Notes and the call options. We are retaining the identification statements in our books and records, together with a schedule providing the accruals on the synthetic debt instruments. The accounting impact of this tax election makes the call options deductible as original issue discount for tax purposes over the term of the Convertible Note, and results in a \$20.6 million deferred tax asset recognized through equity.

Warrant Transactions

In addition, concurrently with entering into the Convertible Note Hedge Transactions, we separately entered into privately-negotiated Warrant Transactions (the Warrant Transactions), whereby we sold to the Counterparties warrants to acquire, collectively, subject to anti-dilution adjustments, 3.7 million shares of our common stock at an initial strike price of \$180.00 per share, which represents a premium of 100% over the public offering price in the common stock issuance. We received aggregate proceeds of \$45.3 million from the Warrant Transactions with the Counterparties, with such proceeds partially offsetting the costs of entering into the Convertible Note Hedge Transactions. The warrants expire in June 2026. If the market value per share of our common stock, as measured under the Warrants Transactions, exceeds the strike price of the warrants, the warrants will have a dilutive effect on our earnings per share, unless we elect, subject to certain conditions, to settle the warrants in cash. The warrants meet the criteria in ASC 815-40 to be classified within Stockholders' Equity, therefore the warrants are not revalued after issuance.

Note 8: Defined Benefit Pension Plans

We sponsor both funded and unfunded defined benefit pension plans offering death and disability, retirement, and special termination benefits for certain of our international employees, primarily in Germany, France, Indonesia, India, and Italy. The defined benefit obligation is calculated annually by using the projected unit credit method. The measurement date for the pension plans was December 31, 2022.

The following tables set forth the components of the changes in benefit obligations and fair value of plan assets:

	Year Ended December 31,					
In thousands	 2022	2021				
Change in benefit obligation:						
Benefit obligation at January 1,	\$ 112,073	\$ 132,732				
Service cost	2,908	4,479				
Interest cost	1,676	1,383				
Actuarial gain	(23,682)	(13,986)				
Benefits paid	(2,753)	(3,381)				
Foreign currency exchange rate changes	(7,162)	(8,505)				
Curtailment	(225)	(579)				
Settlement	(1,499)	(171)				
Release for divestiture	(11,081)	_				
Other	(516)	101				
Benefit obligation at December 31,	\$ 69,739	\$ 112,073				
Change in plan assets:						
Fair value of plan assets at January 1,	\$ 9,609	\$ 10,206				
Actual return on plan assets	(4)	308				
Company contributions	217	102				
Benefits paid	(278)	(329)				
Foreign currency exchange rate changes	(655)	(678)				
Settlement	 (227)	_				
Fair value of plan assets at December 31,	8,662	9,609				
Net pension benefit obligation at fair value	\$ 61,077	\$ 102,464				

Amounts recognized on the Consolidated Balance Sheets consist of:

		December 3	1,
In thousands	:	2022	2021
Assets			_
Plan assets in other long-term assets	\$	162 \$	_
Liabilities			
Current portion of pension benefit obligation in wages and benefits payable	\$	3,400 \$	3,088
Pension benefit obligation held for sale within other current liabilities		_	11,513
Long-term portion of pension benefit obligation		57,839	87,863
Pension benefit obligation, net	\$	61,077 \$	102,464

In conjunction with the business divestiture to Dresser (refer to Note 3: Certain Balance Sheet Components), the related disposal group was classified as held for sale during the fourth quarter of 2021. The disposal group was removed from the balance sheet when the transaction closed on February 28, 2022. Refer to Note 18: Sale of Businesses for additional information on the transaction.

Amounts recognized in OCI (pre-tax) are as follows:

	Year Ended December 31,					
In thousands	· · · · · · · · · · · · · · · · · · ·	2022		2021		2020
Net actuarial (gain) loss	\$	(24,316)	\$	(14,565)	\$	8,734
Settlement		(166)		2		(286)
Curtailment		20		557		_
Plan asset loss		316		38		64
Amortization of net actuarial loss		(1,490)		(2,183)		(2,255)
Amortization of prior service cost		(70)		(71)		(68)
Other		481		101		_
Other comprehensive (income) loss	\$	(25,225)	\$	(16,121)	\$	6,189

If actuarial gains and losses exceed 10 percent of the greater of plan assets or plan liabilities, we amortize them over the employees' average future service period. The estimated net actuarial gain and prior service cost that will be amortized from AOCI into net periodic benefit cost during 2023 is \$0.4 million.

Net periodic pension benefit cost for our plans include the following components:

		Year Ended December 31	.,
In thousands	2022	2021	2020
Service cost	\$ 2,908	\$ 4,479	\$ 4,027
Interest cost	1,676	1,383	1,817
Expected return on plan assets	(312)	(346)	(453)
Amortization of prior service costs	70	71	68
Amortization of actuarial net loss	1,490	2,183	2,255
Settlement	166	(2)	286
Curtailment	(20)	(557)	_
Net periodic benefit cost	\$ 5,978	\$ 7,211	\$ 8,000

The components of net periodic benefit cost, other than the service cost component, are included in total other income (expense) on the Consolidated Statements of Operations.

The significant actuarial weighted average assumptions used in determining the benefit obligations and net periodic benefit cost for our benefit plans are as follows:

	Year Ended December 31,			
	2022	2021	2020	
Actuarial assumptions used to determine benefit obligations at end of period:				
Discount rate	4.14 %	1.66 %	1.10 %	
Expected annual rate of compensation increase	4.26 %	3.88 %	3.68 %	
Actuarial assumptions used to determine net periodic benefit cost for the period:				
Discount rate	1.93 %	1.10 %	1.76 %	
Expected rate of return on plan assets	3.45 %	3.45 %	4.89 %	
Expected annual rate of compensation increase	3.88 %	3.68 %	3.76 %	

We determine a discount rate for our plans based on the estimated duration of each plan's liabilities. For euro denominated defined benefit pension plans, which represent 85% of our projected benefit obligation, we use discount rates with consideration of the duration of each of the plans, using a hypothetical yield curve developed from euro-denominated AA-rated corporate bond issues. These bonds are assigned different weights to adjust their relative influence on the yield curve, and the highest and lowest yielding 10% of bonds are excluded within each maturity group. The discount rate used was 3.75%.

Our expected rate of return on plan assets is derived from a study of actual historic returns achieved and anticipated future long-term performance of plan assets, specific to plan investment asset category. While the study primarily gives consideration to recent insurers' performance and historical returns, the assumption represents a long-term prospective return.

The total accumulated benefit obligation for our defined benefit pension plans was \$63.2 million and \$103.4 million at December 31, 2022 and 2021.

The total obligations and fair value of plan assets for plans with projected benefit obligations and accumulated benefit obligations exceeding the fair value of plan assets are as follows:

In thousands		2022		2021	
Projected benefit obligation	\$	68,799	\$	112,073	
Accumulated benefit obligation		62,503		103,437	
Fair value of plan assets		7,560		9,609	

Our asset investment strategy focuses on maintaining a portfolio using primarily insurance funds, which are accounted for as investments and measured at fair value, in order to achieve our long-term investment objectives on a risk adjusted basis. Our general funding policy for these qualified pension plans is to contribute amounts sufficient to satisfy regulatory funding standards of the respective countries for each plan.

The fair values of our plan investments by asset category are as follows:

	Total	Active M Identic	Prices in Iarkets for al Assets vel 1)	Uno	Significant bservable Inputs (Level 3)
In thousands		Decembe	er 31, 2022		
Cash	\$ 857	\$	857	\$	_
Insurance funds	7,805		_		7,805
Total fair value of plan assets	\$ 8,662	\$	857	\$	7,805
In thousands		Decembe	er 31, 2021		
Cash	\$ 1,075	\$	1,075	\$	_
Insurance funds	 8,534		_		8,534
Total fair value of plan assets	\$ 9,609	\$	1,075	\$	8,534

The following tables present a reconciliation of Level 3 assets held during the years ended December 31, 2022 and 2021:

In thousands	January 1, 022	ealized and lized Gains	Issuance	Purchases, es, Settlements, nd Other	Effect of Foreign Currency	Balan	ce at December 31, 2022
Insurance funds	\$ 8,534	\$ (14)	\$	(165)	\$ (550)	\$	7,805
In thousands	: January 1,)21	ealized and lized Gains	Issuance	Purchases, es, Settlements, nd Other	Effect of Foreign Currency	Balan	ce at December 31, 2021
Insurance funds	\$ 9,156	\$ 289	\$	(242)	\$ (669)	\$	8,534

As the plan assets and contributions are not significant to our total company assets, no further disclosures are considered material.

Annual benefit payments for the next 10 years, including amounts to be paid from our assets for unfunded plans and reflecting expected future service, as appropriate, are expected to be paid as follows:

Year Ending December 31,	Annual Benefit Payments
In thousands	
2023	\$ 3,805
2024	3,989
2025	4,170
2026	4,167
2027	4,731
2028-2032	25,359

Note 9: Stock-Based Compensation

We grant stock-based compensation awards, including restricted stock units, phantom stock, and unrestricted stock units, under the Second Amended and Restated 2010 Stock Incentive Plan (Stock Incentive Plan). Prior to December 31, 2020, stock options were also granted as part of the stock-based compensation awards. In the Stock Incentive Plan, we have 12,623,538 shares of common stock reserved and authorized for issuance subject to stock splits, dividends, and other similar events, and at December 31, 2022, 4,602,456 shares were available for grant. We issue new shares of common stock upon the exercise of stock options or when vesting conditions on restricted stock units are fully satisfied. These shares are subject to a fungible share provision such that the authorized share available for grant is reduced by (i) one share for every one share subject to a stock option or share appreciation right granted under the Plan and (ii) 1.7 shares for every one share of common stock that was subject to an award other than an option or share appreciation right.

We also award phantom stock units, which are settled in cash upon vesting and accounted for as liability-based awards, with no impact to the shares available for grant.

In addition, we maintain the ESPP, for which 71,253 shares of common stock were available for future issuance at December 31, 2022.

ESPP activity and stock-based grants other than stock options and restricted stock units were not significant for the years ended December 31, 2022, 2021, and 2020.

Stock-Based Compensation Expense

Total stock-based compensation expense and the related tax benefit were as follows:

	Year Ended December 31,						
In thousands		2022		2021		2020	
Stock options	\$	891	\$	1,371	\$	1,944	
Restricted stock units		20,038		21,391		22,285	
Unrestricted stock awards		952		856		824	
Phantom stock units		1,315		3,242		3,720	
Total stock-based compensation	\$	23,196	\$	26,860	\$	28,773	
Related tax benefit	\$	5,371	\$	4,991	\$	5,086	

Stock Options

A summary of our stock option activity is as follows:

	Shares	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value	Weighted Average Grant Date Fair Value
	In thousands		Years	In thousands	
Outstanding, January 1, 2020	458	\$ 56.38	7.0	\$ 12,641	
Granted	83	84.39			\$ 26.37
Exercised	(103)	53.99		2,061	
Forfeited	(5)	83.94			
Outstanding, December 31, 2020	433	\$ 61.95	6.9	\$ 14,697	
Granted	_	_			\$ _
Exercised	(34)	67.21		1,215	
Forfeited	(6)	83.33			
Outstanding, December 31, 2021	393	\$ 61.18	5.9	\$ 4,737	
Granted	_	_			\$ _
Exercised	(1)	45.90		4	
Canceled	(9)	80.00			
Forfeited	(2)	87.27			
Outstanding, December 31, 2022	381	\$ 60.63	4.8	\$ 1,892	
Exercisable, December 31, 2022	360	\$ 59.25	4.7	\$ 1,892	

At December 31, 2022, total unrecognized stock-based compensation expense related to nonvested stock options was \$0.1 million, which is expected to be recognized over a weighted average period of approximately 0.6 year.

The weighted average assumptions used to estimate the fair value of stock options granted and the resulting weighted average fair value are as follows:

		Year Ended December 31,					
	2022	2022 2021					
Expected volatility	— %	<u> </u>	32.3 %				
Risk-free interest rate	— %	— %	1.3 %				
Expected term (years)	N/A	N/A	5.3				

Employee stock options are no longer a part of our stock compensation plan as of December 31, 2020.

Restricted Stock Units

The following table summarizes restricted stock unit activity:

	Number of Restricted Stock Units	Weighted Average Grant Date Fair Value	Aggregate Intrinsic Value
	In thousands		In thousands
Outstanding, January 1, 2020	684	\$ 64.38	
Granted	262	83.42	
Released (1)	(363)		\$ 23,702
Forfeited	(39)		
Outstanding, December 31, 2020	544	\$ 71.79	
Granted	230	97.66	
Released (1)	(293)		\$ 20,639
Forfeited	(51)		
Outstanding, December 31, 2021	430	\$ 85.77	
Granted	391	53.33	
Released (1)	(227)	80.08	\$ 18,169
Forfeited	(66)	71.08	
Outstanding, December 31, 2022	528	\$ 66.39	
Vested but not released, December 31, 2022	12	\$ 50.65	\$ 606

⁽¹⁾ Shares released is presented as gross shares and does not reflect shares withheld by us for employee payroll tax obligations.

At December 31, 2022, total unrecognized compensation expense on restricted stock units was \$21.0 million, which is expected to be recognized over a weighted average period of approximately 1.7 years.

The weighted average assumptions used to estimate the fair value of performance-based restricted stock units granted with a service and market condition and the resulting weighted average fair value are as follows:

	Year Ended December 31,					
	2022		2021		2020	
Expected volatility	55.7 %		54.2 %		44.9 %	
Risk-free interest rate	1.7 %		0.4 %)	1.0 %	
Expected term (years)	2.9		1.9	l	1.8	
Weighted average fair value	\$ 57.88	\$	77.65	\$	93.97	

Phantom Stock Units

The following table summarizes phantom stock unit activity:

	Number of Phantom Stock Units	Weighted Average Grant Date Fair Value	 Aggregate Intrinsic Value
	In thousands		 In thousands
Outstanding, January 1, 2020	89	\$ 62.85	
Granted	38	87.27	
Released	(40)		\$ 2,971
Forfeited	(5)		
Outstanding, December 31, 2020	82	\$ 73.13	
Granted	35	96.49	
Released	(41)		\$ 4,100
Forfeited	(7)		
Outstanding, December 31, 2021	69	\$ 85.47	
Granted	59	53.07	
Released	(34)	79.08	\$ 1,780
Forfeited	(9)	76.02	
Outstanding, December 31, 2022	85	\$ 66.46	

At December 31, 2022, total unrecognized compensation expense on phantom stock units was \$2.6 million, which is expected to be recognized over a weighted average period of approximately 1.9 years. As of December 31, 2022 and 2021, we have recognized a phantom stock liability of \$1.7 million and \$1.9 million within wages and benefits payable in the Consolidated Balance Sheets.

Note 10: Defined Contribution Plans

In the United States, United Kingdom, and certain other countries, we make contributions to defined contribution plans. For our U.S. employee savings plan, which represents a majority of our contribution expense, we provide a 75% match on the first 6% of the employee salary deferral, subject to statutory limitations. For our international defined contribution plans, we provide various levels of contributions, based on salary, subject to stipulated or statutory limitations. The expense for our defined contribution plans was as follows:

	Year Ended December 31,							
In thousands	·	2022		2021		2020		
Defined contribution plans expense	\$	14,241	\$	18,287	\$	18,424		

Note 11: Income Taxes

Beginning January 1, 2022, the Tax Cuts and Jobs Act of 2017 eliminated the option to deduct research and development expenditures currently and requires taxpayers to capitalize and amortize them over five or fifteen years, dependent upon the geography in which the expenditures are incurred. Although Congress has considered legislation that would defer, modify, or repeal the capitalization and amortization requirement, as of year-end no such deferral has been passed. The income tax provision has been prepared according to currently enacted tax legislation.

In August 2022, the Inflation Reduction Act was signed into law, which made a number of changes to the Internal Revenue Code, including adding a 1% excise tax on stock buybacks by publicly traded corporations and a 15% minimum tax on adjusted financial statement income of certain large companies. We are subject to the new 1% excise tax beginning January 1, 2023, but the amount will vary depending upon various factors. The 15% minimum tax only applies to corporations with average book income in excess of \$1 billion, so is not currently applicable.

The following table summarizes the provision (benefit) for U.S. federal, state, and foreign taxes on income from continuing operations:

	Year Ended December 31,						
In thousands	2022	2021		2020			
Current:	·						
Federal	\$ (2,692)	\$ 20,19	97 \$	(963)			
State and local	3,698	7,2	71	1,731			
Foreign	25,433	12,59	94	12,409			
Total current	 26,439	40,0	52	13,177			
Deferred:							
Federal	(24,167)	(36,19	96)	(2,852)			
State and local	(4,723)	(12,18	86)	(3,340)			
Foreign	(23,832)	(12,65	57)	(60,444)			
Total deferred	 (52,722)	(61,03	B9)	(66,636)			
Change in valuation allowance	20,087	(24,53	35)	53,697			
Total provision (benefit) for income taxes	\$ (6,196)	\$ (45,5)	2) \$	238			

The change in the valuation allowance does not include the impacts of currency translation adjustments, acquisitions, or significant intercompany transactions.

Our tax provision (benefit) as a percentage of income before tax was 39%, 37%, and less than 1% for 2022, 2021, and 2020. A reconciliation of income taxes at the U.S. federal statutory rate of 21% to the consolidated actual tax rate is as follows:

	Year Ended December 31,						
In thousands		2022		2021		2020	
Income (loss) before income taxes							
Domestic	\$	(19,104)	\$	(91,579)	\$	24,010	
Foreign		3,361		(32,231)		(80,649)	
Total income (loss) before income taxes	\$	(15,743)	\$	(123,810)	\$	(56,639)	
Expected federal income tax provision (benefit)	\$	(3,306)	\$	(26,000)	\$	(11,894)	
Divestitures		1,578		_		10,936	
Change in valuation allowance		20,087		(24,535)		53,697	
Onshoring of international operations		_		(10,933)		_	
Stock-based compensation		1,611		(2,465)		(163)	
Foreign earnings		(22,244)		25,738		(58,649)	
Tax credits		(10,967)		(8,988)		(9,101)	
Uncertain tax positions, including interest and penalties		(2,053)		6,693		11,144	
Change in tax rates		385		(1,919)		557	
State income tax provision (benefit), net of federal effect		(2,873)		(5,722)		(1,997)	
U.S. tax provision on foreign earnings		146		58		142	
Nondeductible goodwill impairment		6,375		_		_	
Local foreign taxes		551		667		1,298	
Other, net		4,514		1,894		4,268	
Total provision (benefit) from income taxes	\$	(6,196)	\$	(45,512)	\$	238	

Deferred tax assets and liabilities consist of the following:

8.					
	 December 31,				
In thousands	2022		2021		
Deferred tax assets					
Loss carryforwards ⁽¹⁾	\$ 405,674	\$	412,023		
Tax credits ⁽²⁾	44,790		39,767		
Accrued expenses	18,774		39,511		
Pension plan benefits expense	7,037		17,140		
Warranty reserves	8,535		9,302		
Depreciation and amortization	72,505		94,917		
Equity compensation	7,061		6,126		
Inventory valuation	5,356		2,593		
Deferred revenue	13,346		11,534		
Interest	11,721		17,971		
Leases	9,543		9,460		
Capitalized research costs	74,058		29,246		
Other deferred tax assets, net	 7,986		9,062		
Total deferred tax assets	686,386		698,652		
Valuation allowance	(427,423)		(443,593)		
Total deferred tax assets, net of valuation allowance	258,963		255,059		
Deferred tax liabilities					
Depreciation and amortization	(34,909)		(56,897)		
Leases	(8,274)		(8,489)		
Other deferred tax liabilities, net	(4,631)		(10,201)		
Total deferred tax liabilities	 (47,814)		(75,587)		
Net deferred tax assets	\$ 211,149	\$	179,472		

⁽¹⁾ For tax return purposes at December 31, 2022, we had U.S. federal loss carryforwards of \$4.2 million, which begin to expire in the year 2023. At December 31, 2022, we have net operating loss carryforwards in Luxembourg of \$1.3 billion, the majority of which can be carried forward indefinitely, offset by a full valuation allowance. The remaining portion of the loss carryforwards are composed primarily of losses in various other state and foreign jurisdictions. The majority of these losses can be carried forward indefinitely. At December 31, 2022, there was a valuation allowance of \$427.4 million primarily associated with foreign loss carryforwards.

Changes in the valuation allowance for deferred tax assets are summarized as follows:

	Year Ended December 31,				
In thousands	2022		2021		2020
Balance at beginning of period	\$ 443,593	\$	503,859	\$	427,030
Other adjustments	(36,257)		(35,731)		23,132
Additions charged to costs and expenses	20,087		(24,535)		53,697
Balance at end of period, noncurrent	\$ 427,423	\$	443,593	\$	503,859

We recognize valuation allowances to reduce deferred tax assets to the extent we believe it is more likely than not that a portion of such assets will not be realized. In making such determinations, we consider all available favorable and unfavorable evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies, and our ability to carry back losses to prior years. We are required to make assumptions and judgments about potential outcomes that lie outside management's control. Our most sensitive and critical factors are the projection, source, and character of future taxable income. Although realization is not assured, management believes it is more likely than not that deferred tax assets, net

⁽²⁾ For tax return purposes at December 31, 2022, we had: U.S. general business credits of \$47.1 million, which begin to expire in 2037; and state tax credits of \$41.9 million, which begin to expire in 2023.

of valuation allowance, will be realized. The amount of deferred tax assets considered realizable, however, could be reduced in the near term if estimates of future taxable income during the carryforward periods are reduced.

We do not provide U.S. deferred taxes on temporary differences related to our foreign investments that are considered permanent in duration. These temporary differences include undistributed foreign earnings of \$43.0 million and \$25.7 million at December 31, 2022 and 2021. Foreign taxes have been provided on these undistributed foreign earnings. As a result of recent changes in U.S. tax legislation, any repatriation of these earnings would not result in additional U.S. federal income tax.

We are subject to income tax in the United States and numerous foreign jurisdictions. Significant judgment is required in evaluating our tax positions and determining our provision for income taxes. During the ordinary course of business, there are many transactions and calculations for which the ultimate tax determination is uncertain. We establish reserves for tax-related uncertainties based on estimates of whether, and the extent to which, additional taxes will be due. These reserves are established when we believe that certain positions might be challenged despite our belief that our tax return positions are fully supportable. We adjust these reserves in light of changing facts and circumstances, such as the outcome of tax audits. The provision for income taxes includes the impact of reserve positions and changes to reserves that are considered appropriate.

A reconciliation of the beginning and ending amount of unrecognized tax benefits were as follows:

In thousands	Total
Unrecognized tax benefits at January 1, 2020	\$ 121,715
Gross increase to positions in prior years	633
Gross decrease to positions in prior years	(2,140)
Gross increases to current period tax positions	14,821
Audit settlements	(795)
Decrease related to lapsing of statute of limitations	(2,381)
Effect of change in exchange rates	4,057
Unrecognized tax benefits at December 31, 2020	\$ 135,910
Gross increase to positions in prior years	570
Gross decrease to positions in prior years	(19,709)
Gross increases to current period tax positions	31,456
Audit settlements	_
Decrease related to lapsing of statute of limitations	(4,535)
Effect of change in exchange rates	(4,163)
Unrecognized tax benefits at December 31, 2021	\$ 139,529
Gross increase to positions in prior years	14,450
Gross decrease to positions in prior years	(2,786)
Gross increases to current period tax positions	4,702
Audit settlements	_
Decrease related to lapsing of statute of limitations	(23,164)
Effect of change in exchange rates	(2,587)
Unrecognized tax benefits at December 31, 2022	\$ 130,144

	At December 31,					
In thousands	2022 2021			2020		
The amount of unrecognized tax benefits that, if recognized, would affect our effective tax						
rate	\$	130,137	\$	139,503	\$	134,473

If certain unrecognized tax benefits are recognized they would create additional deferred tax assets. These assets would require a full valuation allowance in certain locations based upon present circumstances.

We classify interest expense and penalties related to unrecognized tax benefits and interest income on tax overpayments as components of income tax expense. The net interest and penalties expense recognized were as follows:

	 Year Ended December 31,				
In thousands	 2022		2021		2020
Net interest and penalties expense (benefit)	\$ 4,665	\$	(1,097)	\$	400

	At December 31,			
In thousands	2022	202	1	
Accrued interest	\$ 7,575	\$	2,964	
Accrued penalties	567		747	

At December 31, 2022, we are under examination by certain tax authorities. Subsequent to year end we expect to receive an assessment from German tax authorities for years 2014-2017. We have agreed to settle certain issues with Germany, and plan to appeal or litigate others. We believe we have appropriately accrued for the expected outcome of all tax matters and do not currently anticipate that the ultimate resolution of these examinations will have a material adverse effect on our financial condition, future results of operations, or cash flows.

Based upon the timing and outcome of examinations, litigation, the impact of legislative, regulatory, and judicial developments, and the impact of these items on the statute of limitations, it is reasonably possible that the related unrecognized tax benefits could change from those recognized within the next twelve months. However, at this time, an estimate of the range of reasonably possible adjustments to the balance of unrecognized tax benefits cannot be made.

We file income tax returns in various jurisdictions. We are subject to income tax examination by tax authorities in our major tax jurisdictions as follows:

Tax Jurisdiction	Years Subject to Audit
U.S. federal	Subsequent to 2002
France	Subsequent to 2018
Germany	Subsequent to 2013
United Kingdom	Subsequent to 2018
Indonesia	Subsequent to 2017
Italy	Subsequent to 2016

Note 12: Commitments and Contingencies

Guarantees and Indemnifications

We are often required to obtain standby letters of credit (LOCs) or bonds in support of our obligations for customer contracts. These standby LOCs or bonds typically provide a guarantee to the customer for our future performance, which usually covers the installation phase of a contract and may, on occasion, cover the operations and maintenance phase of outsourcing contracts.

Our available lines of credit, outstanding standby LOCs, and bonds were as follows:

	At December			er 31,	
In thousands		2022	2	2021	
Credit facility					
Multicurrency revolving line of credit	\$	500,000	\$	500,000	
Standby LOCs issued and outstanding		(55,990)		(64,374)	
Net available for additional borrowings under the multicurrency revolving line of credit	\$	444,010	\$	435,626	
Net available for additional standby LOCs under sub-facility	\$	244,010	\$	235,626	
Unsecured multicurrency revolving lines of credit with various financial institutions					
Multicurrency revolving lines of credit	\$	81,781	\$	94,845	
Standby LOCs issued and outstanding		(22,530)		(19,957)	
Short-term borrowings		_		_	
Net available for additional borrowings and LOCs	\$	59,251	\$	74,888	
Unsecured surety bonds in force	\$	285,754	\$	281,270	

In the event any such standby LOC or bond is called, we would be obligated to reimburse the issuer of the standby LOC or bond; however, as of February 27, 2023, we do not believe any outstanding standby LOCs or bonds will be called.

We generally provide an indemnification related to the infringement of any patent, copyright, trademark, or other intellectual property right on software or equipment within our sales contracts, which indemnifies the customer from, and pays the resulting costs, damages, and attorney's fees awarded against a customer with respect to, such a claim provided that (a) the customer promptly notifies us in writing of the claim and (b) we have the sole control of the defense and all related settlement negotiations. We may also provide an indemnification to our customers for third-party claims resulting from damages caused by the negligence or willful misconduct of our employees/agents in connection with the performance of certain contracts. The terms of our indemnifications generally do not limit the maximum potential payments. It is not possible to predict the maximum potential amount of future payments under these or similar agreements.

Legal Matters

We are subject to various legal proceedings and claims of which the outcomes are subject to significant uncertainty. Our policy is to assess the likelihood of any adverse judgments or outcomes related to legal matters, as well as ranges of probable losses. A determination of the amount of the liability required, if any, for these contingencies is made after an analysis of each known issue. A liability would be recognized and charged to operating expense when we determine that a loss is probable and the amount can be reasonably estimated. Additionally, we disclose contingencies for which a material loss is reasonably possible, but not probable.

Warranty

A summary of the warranty accrual account activity is as follows:

	Year Ended December 31,					
In thousands		2022		2021		2020
Beginning balance	\$	32,022	\$	41,390	\$	53,241
New product warranties		5,061		4,848		3,616
Other adjustments and expirations, net		(882)		551		7,736
Claims activity		(9,719)		(13,593)		(25,582)
Warranties reclassified to held for sale		_		(90)		_
Effect of change in exchange rates		(784)		(1,084)		2,379
Ending balance	·	25,698		32,022		41,390
Less: current portion of warranty		18,203		18,406		28,329
Long-term warranty	\$	7,495	\$	13,616	\$	13,061

Total warranty expense is classified within cost of revenues and consists of new product warranties issued, costs related to insurance and supplier recoveries, other changes and adjustments to warranties, and customer claims.

In conjunction with the business divestiture to Dresser (refer to Note 3: Certain Balance Sheet Components), the related disposal group was classified as held for sale during the fourth quarter of 2021. The disposal group was removed from the balance sheet when the transaction closed on February 28, 2022. Refer to Note 18: Sale of Businesses for additional information on the transaction.

Warranty expense was as follows:

	Year Ended December 31,				
In thousands	 2022		2021		2020
Total warranty expense	\$ 4,179	\$	5,399	\$	11,539

Warranty expense decreased during the year ended December 31, 2022 compared with the same period in 2021. The lower costs in 2022 are primarily the result of a \$2.6 million change in estimated liability relating to resolution for gas interface modules, offset in part by recognition of \$1.4 million for incremental specific reserves in North America Networked Solutions.

Warranty expense decreased during the year ended December 31, 2021 compared with the same period in 2020. The lower costs in 2021 are primarily the result of incremental specific reserves recognized in 2020 including \$3.0 million for water products in Europe, Middle East, and Africa Device Solutions and \$2.0 million for electric and water products in North America Networked Solutions.

Health Benefits

We are self-insured for a substantial portion of the cost of our U.S. employee group health insurance. We purchase insurance from a third-party, which provides individual and aggregate stop-loss protection for these costs. Each reporting period, we expense the costs of our health insurance plan including paid claims, the change in the estimate of incurred but not reported (IBNR) claims, taxes, and administrative fees (collectively, the plan costs).

Plan costs were as follows:

	 Year Ended December 31,				
In thousands	 2022		2021		2020
Plan costs	\$ 37,942	\$	39,187	\$	36,672

IBNR accrual, which is included in wages and benefits payable, was as follows:

		At December 31,					
In thousands	2022		2021				
IBNR accrual	\$	4,277 \$	3,478				

Our IBNR accrual and expenses may fluctuate due to the number of plan participants, claims activity, and deductible limits. For our employees located outside of the United States, health benefits are provided primarily through governmental social plans, which are funded through employee and employer tax withholdings.

Note 13: Restructuring

2021 Projects

On October 29, 2021, our Board of Directors approved a restructuring plan (the 2021 Projects), which in conjunction with the announcement of the sale of certain Gas product lines from our Device Solutions manufacturing and business operations in Europe and North America to Dresser (refer to Note 18: Sale of Businesses), includes activities to drive reductions in certain locations and functional support areas. These projects are expected to be substantially complete by the end of 2024.

The total expected restructuring costs, the restructuring costs recognized, and the remaining expected restructuring costs related to the 2021 Projects were as follows:

In thousands	xpected Costs at mber 31, 2022	Periods				the Year Ended December			xpected Remaining Costs to be Recognized at December 31, 2022
Employee severance costs	\$ 38,359	\$	49,013	\$	(10,654)	\$	_		
Asset impairments & net loss on sale or disposal	8,599		9,246		(647)		_		
Other restructuring costs	5,509		2,452		632		2,425		
Total	\$ 52,467	\$	60,711	\$	(10,669)	\$	2,425		

2020 Projects

In September 2020, our Board of Directors approved a restructuring plan (the 2020 Projects), which includes activities that continue our efforts to optimize our global supply chain and manufacturing operations, sales and marketing organizations, and other overhead. These projects are scheduled to be substantially complete by the end of 2023.

The total expected restructuring costs, the restructuring costs recognized, and the remaining expected restructuring costs related to the 2020 Projects were as follows:

In thousands	Expected Costs at cember 31, 2022	Costs Recognized in Prior Periods			the Year Ended December 31, 2022		the Year Ended December		to be Recognized at December 31, 2022	
Employee severance costs	\$ 20,382	\$	24,532	\$	(4,150)	\$	_			
Asset impairments & net loss on sale or disposal	6,465		6,442		23		_			
Other restructuring costs	7,841		6,170		1,171		500			
Total	\$ 34,688	\$	37,144	\$	(2,956)	\$	500			

The following table summarizes the activity within the restructuring related balance sheet accounts for the 2021 Projects and the 2020 Projects during the year ended December 31, 2022:

In thousands	A	ccrued Employee Severance	Impairments & Net s (Gain) on Sale or Disposal	Other Accrued Costs	Total
Beginning balance, January 1, 2022	\$	79,876	\$ _	\$ 5,130	\$ 85,006
Costs charged to expense		(14,804)	(624)	1,803	(13,625)
Cash payments		(21,683)	(242)	(3,840)	(25,765)
Cash receipts		_	3,937	_	3,937
Net assets disposed and impaired		_	(3,071)	_	(3,071)
Effect of change in exchange rates		(3,831)	_	(207)	(4,038)
Ending balance, December 31, 2022	\$	39,558	\$ _	\$ 2,886	\$ 42,444

During the year ended December 31, 2022, \$14.8 million in accrued employee severance has been released due to employee attrition and other employee agreements.

Asset impairments are determined at the asset group level. Revenues and net operating income from the activities we have exited or will exit under the restructuring projects are not material to our operating segments or consolidated results.

Certain of Itron's employees are represented by unions or works councils, which requires consultation, and potential restructuring projects may be subject to regulatory approval, both of which could impact the timing of planned savings in certain jurisdictions.

Other restructuring costs include expenses for employee relocation, professional fees associated with employee severance, costs to exit the facilities once the operations in those facilities have ceased, and other costs associated with the liquidation of any affected legal entities. Costs associated with restructuring activities are generally presented in the Consolidated Statements of Operations as restructuring, except for certain costs associated with inventory write-downs, which are classified within cost of

revenues, and accelerated depreciation expense, which is recognized according to the use of the asset. Restructuring expense is part of the Corporate unallocated segment and does not impact the results of our operating segments.

The current portions of restructuring liabilities were \$14.5 million and \$29.7 million as of December 31, 2022 and 2021 and are classified within other current liabilities on the Consolidated Balance Sheets. The long-term portions of restructuring liabilities were \$27.9 million and \$55.3 million as of December 31, 2022 and 2021. The long-term portions of restructuring liabilities are classified within other long-term obligations on the Consolidated Balance Sheet and include severance accruals and facility exit costs.

Note 14: Shareholders' Equity

Preferred Stock

We have authorized the issuance of 10 million shares of preferred stock with no par value. In the event of a liquidation, dissolution, or winding up of the affairs of the corporation, whether voluntary or involuntary, the holders of any outstanding preferred stock would be entitled to be paid a preferential amount per share to be determined by the Board of Directors prior to any payment to holders of common stock. There was no preferred stock issued or outstanding at December 31, 2022 or 2021.

Stock Repurchase Program

Effective November 1, 2021, Itron's Board of Directors authorized a share repurchase program of up to \$100 million of our common stock over an 18-month period (the 2021 Stock Repurchase Program). Repurchases are made in the open market or in privately negotiated transactions, and in accordance with applicable securities laws. During the year ended December 31, 2021, we repurchased 125,314 shares of our common stock under the 2021 Stock Repurchase Program. The average price paid per share was \$64.05 (excluding commissions) for a total of \$8.0 million. During the first quarter of 2022, we repurchased 279,968 shares of our common stock under the 2021 Stock Repurchase Program. The average price paid per share was \$60.60 (excluding commissions) for a total of \$17.0 million. No shares were repurchased for the remainder of 2022. Following the announcement of the program and through 2022, we repurchased 405,282 shares at an average price paid per share of \$61.67 (excluding commissions) for total of \$25.0 million. As of December 31, 2022, we are authorized to repurchase up to an additional \$75 million before May 1, 2023.

Issuance of Common Stock

On March 12, 2021, we closed the sale of 4,472,222 shares of our common stock in a public offering, resulting in net proceeds to us of approximately \$389.4 million, after deducting underwriters' discounts of the offering.

Convertible Note Hedge Transactions

We paid an aggregate amount of \$84.1 million for the Convertible Note Hedge Transactions. The Convertible Note Hedge Transactions cover, subject to anti-dilution adjustments substantially similar to those in the Convertible Notes, approximately 3.7 million shares of our common stock, the same number of shares initially underlying the Convertible Notes, at a strike price of approximately \$126.00, subject to customary adjustments. The Convertible Note Hedge Transactions will expire upon the maturity of the Convertible Notes, subject to earlier exercise or termination. The Convertible Note Hedge Transactions are expected generally to reduce the potential dilutive effect of the conversion of our Convertible Notes and/or offset any cash payments we are required to make in excess of the principal amount of the converted notes, as the case may be, in the event the price per share of our common stock, as measured under the terms of the Convertible Note Hedge Transactions, is greater than the strike price of the Convertible Note Hedge Transactions. The Convertible Note Hedge Transactions meet the criteria in ASC 815-40 to be classified within Stockholders' Equity, therefore the Convertible Note Hedge Transactions are not revalued after their issuance.

We made a tax election to integrate the Convertible Notes and the call options. We are retaining the identification statements in our books and records, together with a schedule providing the accruals on the synthetic debt instruments. The accounting impact of this tax election makes the call options deductible as original issue discount for tax purposes over the term of the Convertible Note, and results in a \$20.6 million deferred tax asset recognized through equity.

Warrant Transactions

In addition, concurrently with entering into the Convertible Note Hedge Transactions, we separately entered into privately-negotiated Warrant Transactions, whereby we sold to the Counterparties warrants to acquire, collectively, subject to anti-dilution adjustments, 3.7 million shares of our common stock at an initial strike price of \$180.00 per share, which represents a premium of 100% over the public offering price in the common stock issuance. We received aggregate proceeds of \$45.3 million from the Warrant Transactions with the Counterparties, with such proceeds partially offsetting the costs of entering into the Convertible Note Hedge Transactions. The warrants expire in June 2026. If the market value per share of our common stock, as measured under the Warrant Transactions, exceeds the strike price of the warrants, the warrants will have a

dilutive effect on our earnings per share, unless we elect, subject to certain conditions, to settle the warrants in cash. The warrants meet the criteria in ASC 815-40 to be classified within Stockholders' Equity, and therefore the warrants are not revalued after issuance.

Accumulated Other Comprehensive Income (Loss)

The changes in the components of AOCI, net of tax, were as follows:

In thousands	Foreign Currency Translation Adjustments	Net Unrealized Gain (Loss) on Derivative Instruments	Net Unrealized Gain (Loss) on Nonderivative Instruments	Pension Benefit Obligation Adjustments	Accumulated Other Comprehensive Income (Loss)
Balances at January 1, 2020	\$ (157,999)	\$ (723)	\$ (14,380)	\$ (31,570)	\$ (204,672)
OCI before reclassifications	21,082	(7,002)	_	(8,689)	5,391
Amounts reclassified from AOCI	52,074	6,104	_	2,577	60,755
Total other comprehensive income (loss)	73,156	(898)		(6,112)	66,146
Balances at December 31, 2020	(84,843)	(1,621)	(14,380)	(37,682)	(138,526)
OCI before reclassifications	(26,923)	1,121	_	14,264	(11,538)
Amounts reclassified from AOCI	_	290	_	1,676	1,966
Total other comprehensive income (loss)	(26,923)	1,411		15,940	(9,572)
Balances at December 31, 2021	(111,766)	(210)	(14,380)	(21,742)	(148,098)
OCI before reclassifications	(28,748)			23,170	(5,578)
Amounts reclassified from AOCI	57,321	_	_	1,681	59,002
Total other comprehensive income (loss)	28,573			24,851	53,424
Balances at December 31, 2022	\$ (83,193)	\$ (210)	\$ (14,380)	\$ 3,109	\$ (94,674)

In determining the amount of the impairment loss for the assets of the transaction with Dresser during the fourth quarter of 2021, we included \$59.7 million of accumulated foreign currency translation losses and \$0.9 million in unrealized defined benefit plan losses. Upon closing of the sale transaction in the first quarter of 2022, the then outstanding amounts in AOCI were reclassified to net income (loss) through loss on sale of businesses for a total of \$55.4 million, with a corresponding reversal of the impairment loss originally booked in the fourth quarter of 2021. Refer to Note 18: Sale of Businesses for additional information on the transaction.

During the third quarter of 2022, we substantially liquidated our legal entity in Russia, recognizing a loss of \$1.9 million for the reclassification of the currency translation adjustment from accumulated other comprehensive income (loss) related to the disposal of the business.

The before-tax, income tax (provision) benefit, and net-of-tax amounts related to each component of OCI were as follows:

	Year Ended December 31,							
In thousands	· · · · · · · · · · · · · · · · · · ·	2022		2021	2020			
Before-tax amount								
Foreign currency translation adjustment	\$	(28,921)	\$	(26,757)	\$ 20,947			
Foreign currency translation adjustment reclassified to net loss on sale or disposal of businesses		57,321		_	52,074			
Net unrealized gain (loss) on derivative instruments, designated as cash flow hedges		_		1,139	(7,519)			
Net hedging (gain) loss reclassified to net loss		_		756	6,190			
Net unrealized gain (loss) on defined benefit plans		23,519		14,426	(8,798)			
Net defined benefit plan (gain) loss reclassified to net loss		1,706		1,695	2,609			
Total other comprehensive income (loss), before tax		53,625		(8,741)	65,503			
Tax (provision) benefit								
Foreign currency translation adjustment		173		(166)	135			
Foreign currency translation adjustment reclassified to net loss on sale or disposal of businesses		_		_	_			
Net unrealized gain (loss) on derivative instruments, designated as cash flow hedges		_		(18)	517			
Net hedging (gain) loss reclassified to net loss		_		(466)	(86)			
Net unrealized gain (loss) on defined benefit plans		(349)		(162)	109			
Net defined benefit plan (gain) loss reclassified to net loss		(25)		(19)	(32)			
Total other comprehensive income (loss) tax (provision) benefit		(201)		(831)	643			
Net-of-tax amount								
Foreign currency translation adjustment		(28,748)		(26,923)	21,082			
Foreign currency translation adjustment reclassified to net loss on sale or disposal of businesses		57,321		_	52,074			
Net unrealized gain (loss) on derivative instruments, designated as cash flow hedges		_		1,121	(7,002)			
Net hedging (gain) loss reclassified to net loss		_		290	6,104			
Net unrealized gain (loss) on defined benefit plans		23,170		14,264	(8,689)			
Net defined benefit plan (gain) loss reclassified to net loss		1,681		1,676	2,577			
Total other comprehensive income (loss), net of tax	\$	53,424	\$	(9,572)	\$ 66,146			

Note 15: Fair Value of Financial Instruments

The fair values at December 31, 2022 and 2021 do not reflect subsequent changes in the economy, interest rates, tax rates, and other variables that may affect the determination of fair value.

	Decembe	er 31, 2022	December 31, 2021			
In thousands	Carrying Amount	Fair Value	Carrying Amount	Fair Value		
Credit facility						
Multicurrency revolving line of credit	\$ —	\$ —	\$ —	\$ —		
Convertible notes	452,526	377,200	450,228	422,749		

The following methods and assumptions were used in estimating fair values:

Cash and cash equivalents: Due to the liquid nature of these instruments, the carrying amount approximates fair value (Level 1).

Credit Facility - multicurrency revolving line of credit: The revolver is not traded publicly. The fair values, which are determined based upon a hypothetical market participant, are calculated using a discounted cash flow model with Level 2

inputs, including estimates of incremental borrowing rates for debt with similar terms, maturities, and credit profiles. Refer to Note 6: Debt for a further discussion of our debt.

Convertible Notes: The Convertible Notes are not listed on any securities exchange but may be actively traded. The fair value is estimated using Level 1 inputs, as it is based on quoted prices for these instruments in active markets.

Derivatives: Refer to Note 7: Derivative Financial Instruments for a description of our methods and assumptions in determining the fair value of our derivatives, which were determined using Level 2 inputs. Each derivative asset and liability has a carrying value equal to fair value.

Note 16: Segment Information

We operate under the Itron brand worldwide and manage and report under three operating segments: Device Solutions, Networked Solutions, and Outcomes.

We have three GAAP measures of segment performance: revenues, gross profit (gross margin), and operating income (operating margin). Intersegment revenues are minimal. Certain operating expenses are allocated to the operating segments based upon internally established allocation methodologies. Corporate operating expenses, interest income, interest expense, other income (expense), and the income tax provision (benefit) are neither allocated to the segments, nor are they included in the measure of segment performance. Goodwill impairment charges are recognized in Corporate unallocated. Refer to Note 5: Goodwill for discussion of goodwill impairment recognized during the second quarter of 2022. In addition, we allocate only certain production assets and intangible assets to our operating segments. We do not manage the performance of the segments on a balance sheet basis.

Segment Products

Device Solutions — This segment primarily includes hardware products used for measurement, control, or sensing that do not have communications capability embedded for use with our broader Itron systems, i.e., hardware-based products not part of a complete end-to-end solution. Examples from the Device Solutions portfolio include: standard endpoints that are shipped without Itron communications, such as our standard gas, electricity, and water meters for a variety of global markets and adhering to regulations and standards within those markets, as well as our heat and allocation products; communicating meters that are not a part of an Itron end-to-end solution, such as Smart Spec meters; and the implementation and installation of non-communicating devices.

Networked Solutions – This segment primarily includes a combination of communicating devices (e.g., smart meters, modules, endpoints, and sensors), network infrastructure, and associated application software designed and sold as a complete solution for acquiring and transporting robust application-specific data. Networked Solutions includes products and software for the implementation, installation, and management of communicating devices and data networks. The Industrial Internet of Things (IIoT) solutions supported by this segment include automated meter reading (AMR), advanced metering infrastructure (AMI), distributed energy resource management (DERMs), smart grid and distribution automation, smart street lighting, and an ever-growing set of smart city applications such as traffic management, smart parking, air quality monitoring, electric vehicle charging, customer engagement, digital signage, acoustic (e.g., gunshot) detection, and leak detection and mitigation for both gas and water systems. Our IIoT platform allows all these utility and smart city applications to be run and managed on a single, multi-purpose network.

Outcomes – This segment primarily includes our value-added, enhanced software and services in which we manage, organize, analyze, and interpret raw, anonymized and aggregated data to improve decision making, maximize operational profitability, drive resource efficiency, improve grid analytics, and deliver results for consumers, utilities, and smart cities. Outcomes supports high-value use cases such as data management, grid operations, distributed intelligence, operations management, gas distribution and safety, water operations management, revenue assurance, DERMs, energy forecasting, consumer engagement, smart payment, and fleet energy resource management. Utilities leverage these outcomes to capitalize on the power of networks and devices, empower their workforce, maximize their operations and enhance the customer experience. The revenues from these offerings are primarily recurring in nature and would include any direct management of Device Solutions, Networked Solutions, and other products on behalf of our end customers.

Revenues, gross profit, and operating income associated with our operating segments were as follows:

	Year Ended December 31,								
In thousands		2022			2020				
Product revenues									
Device Solutions	\$	433,354	\$	635,103	\$	684,517			
Networked Solutions		1,002,156		974,531		1,148,698			
Outcomes		64,733		68,561		55,958			
Total Company	\$	1,500,243	\$	1,678,195	\$	1,889,173			
Service revenues									
Device Solutions	\$	5,356	\$	10,001	\$	9,478			
Networked Solutions		117,112		118,100		100,704			
Outcomes		172,853		175,276		173,995			
Total Company	\$	295,321	\$	303,377	\$	284,177			
Total revenues									
Device Solutions	\$	438,710	\$	645,104	\$	693,995			
Networked Solutions		1,119,268		1,092,631		1,249,402			
Outcomes		237,586		243,837		229,953			
Total Company	\$	1,795,564	\$	1,981,572	\$	2,173,350			
Gross profit									
Device Solutions	\$	61,778	\$	99,355	\$	86,859			
Networked Solutions		361,975		378,633		432,906			
Outcomes		98,436		95,181		82,402			
Total Company	\$	522,189	\$	573,169	\$	602,167			
Operating income (loss)									
Device Solutions	\$	26,703	\$	57,217	\$	40,769			
Networked Solutions		248,268		254,434		308,099			
Outcomes		46,247		50,631		47,619			
Corporate unallocated		(328,657)		(441,581)		(406,882			
Total Company		(7,439)		(79,299)		(10,395			
Total other income (expense)		(8,304)		(44,511)		(46,244			
Loss before income taxes	\$	(15,743)	\$	(123,810)	\$	(56,639			

Our Corporate unallocated operating loss for the years ended December 31, 2022 and 2021 include losses from the sale of businesses of \$3.5 million and \$64.3 million. Refer to Note 18: Sale of Businesses for additional information on the transactions.

For all periods presented, no single customer represents more than 10% of total company revenue.

Revenues by region were as follows:

	Year Ended December 31,					
In thousands		2022		2021		2020
United States and Canada	\$	1,302,241	\$	1,273,868	\$	1,434,577
Europe, Middle East, and Africa		391,556		568,008		594,264
Asia Pacific and Latin America (1)		101,767		139,696		144,509
Total Company	\$	1,795,564	\$	1,981,572	\$	2,173,350

⁽¹⁾ On June 25, 2020, we sold our Latin American operations. We continue to sell into the region through a distributor.

Property, plant, and equipment, net, by geographic area were as follows:

	At December 31,					
In thousands	2022		2021			
United States	\$ 85,704	\$	94,899			
Outside United States	54,419		68,285			
Total Company	\$ 140,123	\$	163,184			

Depreciation expense is allocated to the operating segments based upon each segment's use of the assets. All amortization expense is recognized within Corporate unallocated. Depreciation and amortization of intangible assets expense associated with our operating segments was as follows:

	Year Ended December 31,							
In thousands	2022 2021 2020					2020		
Device Solutions	\$	14,452	\$	22,884	\$	25,058		
Networked Solutions		17,539		16,607		16,965		
Outcomes		5,501		4,454		5,348		
Corporate unallocated		29,271		40,208		49,919		
Total Company	\$	66,763	\$	84,153	\$	97,290		

Note 17: Revenues

A summary of significant net changes in the contract assets and the contract liabilities balances during the period is as follows:

In thousands	liabilities, ract assets
Beginning balance, January 1, 2022	\$ 83,180
Revenues recognized from beginning contract liability	(47,997)
Cumulative catch-up adjustments	5,417
Increases due to amounts collected or due	312,173
Revenues recognized from current period increases	(275,348)
Other	(1,467)
Ending balance, December 31, 2022	\$ 75,958

On January 1, 2022, total contract assets were \$33.7 million and total contract liabilities were \$116.9 million. On December 31, 2022, total contract assets were \$57.0 million and total contract liabilities were \$133.0 million. The contract assets primarily relate to contracts that include a retention clause and allocations related to contracts with multiple performance obligations. The contract liabilities primarily relate to deferred revenue, such as extended warranty and maintenance cost. The cumulative catch-up adjustments relate to contract modifications, measure-of-progress changes, and changes in the estimate of the transaction price.

Transaction price allocated to the remaining performance obligations

Total transaction price allocated to remaining performance obligations represents committed but undelivered products and services for contracts and purchase orders at period end. Twelve-month remaining performance obligations represent the portion of total transaction price allocated to remaining performance obligations that we estimate will be recognized as revenue over the next 12 months. Total transaction price allocated to remaining performance obligations is not a complete measure of our future revenues as we also receive orders where the customer may have legal termination rights but are not likely to terminate.

Total transaction price allocated to remaining performance obligations related to contracts is approximately \$1.9 billion for the next 12 months and approximately \$1.6 billion for periods longer than 12 months. The total remaining performance obligations consist of product and service components. The service component relates primarily to maintenance agreements for which customers pay a full year's maintenance in advance, and service revenues are generally recognized over the service period. Total transaction price allocated to remaining performance obligations also includes our extended warranty contracts, for which revenue is recognized over the warranty period, and hardware, which is recognized as units are delivered. The estimate of when remaining performance obligations will be recognized requires significant judgment.

Cost to obtain a contract and cost to fulfill a contract with a customer

Cost to obtain a contract and costs to fulfill a contract were capitalized and amortized using a systematic rational approach to align with the transfer of control of underlying contracts with customers. While amounts were capitalized, they are not material.

Disaggregation of revenue

Refer to Note 16: Segment Information and the Consolidated Statements of Operations for disclosure regarding the disaggregation of revenue into categories, which depict how revenue and cash flows are affected by economic factors. Specifically, our operating segments and geographical regions as disclosed, and categories for products, which include hardware and software and services, are presented.

Note 18: Sale of Businesses

Latin America Divestiture

On June 25, 2020, we closed on the sale of five subsidiaries comprising our manufacturing and sales operations in Latin America to buyers led by Instalación Profesional y Tecnologías del Centro S.A. de C.V., a Mexican company doing business as Accell in Brazil (Accell), through the execution of various definitive stock purchase agreements. The sale of these Latin America-based operations is part of our continued strategy to improve profitability and focus on growing our Networked Solutions and Outcomes businesses in Latin America and throughout the world. We retained the intellectual property rights to our products sold in Latin America. As part of the transaction, we entered into an intellectual property license agreement whereby Accell pays a royalty on certain products manufactured by Accell using licensed Company intellectual property. In addition, Accell serves as the exclusive distributor for our Device Solutions, Networked Solutions, and Outcomes product and service offerings in Latin America.

The total sales price of \$35.0 million included deferred payments of \$21.1 million for working capital, which was to be paid in full by December 31, 2020, as evidenced by a promissory note, and the remainder in cash (\$4.5 million) and other deferred consideration. We recognized a total loss of \$59.8 million during the year ended 2020, as the result of the total of the net assets sold (including the cumulative translation adjustment in AOCI) exceeding the sales price.

In January 2021, we agreed to extend the payment terms on the remaining outstanding working capital balance of \$18.4 million. Accell had agreed to make monthly payments including interest through September 2022, under which we received full payments for January through March and partial payments in April and May (totaling \$3.8 million including \$0.7 million in interest). Based on Accell's failure to make timely payments, continued requests to defer payments significantly beyond the original maturity of the working capital note and the unfavorable impact of the COVID-19 pandemic on the Latin American markets, we determined to fully reserve the working capital and other deferred receivables, recognizing a loss on sale of business of \$26.8 million for the year ended December 31, 2021.

Sale to Dresser

On November 2, 2021, Itron entered into a definitive securities and asset purchase agreement to sell certain Gas product lines from our Device Solutions manufacturing and business operations in Europe and North America to Dresser. The sale included one German subsidiary – Itron GmbH along with its business operations, personnel, and the owned manufacturing facility in Karlsruhe; the business operations, personnel, and assets associated with the leased manufacturing facility in Argenteuil, France; and the business and manufacturing assets maintained at one of our contract manufacturers in North America. The base

sale price of this divestiture was \$75.0 million, with adjustments for (1) pension liabilities assumed by Dresser for related active employees and (2) the final working capital balance. Cash proceeds from the sale were \$55.9 million.

The transaction closed on February 28, 2022. The final sales price and loss on sale were determined after the finalization of the working capital adjustment, recognized in the fourth quarter of 2022. As of December 31, 2021, we recognized a pre-tax impairment loss of \$34.4 million as well as \$3.1 million for professional services in conjunction with the planned sale to Dresser (classified within loss on sale of businesses within the Consolidated Statements of Operations). In determining the amount of the impairment loss for the assets of this transaction during the fourth quarter of 2021, we included \$59.7 million of accumulated foreign currency translation losses and \$0.9 million in unrealized loss on defined benefit pension plans, both classified within AOCI. Upon closing of the sale transaction in the first quarter of 2022, the then outstanding amounts in AOCI were reclassified to net income through loss on sale of businesses for a total of \$55.4 million, with a corresponding reversal of the impairment loss originally booked in the fourth quarter of 2021. The difference between the amounts included for the impairment loss in the fourth quarter of 2021 and the first quarter of 2022 was driven by the change in the euro to U.S. dollar exchange rate, and operating results for the period owned in 2022.

In the first quarter of 2022, we recognized additional loss of \$2.2 million related to changes in the working capital balances and additional professional services. In the second quarter of 2022, the loss increased by \$0.2 million for professional services related to the divestiture. In the third quarter of 2022, we recognized additional loss of \$0.8 million related primarily to a true-up in the working capital balances. In the fourth quarter of 2022, we recognized additional loss of \$0.3 million related to changes in the working capital balance and other charges related to the finalization of the transaction. We recognized a total loss of \$3.5 million in 2022.

Note 19: Leases

We lease certain factories, service and distribution locations, offices, and equipment under operating leases. Our operating leases have initial lease terms ranging from one to 12 years, some of which include options to extend or renew the leases for up to 10 years. Certain lease agreements contain provisions for future rent increases. Our leases do not contain material residual value guarantees, and finance leases are not material.

The components of operating lease expense are as follows:

In thousands	Year Ended December 31,				
	2022 2021				
Operating lease cost	\$ 19,092	\$	20,577		
Variable lease cost	4,107		2,662		
Total operating lease cost	\$ 23,199	\$	23,239		

Supplemental cash flow information related to operating leases is as follows:

III tilousullas	Tear Ended December 51,			
		2022	2021	
Cash paid for amounts included in the measurement of operating lease liabilities	\$	19,214	\$	20,958
Right-of-use assets obtained in exchange for operating lease liabilities		5,597		8,342

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Supplemental balance sheet information related to operating leases is as follows:

In thousands	December	December 31, 2022 December 31, 2021		mber 31, 2021
Operating lease right-of-use assets, net	\$	52,826	\$	65,523
Other current liabilities		15,967		16,602
Operating lease liabilities		44,370		57,314
Total operating lease liability	\$	60,337	\$	73,916
Weighted average remaining lease term - Operating leases 3.8 years		-	4.7 years	
Weighted average discount rate - Operating leases		4.4 %		4.4 %

Amounts due under operating lease liabilities as of December 31, 2022 are as follows:

In thousands	Decei	December 31, 2022	
2023	\$	18,199	
2024		16,080	
2025		14,558	
2026		12,201	
2027		3,543	
Thereafter		1,033	
Total lease payments		65,614	
Less: imputed interest		(5,277)	
Total operating lease liability	\$	60,337	

Note 20: Subsequent Events

2023 Restructuring Projects

On February 23, 2023, the Board of Directors of Itron approved a restructuring plan (the 2023 Projects). The 2023 Projects include activities that continue the Company's efforts to optimize its global supply chain and manufacturing operations, sales and marketing organizations, and other overhead. These projects are to be substantially complete by early 2025. Itron estimates pre-tax restructuring charges of \$40-45 million. Of the total estimated charge, approximately 95% will result in cash expenditures, and the remainder to non-cash impairment charges. The majority of the expense will be recognized during the first quarter of 2023. Certain of Itron's employees are represented by unions or works councils, which requires consultation, and potential restructuring projects may be subject to regulatory approval.

Item 9: Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

There were no disagreements with our independent accountants on accounting and financial disclosure matters within the three year period ended December 31, 2022, or in any period subsequent to such date, through the date of this report.

Item 9A: Controls and Procedures

Evaluation of disclosure controls and procedures

An evaluation was performed under the supervision and with the participation of our Company's management, including the Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation 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. Based on that evaluation, the Company's management, including the Chief Executive Officer and Chief Financial Officer, concluded that as of December 31, 2022, the Company's disclosure controls and procedures were effective to ensure the information required to be disclosed by an issuer in the reports that it files or submits under the Securities Exchange Act of 1934 is accumulated and communicated to our management, including our principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f). Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework). Based on our evaluation under the 2013 Framework, management concluded that our internal control over financial reporting was effective as of December 31, 2022.

The effectiveness of our internal control over financial reporting as of December 31, 2022 has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report that is included in this Annual Report.

Changes in internal controls over financial reporting

There have been no changes in our internal control over financial reporting during the three months ended December 31, 2022 that materially affected, or are reasonably likely to materially affect, internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Itron, Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Itron, Inc. and subsidiaries (the "Company") 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 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 COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2022, of the Company and our report dated February 27, 2023, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying *Management's Annual Report on Internal Control Over Financial Reporting*. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (3) 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.

/s/ DELOITTE & TOUCHE LLP

Seattle, Washington February 27, 2023

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 section entitled "Proposal 1 – Election of Directors" appearing in our Proxy Statement for the Annual Meeting of Shareholders to be held on May 11, 2023 (the 2023 Proxy Statement) sets forth certain information with regard to our directors as required by Item 401 of Regulation S-K and is incorporated herein by reference.

Certain information with respect to persons who are or may be deemed to be executive officers of Itron, Inc. as required by Item 401 of Regulation S-K is set forth under the caption "Information about our Executive Officers" in Part I of this Annual Report.

The section entitled "Delinquent Section 16(a) Reports" appearing in the 2023 Proxy Statement sets forth certain information as required by Item 405 of Regulation S-K and is incorporated herein by reference.

The section entitled "Corporate Governance" appearing in the 2023 Proxy Statement sets forth certain information with respect to the Registrant's code of conduct and ethics as required by Item 406 of Regulation S-K and is incorporated herein by reference. Our code of conduct and ethics can be accessed on our website, at *www.itron.com* under the Investors section.

There were no material changes to the procedures by which security holders may recommend nominees to Itron's board of directors during 2023, as set forth by Item 407(c)(3) of Regulation S-K.

The section entitled "Corporate Governance" appearing in the 2023 Proxy Statement sets forth certain information regarding the Audit/Finance Committee, including the members of the Committee and the Audit/Finance Committee financial experts, as set forth by Item 407(d)(4) and (d)(5) of Regulation S-K and is incorporated herein by reference.

Item 11: Executive Compensation

The sections entitled "Compensation of Directors" and "Executive Compensation" appearing in the 2023 Proxy Statement set forth certain information with respect to the compensation of directors and management of Itron as required by Item 402 of Regulation S-K and are incorporated herein by reference.

The section entitled "Corporate Governance" appearing in the 2023 Proxy Statement sets forth certain information regarding members of the Compensation Committee required by Item 407(e)(4) of Regulation S-K and is incorporated herein by reference.

The section entitled "Compensation Committee Report" appearing in the 2023 Proxy Statement sets forth certain information required by Item 407(e)(5) of Regulation S-K and is incorporated herein by reference.

Item 12: Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The section entitled "Equity Compensation Plan Information" appearing in the 2023 Proxy Statement sets forth certain information required by Item 201(d) of Regulation S-K and is incorporated herein by reference.

The section entitled "Security Ownership of Certain Beneficial Owners and Management" appearing in the 2023 Proxy Statement sets forth certain information with respect to the ownership of our common stock as required by Item 403 of Regulation S-K and is incorporated herein by reference.

Item 13: Certain Relationships and Related Transactions, and Director Independence

The section entitled "Corporate Governance" appearing in the 2023 Proxy Statement sets forth certain information required by Item 404 of Regulation S-K and is incorporated herein by reference.

The section entitled "Corporate Governance" appearing in the 2023 Proxy Statement sets forth certain information with respect to director independence as required by Item 407(a) of Regulation S-K and is incorporated herein by reference.

Item 14: Principal Accountant Fees and Services

The section entitled "Independent Registered Public Accounting Firm's Audit Fees and Services" appearing in the 2023 Proxy Statement sets forth certain information with respect to the principal accounting fees and services and the Audit/Finance Committee's policy on pre-approval of audit and permissible non-audit services performed by our independent auditors as required by Item 9(e) of Schedule 14A and is incorporated herein by reference.

PART IV

Item 15: Exhibit and Financial Statement Schedules

(a) (1) Financial Statements:

The financial statements required by this item are submitted in Part II, Item 8: Financial Statements and Supplementary Data of this Annual Report on Form 10-K.

(a) (2) Financial Statement Schedule:

All schedules have been omitted because of the absence of conditions under which they are required or because the required information is included in the consolidated financial statements or the notes thereto.

(a) (3) Exhibits:

Exhibit Number	Description of Exhibits
2.1	Agreement and Plan of Merger, dated September 17, 2017, by and among Itron, Inc., Ivory Merger Sub, Inc., and Silver Spring, Inc. (Filed as Exhibit 2.1 to Itron Inc.'s Current Report on Form 8-K, filed on September 18, 2017)
3.1	Amended and Restated Articles of Incorporation of Itron, Inc. (Filed as Exhibit 3.1 to Itron, Inc.'s Annual Report on Form 10-K, filed on March 27, 2003)
3.2	Amended and Restated Bylaws of Itron, Inc. (Filed as Exhibit 3.2 to Itron, Inc.'s Current Report on Form 8-K, filed on February 28, 2022)
4.1	Security Agreement dated August 5, 2011 among Itron, Inc. and Wells Fargo Bank, National Association (Filed as Exhibit 4.2 to Form 8-K filed on August 8, 2011)
4.2	First Amendment to Security Agreement dated June 23, 2015 among Itron, Inc. and Wells Fargo Bank, National Association. (Filed as Exhibit 4.2 to Itron, Inc.'s Current Report on Form 8-K, filed on June 23, 2015)
4.3	Indenture, dated as of December 22, 2017 among Itron, Inc., the guarantors from time to time party thereto and U.S. Bank National Association, as trustee. (Filed as Exhibit 4.1 to Itron, Inc.'s Current Report on Form 8-K, filed on December 22, 2017)
4.4	Second Amended and Restated Credit Agreement dated January 5, 2018 among Itron, Inc. and a syndicate of banks led by Wells Fargo Bank, National Association, JPMorgan Chase Bank, N.A., J.P. Morgan Europe Limited, J.P. Morgan Securities PLC, BNP Paribas, and Silicon Valley Bank (Filed as Exhibit 4.1 to Itron, Inc.'s Current Report on Form 8-K, filed on January 12, 2018)
4.5	Amendment No. 1 dated October 18, 2019, to the Second Amended and Restated Credit Agreement dated January 5, 2018 among Itron, Inc., certain foreign borrowers, guarantors, lenders and issuing parties thereto, and Wells Fargo Bank, National Association, as administrative agent. (Filed as Exhibit 4.1 to Itron, Inc.'s Current Report on Form 8-K, filed on October 24, 2019)
4.6	Amendment No. 2 dated October 19, 2020, to the Second Amended and Restated Credit Agreement dated January 5, 2018 among Itron, Inc., certain foreign borrowers, guarantors, lenders and issuing parties thereto, and Wells Fargo Bank, National Association, as administrative agent. (Filed as Exhibit 4.1 to Itron, Inc's Quarterly Report on Form 10-Q filed on November 2, 2020)
4.7	Amendment No. 3, dated March 8, 2021, to the Credit Agreement, dated January 5, 2018 among Itron, Inc. and certain foreign borrowers, guarantors, lenders and issuing parties thereto, and Wells Fargo Bank, National Association, as administrative agent. (Filed as Exhibit 10.3 to Itron, Inc.'s Current Report on Form 8-K, filed on March 12, 2021)
4.8	Indenture, dated as of March 12, 2021, by and between Itron, Inc. and U.S. Bank National Association, as trustee (Filed as Exhibit 4.1 to Itron, Inc.'s Current Report on Form 8-K, filed on March 12, 2021)

Exhibit Number	Description of Exhibits
4.9	Form of 0.00% Convertible Senior Note due 2026 (Filed as Exhibit 4.2 to Itron, Inc.'s Current Report on Form 8-K, filed on March 12, 2021)
4.10	Form of Convertible Note Hedge (Filed as Exhibit 10.1 to Itron, Inc.'s Current Report on Form 8-K, filed on March 12, 2021)
4.11	Form of Warrant Confirmation (Filed as Exhibit 10.2 to Itron, Inc.'s Current Report on Form 8-K, filed on March 12, 2021)
4.12	Description of Registrant's Securities (filed with this report)
4.13	Amendment No. 4, dated February 25, 2022, to the Credit Agreement, dated January 5, 2018 among Itron, Inc. and certain foreign borrowers, guarantors, lenders and issuing parties thereto, and Wells Fargo Bank, National Association, as administrative agent. (Filed as Exhibit 4.13 to Itron, Inc's Annual Report on Form 10-K, filed on February 28, 2022)
4.14	Amendment No. 6, dated February 21, 2023, to the Credit Agreement, dated January 5, 2018 among Itron, Inc. and certain foreign borrowers, guarantors, lenders and issuing parties thereto, and Wells Fargo Bank, National Association, as administrative agent. (Filed as Exhibit 10.1 to Itron, Inc's Current Report on Form 8-K, filed on February 27, 2023)
10.1*	Form of Second Amended and Restated Change in Control Severance Agreement for Executive Officers. (Filed as Exhibit 10.1 to Itron, Inc.'s Quarterly Report on Form 10-Q, filed on August 4, 2022)
10.2*	Second Amended and Restated Change in Control Severance Agreement, dated May 12, 2022, by and between Itron, Inc. and Thomas L. Deitrich (Filed as Exhibit 10.2 to to Itron, Inc.'s Quarterly Report on Form 10-Q, filed on August 4, 2022)
10.3*	Form of Indemnification Agreements between Itron, Inc. and certain directors and officers. (Filed as Exhibit 10.9 to Itron, Inc.'s Annual Report on Form 10-K, filed on March 30, 2000)
10.4*	Amended and Restated 2010 Stock Incentive Plan. (Filed as Appendix A to Itron, Inc.'s Proxy Statement for the 2014 Annual Meeting of Shareholders, filed on March 13, 2014)
10.5*	Second Amended and Restated 2010 Stock Incentive Plan. (Filed as Appendix A to Itron, Inc.'s Proxy Statement for the 2017 Annual Meeting of Shareholders, filed on March 24, 2017)
10.6*	Terms of the Amended and Restated Equity Grant Program for Nonemployee Directors under the Itron, Inc. Amended and Restated 2000 Stock Incentive Plan. (Filed as Exhibit 10.4 to Itron, Inc.'s Annual Report on Form 10-K, filed on February 26, 2008)
10.7*	Form of Stock Option Grant Notice and Agreement for use in connection with both incentive and non-qualified stock options granted under Itron, Inc.'s Amended and Restated 2000 Stock Incentive Plan. (Filed as Exhibit 10.6 to Itron, Inc.'s Current Report on Form 8-K, filed on February 18, 2010)
10.8*	Form of RSU Award Notice and Agreement for all Participants (excluding France) for use in connection with Itron, Inc.'s Amended and Restated 2000 Stock Incentive Plan. (Filed as Exhibit 10.4 to Itron, Inc.'s Current Report on Form 8-K, filed on February 18, 2010)
10.9*	Form of Long Term Performance RSU Award Notice and Agreement for U.S. Participants for use in connection with Itron, Inc.'s Amended and Restated 2010 Stock Incentive Plan. (Filed as Exhibit 10.4 to Itron, Inc.'s Quarterly Report on Form 10-Q, filed on August 6, 2014)
10.10*	Form of Long Term Performance RSU Award Notice and Agreement for International Participants (excluding France) for use in connection with Itron, Inc.'s Amended and Restated 2010 Stock Incentive Plan. (Filed as Exhibit 10.19 to Itron, Inc.'s Annual Report on Form 10-K, filed on February 25, 2011)

Exhibit Number	Description of Exhibits
10.11*	Form of RSU Award Notice and Agreement for all Participants (excluding France) for use in connection with Itron, Inc.'s Amended and Restated 2010 Stock Incentive Plan. (Filed as Exhibit 10.2 to Itron, Inc.'s Quarterly Report on Form 10-Q, filed on August 6, 2014)
10.12*	Form of RSU Award Notice and Agreement for Non-employee Directors for use in connection with Itron, Inc.'s Amended and Restated 2010 Stock Incentive Plan. (Filed as Exhibit 10.3 to Itron, Inc.'s Quarterly Report on Form 10-Q, filed on May 3, 2013)
10.13*	Form of Stock Option Grant Notice and Agreement for use in connection with both incentive and non-qualified stock options granted under Itron, Inc.'s Amended and Restated 2010 Stock Incentive Plan. (Filed as Exhibit 10.1 to Itron, Inc.'s Quarterly Report on Form 10-Q, filed on August 6, 2014)
10.14*	Amendment to the Executive Deferred Compensation Plan. (Filed as Exhibit 10.1 to Itron, Inc.'s Quarterly Report on Form 10-Q, filed on November 3, 2016)
10.15*	Amended and Restated 2012 Employee Stock Purchase Plan. (Filed as Exhibit 10.21 to Itron, Inc.'s Annual Report on Form 10-K, filed on February 24, 2021)
10.16	<u>Cooperation Agreement by and among Itron, Inc., Coppersmith Capital Management LLC, Scopia Management, Inc. and certain of their specified affiliates, Jerome J. Lande and Peter Mainz, dated as of December 9, 2015. (Filed as Exhibit 10.1 to Itron, Inc.'s Current Report on Form 8-K, filed on December 11, 2015)</u>
10.17	Amendment to Cooperation Agreement by and among Itron, Inc., Coppersmith Capital Management LLC, Scopia Management, Inc. and certain of their specified affiliates, Jerome J. Lande and Peter Mainz. (Filed as Exhibit 10.2 to Itron, Inc.'s Quarterly Report on Form 10-Q, filed on November 3, 2016)
10.18	First Amendment to Cooperation Agreement, dated November 1, 2017, by and among Itron, Inc., Scopia Management, Inc. and certain of their specified affiliates, Jerome J. Lande and certain other individuals. (Filed as Exhibit 10.1 to Itron, Inc.'s Current Report on Form 8-K, filed on November 2, 2017)
10.19*	Form of Stock Option Grant Notice and Agreement for use in connection with both incentive and non-qualified stock options granted under Itron, Inc.'s Amended and Restated 2010 Stock Incentive Plan. (Filed as Exhibit 10.1 to Itron, Inc.'s Quarterly Report on Form 10-Q, filed on May 4, 2017)
10.20*	Form of Long-Term Performance RSU Award Notice and Agreement for U.S. Participants for use in connection with Itron, Inc.'s Amended and Restated 2010 Stock Incentive Plan. (Filed as Exhibit 10.2 to Itron, Inc.'s Quarterly Report on Form 10-Q, filed on May 4, 2017)
10.21*	Form of RSU Award Notice and Agreement for all Participants for use in connection with Itron, Inc.'s Amended and Restated 2010 Stock Incentive Plan. (Filed as Exhibit 10.3 to Itron, Inc.'s Quarterly Report on Form 10-Q, filed on May 4, 2017)
10.22*	Form of Stock Option Grant Notice and Agreement for use in connection with both incentive and non-qualified stock options granted under Itron, Inc.'s Amended and Restated 2010 Stock Incentive Plan. (Filed as Exhibit 10.32 to Itron, Inc.'s Annual Report on Form 10-K, filed on February 28, 2019)
10.23*	Form of Long-Term Performance RSU Award Notice and Agreement for U.S. Participants for use in connection with Itron, Inc.'s Amended and Restated 2010 Stock Incentive Plan. (Filed as Exhibit 10.33 to Itron, Inc.'s Annual Report on Form 10-K, filed on February 28, 2019)
10.24*	Form of RSU Award Notice for awards with 1 year vesting and Agreement for all Participants for use in connection with Itron, Inc.'s Amended and Restated 2010 Stock Incentive Plan. (Filed as Exhibit 10.34 to Itron, Inc.'s Annual Report on Form 10-K, filed on February 28, 2019)
10.25*	Form of RSU Award Notice for awards with 2 year vesting and Agreement for all Participants for use in connection with Itron, Inc.'s Amended and Restated 2010 Stock Incentive Plan. (Filed as Exhibit 10.35 to Itron, Inc.'s Annual Report on Form 10-K, filed on February 28, 2019)

Exhibit Number	Description of Exhibits
10.26*	Form of RSU Award Notice for awards with 3 year vesting and Agreement for all Participants for use in connection with Itron, Inc.'s Amended and Restated 2010 Stock Incentive Plan. (Filed as Exhibit 10.36 to Itron, Inc.'s Annual Report on Form 10-K, filed on February 28, 2019)
10.27*	Employment Agreement between Itron, Inc. and Thomas L. Deitrich, dated July 16, 2019. (Filed as Exhibit 10.1 to Itron, Inc.'s Current Report on Form 8-K, filed on July 22, 2019)
10.28*	Form of Long-Term Performance RSU Award Notice and Agreement for U.S Participants for use in connection with Itron, Inc.'s Second Amended and Restated 2010 Stock Incentive Plan. (Filed as Exhibit 10.39 to Itron, Inc's Annual report on Form 10-K, filed on February 26, 2020)
10.29*	Form of RSU Award Notice and Agreement for all Participants for use in connection with Itron, Inc.'s Second Amended and Restated 2010 Stock Incentive Plan. (Filed as Exhibit 10.36 to Itron. Inc.'s Annual Report on Form 10-K, filed on February 24, 2021)
10.30*	2022 Itron Incentive Plan (Filed as Exhibit 10.36 to Itron Inc.'s Annual Report on Form 10-K, filed on February 28, 2022)
21.1	Subsidiaries of Itron, Inc. (filed with this report)
23.1	Consent of Deloitte & Touche LLP Independent Registered Public Accounting Firm. (filed with this report)
31.1	Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (filed with this report)
31.2	Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (filed with this report)
32.1	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (furnished with this report)
101	The following financial information from Itron, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2022 formatted in Inline XBRL (Extensible Business Reporting Language) includes: (i) the Consolidated Statements of Operations, (ii) the Consolidated Statements of Comprehensive Income (Loss), (iii) the Consolidated Balance Sheets, (iv) the Consolidated Statements of Equity, (v) the Consolidated Statements of Cash Flows, and (vi) Notes to the Consolidated Financial Statements.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)
*	Management contract or compensatory plan or arrangement.
	100
	106

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on the 27th day of February, 2023.

ITRON, INC.

By:	/s/ JOAN S. HOOPER	
Joan S. Hooper		
	Senior Vice President and Chief Financial Officer	

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on the 27th day of February, 2023.

Signatures	Title
/s/ THOMAS L. DEITRICH	
Thomas L. Deitrich	President and Chief Executive Officer (Principal Executive Officer), Director
/s/ JOAN S. HOOPER	
Joan S. Hooper	Senior Vice President and Chief Financial Officer
/s/ MARY C. HEMMINGSEN	
Mary C. Hemmingsen	Director
/s/ FRANK M. JAEHNERT	
Frank M. Jaehnert	Director
/s/ JEROME J. LANDE	
Jerome J. Lande	Director
/s/ TIMOTHY M. LEYDEN	
Timothy M. Leyden	Director
/s/ SANTIAGO PEREZ	
Santiago Perez	Director
/s/ GARY E. PRUITT	
Gary E. Pruitt	Director
/s/ DIANA D. TREMBLAY	
Diana D. Tremblay	Chair of the Board
/s/ LYNDA L. ZIEGLER	
Lynda L. Ziegler	Director

DESCRIPTION OF REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

DESCRIPTION OF COMMON STOCK

The following description of the Company's common stock is based upon the Company's Amended and Restated Articles of Incorporation ("Articles"), the Company's Amended and Restated Bylaws ("Bylaws") and applicable provisions of law. We have summarized certain portions of the Articles and Bylaws below. The summary is not complete and is subject to, and is qualified in its entirety by express reference to, the provisions of our Articles and Bylaws, each of which is filed as an exhibit on Form 8-K of which this Exhibit 4.12 is a part.

Authorized Capital Stock

Under the Articles, the Company's authorized capital stock consists of 75,000,000 shares of common stock, without par value, and 10,000,000 shares of preferred stock, without par value.

Common Stock

Common Stock Outstanding. The outstanding shares of the Company's common stock are duly authorized, validly issued, fully paid and nonassessable. The Company's common stock is listed and principally traded on the Nasdaq Global Select Market under the ticker symbol "ITRI."

Dividend Rights. Subject to the prior or preferential rights of holders of our preferred stock outstanding at the time, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our Board of Directors out of legally available funds.

Voting Rights. Each share of our common stock entitles its holder to one vote on all matters voted on by the shareholders, including the election of directors. We have not provided for cumulative voting for the election of directors in our Articles.

Right to Receive Liquidation Distributions. Subject to the prior or preferential rights of holders of our preferred stock outstanding at the time, in the event of our liquidation, dissolution, or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to shareholders.

Rights and Preferences. Holders of our common stock have no preemptive or conversion rights, and there are no redemption or sinking fund provisions applicable to our common stock.

Preferred Stock

Our Board of Directors has the authority, without further action by our shareholders, to issue up to 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges, and restrictions thereof. These rights, preferences, and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms, and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock. The issuance of preferred stock by us could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock by us could have the effect of delaying, deferring, or preventing a change in control of our company or other corporate action. No shares of preferred stock are outstanding, and we have no present plan to issue any shares of preferred stock.

Anti-Takeover Provisions

Certain provisions of our Articles and Bylaws could have the effect of delaying, deferring or preventing a change of control of our company without further action by our shareholders and may adversely affect the voting and other rights of the holders of common stock. For example, our Articles and Bylaws include provisions that:

- authorize our Board of Directors to issue up to 10,000,000 shares of preferred stock and to determine the price, rights, preferences, privileges and restrictions, including voting rights, of those shares without any further vote or action by the shareholders. The rights of the holders of common stock may be subject to, and may be adversely affected by, the rights of the holders of any preferred stock that may be issued in the future;
- limit the ability of shareholders to raise matters at a meeting of shareholders without giving advance notice;
- provide that directors may only be removed for cause;
- set the Superior Court of Spokane County of the State of Washington as the sole and exclusive forum for (a) any derivative action or proceeding brought on behalf of the Company, (b) any action asserting a claim of breach of a fiduciary duty owed by any of our directors or officers to the Company or the Company's shareholders, (c) any action asserting a claim against the Company arising under or pursuant to, or based on, any provision of the Washington Business Corporation Act or our Articles or Bylaws, or (d) any action asserting a claim against the Company governed by the internal affairs doctrine; and
- provide for a classified Board of Directors, which will generally make it more difficult for shareholders to replace a majority of our Board of Directors.

Washington law, our Articles and Bylaws limit the ability of shareholders from acting by written consent by requiring unanimous written consent for shareholder action to be effective. Similarly, state anti-takeover laws in the State of Washington related to corporate takeovers may prevent or delay a change of control of our Company.

CONSOLIDATED SUBSIDIARIES OF THE REGISTRANT AT DECEMBER 31, 2022

Itron, Inc. Domestic Subsidiaries State of Incorporation

Itron International, LLC Delaware Itron Networked Solutions, Inc. Delaware SSN Holdings, LLC Delaware

Itron Global LLC dba Itron Global Trading Texas Royal Cautivo Insurance, Inc. Utah

<u>Jurisdiction of Incorporation or Organization</u> **Itron, Inc. International Subsidiaries**

Italy

Itron Australasia Pty Limited Australia Itron Austria GmbH Austria Itron Belgium SA Belgium Itron Canada, Inc. Canada Silver Spring Networks International Limited Cavman Island

Itron Metering Solutions (Suzhou) Co., Ltd. China Itron Metering Systems (Suzhou) Co., Ltd. China

Itron Czech Republic s.r.o. Czech Republic

Dubai

Itron France S.A.S – Dubai U.A.E. Branch Office Asais S.A.S France Asais Conseil S.A.S. France Itron France S.A.S. France Itron Holding France S.A.S. France Itron Holding Germany GmbH Germany Itron Zähler & Systemtechnik GmbH Germany

Itron Unterstutzungskasse GmbH Germany Allmess GmbH Germany

Itron Unterstutzungseinrichtung GmbH Germany SEWA GmbH Germany Itron Labs Kft Hungary

Itron India Private Limited India Itron Metering Solutions India Private Limited India India Silver Spring Networks India LLP

PT Mecoindo (J.V.) Indonesia Itron Management Services Ireland, Limited Ireland Temetra Limited Ireland

Itron Italia SpA

Itron Japan Co., Ltd. Japan Itron Metering Solutions Luxembourg SARL Luxembourg

Itron Global SARL Luxembourg

Metertek Sdn Bhd (J.V. 100% indirectly owned) Malaysia Itron Servicios, S.A. de C.V. Mexico Itron Nederland B.V. Netherlands Itron New Zealand Limited New Zealand Itron Polska SP ZOO Poland Itron Portugal, Unipessoal, LDA. Portugal

Itron Imobiliaria, Unipessoal, LDA. Portugal Itron Sistemas de Medição Lda. Portugal

Itron, Inc. International Subsidiaries

Itron Measurement and Systems (Proprietary) Limited

Itron LLC

Itron Belgium (Rwandan Branch Office) Itron Metering Systems Singapore Pte Ltd.

Itron Spain SLU Itron Sweden AB

Itron Metering Solutions (Thailand) Co. Ltd.

Itron Ukraine

Itron Ukrgas Meters Company (J.V. Majority)

Itron Metering Solutions UK Ltd. Itron Development UK Ltd.

<u>Jurisdiction of Incorporation or Organization</u>

Republic of South Africa

Russia Rwanda Singapore Spain Sweden Thailand Ukraine Ukraine

United Kingdom United Kingdom

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-253986 on Form S-3, and Nos. 333-40356, 333-89966, 333-97571, 333-110703, 333-115987, 333-125461, 333-134749, 333-143048, 333-166601, 333-181685, 333-193970, 333-195633, 333-218086, 333-222480, and 333-226020 on Form S-8 of our reports dated February 27, 2023, relating to the financial statements of Itron, Inc. and the effectiveness of the Itron, Inc.'s internal control over financial reporting appearing in this Annual Report on Form 10-K for the year ended December 31, 2022.

/s/ DELOITTE & TOUCHE LLP

Seattle, Washington February 27, 2023

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350 AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Thomas L. Deitrich, certify that:

- 1. I have reviewed this Annual Report on Form 10-K of Itron, Inc.;
- 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.

ITRON, INC.

By:

/s/ THOMAS L. DEITRICH

Thomas L. Deitrich President and Chief Executive Officer

Date: February 27, 2023

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350 AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Joan S. Hooper, certify that:

- 1. I have reviewed this Annual Report on Form 10-K of Itron, Inc.;
- 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.

By: /s/ JOAN S. HOOPER

Joan S. Hooper

Senior Vice President and Chief Financial Officer

Date: February 27, 2023

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350 AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

The certification set forth below is being submitted in connection with the Annual Report of Itron, Inc. (the Company) on Form 10-K for the year ended December 31, 2022 (the Report) for the purpose of complying with Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 and Section 1350 of Chapter 63 of Title 18 of the United States Code.

Thomas L. Deitrich, the Chief Executive Officer and Joan S. Hooper, the Chief Financial Officer of the Company, each certifies that to the best of his or her knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ THOMAS L. DEITRICH

Thomas L. Deitrich President and Chief Executive Officer February 27, 2023

/s/ JOAN S. HOOPER

Joan S. Hooper Senior Vice President and Chief Financial Officer February 27, 2023