UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2022

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

For the transition period from ___ to ___

Commission File Number 1-12273

ROPER TECHNOLOGIES, INC.

(Exact name of Registrant as specified in its charter)

Delaware	**51-0263969**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

6901 Professional Parkway, Suite 200
Sarasota, Florida 34240
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: **(941) 556-2601**

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Title of Each Class	Trading Symbol	Name of Each Exchange On Which Registered
Common Stock, $0.01 Par Value	ROP	New York Stock Exchange

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT: None

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. ☐ Yes ☑ No

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§223.405) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). ☑ Yes ☐ No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company (as defined in Rule 12b-2 of the Exchange Act). ☑ Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issues its audit report. ☑

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

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

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

Based on the closing sale price on the New York Stock Exchange on June 30, 2022, the aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant was: $41.6 billion.

Number of shares of registrant's Common Stock outstanding as of February 17, 2023: 106,243,275.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement to be furnished to Stockholders in connection with its 2023 Annual Meeting of Stockholders are incorporated by reference into Part III, Items 10, 11, 12, 13 and 14 of this Annual Report on Form 10-K.

ROPER TECHNOLOGIES, INC.

FORM 10-K FOR THE FISCAL YEAR ENDED DECEMBER 31, 2022

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Information About Forward-Looking Statements

This Annual Report on Form 10-K ("Annual Report") includes and incorporates by reference "forward-looking statements" within the meaning of the federal securities laws. In addition, we, or our executive officers on our behalf, may from time to time make forward-looking statements in reports and other documents we file with the U.S. Securities and Exchange Commission ("SEC") or in connection with oral statements made to the press, potential investors or others. All statements that are not historical facts are "forward-looking statements." Forward-looking statements may be indicated by words or phrases such as "anticipate," "estimate," "plans," "expects," "projects," "should," "will," "believes" or "intends" and similar words and phrases. These statements reflect management's current beliefs and are not guarantees of future performance. They involve risks and uncertainties that could cause actual results to differ materially from those contained in any forward-looking statement. Such risks and uncertainties include any ongoing impacts of the COVID-19 pandemic on our business, operations, financial results and liquidity, which will depend on numerous evolving factors which we cannot accurately predict or assess.

Examples of forward-looking statements in this report include but are not limited to statements regarding operating results, the success of our operating plans, our expectations regarding our ability to generate cash and reduce debt and associated interest expense, profit and cash flow expectations, the prospects for newly acquired businesses to be integrated and contribute to future growth and our expectations regarding growth through acquisitions. Important assumptions relating to the forward-looking statements include, among others, demand for our products, the cost, timing and success of product upgrades and new product introductions, raw material costs, expected pricing levels, expected outcomes of pending litigation, competitive conditions and general economic conditions. These assumptions could prove inaccurate. Although we believe that the estimates and projections reflected in the forward-looking statements are reasonable, our expectations may prove to be incorrect. Important factors that could cause actual results to differ materially from estimates or projections contained in the forward-looking statements include but are not limited to:

- general economic conditions;
- difficulty making acquisitions and successfully integrating acquired businesses;
- any unforeseen liabilities associated with future acquisitions;
- failure to effectively mitigate cybersecurity threats, including any litigation arising therefrom;
- failure to comply with new data privacy laws and regulations, including any litigation arising therefrom;
- risks and costs associated with our international sales and operations;
- rising interest rates;
- limitations on our business imposed by our indebtedness;
- product liability and insurance risks;
- future competition;
- reduction of business with large customers;
- risks associated with government contracts;
- changes in the supply of, or price for, labor, energy, raw materials, parts and components, including as a result of impacts from the current inflationary environment, supply chain constraints or additional or ongoing outbreaks of COVID-19;
- potential write-offs of our goodwill and other intangible assets;
- our ability to successfully develop new products;
- failure to protect our intellectual property;
- unfavorable changes in foreign exchange rates;
- difficulties associated with exports/imports and risks of changes to tariff rates;
- increased warranty exposure;
- environmental compliance costs and liabilities;
- the effect of, or change in, government regulations (including tax);
- economic disruption caused by armed conflicts (such as the war in Ukraine), terrorist attacks, health crises (such as the COVID-19 pandemic) or other unforeseen geopolitical events; and
- the factors discussed in Item 1A to this Annual Report under the heading "Risk Factors."

You should not place undue reliance on any forward-looking statements, which are based on current expectations. Further, forward-looking statements speak only as of the date they are made, and we undertake no obligation to publicly update any of these statements in light of new information or future events.

PART I

ITEM 1. BUSINESS

All currency amounts are in millions unless specified

Our Business

Roper Technologies, Inc. (“Roper,” the “Company,” “we,” “our” or “us”) is a diversified technology company. Roper has a proven, long-term, successful track record of compounding cash flow and shareholder value. We operate market leading businesses that design and develop vertical software and technology enabled products for a variety of defensible niche markets.

We pursue consistent and sustainable growth in revenue, earnings and cash flow by enabling continuous improvement in the operating performance of our existing businesses and by acquiring other businesses that offer high value-added software, services, technology-enabled products and solutions that we believe are capable of achieving growth and maintaining high margins. We compete in many defensible niche markets and believe we are the market leader or a competitive alternative to the market leader in most of these markets. In the last three years, we have deployed approximately $10,500 of capital toward acquisitions, including approximately $3,750 in 2022 for the acquisition of Frontline Education, a leading provider of Software-as-a-Service (“SaaS”) solutions for school administration and approximately $5,400 in 2020 for the acquisition of Vertafore, Inc., a leading provider of SaaS solutions for the property and casualty insurance industry. Additionally, we deployed approximately $1,400 towards bolt-on acquisitions to help build on the strategic position of several of our businesses.

On November 22, 2022, the Company completed the divestiture of a majority 51% equity stake in its industrial businesses, including its entire historical Process Technologies reportable segment and the industrial businesses within its historical Measurement & Analytical Solutions reportable segment, to Clayton, Dubilier & Rice, LLC. The businesses included in this transaction were Alpha, AMOT, CCC, Cornell, Dynisco, FTI, Hansen, Hardy, Logitech, Metrix, PAC, Roper Pump, Struers, Technolog, Uson, and Viatran (collectively “Indicor”). Following the sale of the majority stake, the Company retained an initial 49% minority equity interest in the new standalone parent company, Indicor, LLC. This transaction is referred to herein as the “Indicor Transaction.”

During 2021, Roper entered into definitive agreements to divest our TransCore, Zetec and CIVCO Radiotherapy businesses (“2021 Divestitures”). As of March 31, 2022, Roper had completed the 2021 Divestitures.

The aggregate of the 2021 Divestitures and Indicor Transaction have greatly reduced the cyclicality and asset intensity of the Company. In addition, the Company has an increased mix of recurring revenue and a higher margin profile. The financial results for Indicor and the 2021 Divestitures are reported as discontinued operations for all periods presented. Unless otherwise noted, discussion within Part I relates to continuing operations. Information regarding discontinued operations is included in Note 3 of the Notes to Consolidated Financial Statements.

We were incorporated on December 17, 1981 under the laws of the State of Delaware.

Market Share, Market Expansion, and Product Development

Leadership with Technology and Products for Niche Markets - We maintain a leading position in many of our markets. We believe our market positions are attributable to the applications expertise used to create high value products and solutions for our customers, the underlying critical nature of our offerings, and the inherent customer intimacy of our chosen niche markets. Our businesses realize growth from new and existing customers in their niche markets through successfully executing go-to-market strategies, developing new products and applications, and delivering professional services.

Diversified End Markets and Geographic Reach - We have a global presence, with sales to customers outside the United States (“U.S.”). totaling $806.5 in 2022. Information regarding our international operations is set forth in Note 14 of the Notes to Consolidated Financial Statements included in this Annual Report.

Our Reportable Segments

During the second quarter of 2022, we updated our reportable segment structure following the announcement of the Indicor Transaction. The Company's new reporting segment structure is classified based on business model and delivery of performance obligations. The three updated reportable segments (and businesses within each; including changes due to acquisitions since the realignment) are as follows:

–**Application Software** - Aderant, CBORD/Horizon, CliniSys, Data Innovations, Deltek, Frontline Education, IntelliTrans, PowerPlan, Strata, Vertafore

–**Network Software** - ConstructConnect, DAT, Foundry, iPipeline, iTradeNetwork, Loadlink, MHA, SHP, SoftWriters

–**Technology Enabled Products** - CIVCO Medical Solutions, FMI, Inovonics, IPA, Neptune, Northern Digital, rf IDEAS, Verathon

Following the Indicor Transaction and the realignment of our reportable segments, the day-to-day operations of our businesses, our organizational structure, and our strategy remain unchanged. All prior periods have been recast to reflect the changes noted above. Financial information about our reportable segments is presented in Note 14 of the Notes to Consolidated Financial Statements included in this Annual Report.

Application Software

Our Application Software segment had net revenues of $2,639.5 for the year ended December 31, 2022, representing 49.1% of our total net revenues. Below is a description of the products offered by business that comprise the Application Software segment.

Aderant - comprehensive management software solutions for law and other professional services firms, including business development, calendar/docket matter management, time and billing and case management.

CBORD/Horizon - campus solutions software including access and cashless systems and food and nutrition service management serving primarily higher education and healthcare markets along with software, services, and technologies for foodservice operations specializing in K-12.

CliniSys - diagnostic and laboratory information management software solutions.

Data Innovations - software solutions that enable enterprise management of hospitals and independent laboratories.

Deltek - enterprise software and information solutions for government contractors, professional services firms and other project-based businesses.

Frontline Education - K-12 school administration software, connecting solutions for human capital management, student and special programs, and business operations with powerful analytics to empower educators.

IntelliTrans - transportation management software and services to bulk and break-bulk commodity producers.

PowerPlan - financial and compliance management software and solutions to large complex companies in asset-intensive industries.

Strata - cloud-based financial analytics and performance management software that is used by healthcare providers for financial planning, decision support and continuous cost improvement.

Vertafore - cloud-based software to the property and casualty insurance industry, including agency management, compliance, workflow, and data solutions.

Network Software

Our Network Software segment had net revenues of $1,378.5 for the year ended December 31, 2022, representing 25.7% of our total net revenues. Below is a description of the products offered by business that comprise the Network Software segment.

ConstructConnect - cloud-based data, collaboration and estimating automation software solutions to a network of pre-construction contractors.

DAT - electronic marketplaces that connect available capacity of trucking units with the available loads of freight throughout North America.

Foundry - software technologies used to deliver visual effects and 3D content for the entertainment and digital design industries.

iPipeline - cloud-based software solutions for the life insurance and financial services industries.

iTradeNetwork - electronic marketplaces and supply chain software that connect food suppliers, distributors and vendors, primarily in the perishable food sector.

Loadlink - electronic marketplaces that connect available capacity of trucking units with the available loads of freight throughout Canada.

MHA - health care service and software solutions to alternate site health care markets.

SHP - data analytics and benchmarking information for the post-acute healthcare provider marketplace.

SoftWriters - software solutions to pharmacies that primarily serve the long term care marketplace.

Technology Enabled Products

Our Technology Enabled Products segment had net revenues of $1,353.8 for the year ended December 31, 2022, representing 25.2% of our total net revenues. Below is a description of the products offered by business that comprise the Technology Enabled Products segment.

CIVCO Medical Solutions - accessories focused on guidance and infection control for ultrasound procedures.

FMI - dispensers and metering pumps which are utilized in a broad range of applications requiring precision fluid control.

Inovonics - high-performance wireless sensor network and solutions for a variety of applications.

IPA - automated surgical scrub and linen dispensing equipment for healthcare providers.

Neptune - water meters, enabling water utilities to remotely monitor their customers utilizing Automatic Meter Reading (AMR), Advanced Metering Infrastructure (AMI) technologies and cloud-based software supporting meter data management.

Northern Digital - optical and electromagnetic precision measurement systems for medical and industrial applications.

rf IDeas - RFID card readers used in numerous identity access management applications across a variety of vertical markets.

Verathon - medical devices that enable airway management and bladder volume measurement solutions for healthcare providers.

Materials and Suppliers

We believe most materials and supplies we use are readily available from numerous sources and suppliers throughout the world. However, some components and sub-assemblies are currently available from only a limited number of suppliers for which we regularly investigate and identify alternative sources where possible. We also believe these conditions affect our competitors. Although supply shortages have not had a material adverse effect on our revenues, we may continue to be impacted by supply chain challenges including increased material costs, component shortages and transportation disruptions and delays.

Remaining Performance Obligations and Backlog

Remaining performance obligations represents the transaction price of firm orders for which work has not been performed and excludes unexercised contract options. As of December 31, 2022 and December 31, 2021, the aggregate amount of the transaction price allocated to remaining performance obligations was $4,214.0 and $3,539.1, respectively.

Backlog is equal to our remaining performance obligations expected to be recognized as revenue within the next 12 months. Backlog was $2,912.6 at December 31, 2022, and $2,325.1 at December 31, 2021.

Distribution and Sales

Distribution and sales occur primarily through direct sales offices, manufacturers’ representatives, resellers and distributors.

Governmental Regulations

We face extensive government regulation around the world relating to the development, manufacture, marketing, sale and distribution of our software, services, and products. The following sections describe certain significant regulations to which we are subject, but these are not the only regulations to which our businesses must comply. For a description of the risks related to the regulations that our businesses are subject to, please refer to “Item 1A. Risk Factors.”

Privacy and Data Security

We are subject to privacy and data security laws around the world that may impose operational burdens on our businesses. In 2018, the General Data Protection Regulation (“GDPR”) became effective in the European Union (“EU”) and United Kingdom and imposed restrictions on how companies use and process personal information. In particular, legal challenges to the way regulators implemented GDPR have created additional operational burdens for companies transferring personal data back and forth between the EU, U.S., and India. In the U.S., several states have adopted legislation that imposes similar (but not identical) restrictions to GDPR on companies conducting business or serving customers in those states. For example, in 2020 the California Consumer Privacy Act (“CCPA”) became effective and required companies to make disclosures to consumers about their data collection, use, and sharing practices; allowed consumers to opt out of certain data sharing with third parties; and provided a private right of action for data breaches. Changes to the CCPA effective in 2023 have added to the processing restrictions and notifications requirements – particularly when companies engage in online advertising. Virginia, Colorado, Connecticut, and Utah have passed similar legislation that will also become effective in 2023. Canada (Quebec) and China have also significantly updated their privacy laws. The compliance and other burdens on our businesses imposed by these privacy laws and regulations may be substantial as we work to comply with differing legal and implementation requirements across multiple jurisdictions.

Healthcare Regulations

The manufacture, sale, lease and service of medical diagnostic and surgical devices intended for commercial use are subject to extensive governmental regulation by the FDA in the U.S. and by a variety of regulatory agencies in other countries for some of our businesses. Under the Federal Food, Drug and Cosmetic Act, known as the FD&C Act, manufacturers of medical products and devices must comply with certain regulations governing the design, testing, manufacturing, packaging, servicing and marketing of medical products. FDA product approvals may be withdrawn or suspended if compliance with regulatory standards is not maintained or if problems occur following initial marketing. We are also subject to a variety of federal, state and foreign laws which broadly relate to our interactions with healthcare practitioners and other participants in the healthcare system, including, among others, anti-kickback law, and laws regulating the confidentiality of sensitive personal information and the circumstances under which such information may be released and/or collected, such as the Health Insurance Portability and Accountability Act of 1996, or HIPAA, the Health Information Technology for Economic and Clinical Health Act, or HITECH Act, and the GDPR.

Anti-Corruption and Anti-Bribery Laws and Regulations

We are subject to the U.S. Foreign Corrupt Practices Act (FCPA) and anti-corruption laws, and similar laws in foreign countries, such as the UK Anti-Bribery Act. Any violation of these laws by us or our agents or distributors could create substantial liability for us, subject our officers and directors to personal liability, and cause a loss of reputation in the market. Increased business in higher risk countries could subject us and our officers and directors to increased scrutiny and increased liability. In addition, becoming familiar with and implementing the infrastructure necessary to comply with laws, rules and regulations applicable to new business activities and mitigating and protecting against corruption risks could be quite costly.

Export Controls and Trade Policies

We are subject to numerous domestic and foreign regulations relating to our operations worldwide. In particular, our sales activities must comply with restrictions relating to the export of controlled technology and sales to denied or sanctioned parties contained in the U.S. Export Administration Regulations, U.S. International Traffic in Arms Regulations (ITAR), and sanctions administered by the Office of Foreign Asset Controls of the U.S. Treasury Department (OFAC). Our businesses may also be impacted by additional domestic or foreign trade regulations ensuring fair trade practices, including trade restrictions, tariffs and sanctions.

Environmental Regulations

Our operations and properties are subject to laws and regulations relating to environmental protection, including those governing air emissions, water discharges, waste management and workplace safety. We use, generate and dispose of hazardous substances and waste in our operations and could be subject to material liabilities relating to the investigation and clean-up of contaminated properties and related claims. We are required to conform our operations and properties to these laws and adapt to regulatory requirements in all countries as these requirements change. In connection with our acquisitions, we may assume significant environmental liabilities, some of which we may not be aware of, or may not be quantifiable, at the time of acquisition. In addition, new laws and regulations, the discovery of previously unknown contamination or the imposition of new requirements could increase our costs or subject us to new or increased liabilities.

Customers

During 2022, no customer accounted for 10% or more of any segment or total Company net revenues.

Competition

Generally, our products and solutions face significant competition, although in certain niche markets there are a limited number of competitors. We believe that we are a leader in most of our markets, and no single company competes with us over a significant number of product lines. Competitors might be large or small in size, often depending on the size of the niche market we serve. We compete primarily on product quality, performance, innovation, technology, price, applications expertise, system and service flexibility, distribution channel access and customer service capabilities.

Intellectual Property

In addition to trade secrets, including unpatented know-how and other intellectual property like software source code, we own or license the rights under numerous patents, trademarks, trade dress and copyrights relating to certain of our products and businesses. We also employ various methods, including confidentiality and non-disclosure agreements with individuals and companies we do business with, including employees, distributors, representatives, independent contractors and customers to protect our intellectual property. We believe none of our operating units are substantially dependent on any single item of intellectual property, including a trade secret, patent, trademark, trade dress, or copyright.

Human Capital Management

Roper is a diversified technology company that utilizes a decentralized operating model across our many businesses which serve a diverse set of end markets. Subject to oversight and guidance from Roper executive management, each business operates as an individual unit with its managers empowered to make day to day operating decisions, including decisions with respect to human capital management. As a result, apart from guidance with respect to: (i) compliance with regulatory requirements or corporate policies; and (ii) the implementation of compensation and benefit programs provided by corporate management, managers at individual businesses are the primary decision makers with respect to human capital management and development. Though our individual businesses are primarily responsible for these decisions, because of the importance of human capital to our enterprise, we provide guidance and share best practices on key aspects of selection, development, engagement and diversity of talent within our workforce.

As of December 31, 2022, we employed approximately 15,800 people worldwide on a consolidated basis, of which approximately 10,500 were employed in the U.S. and approximately 5,300 were outside of the U.S. Management believes that the Company's employee relations are favorable. During the COVID-19 pandemic, most of our businesses implemented broad work-from-home initiatives. Many businesses have retained work-from-home flexibility for their employees and have implemented hybrid work-from-home and in-office arrangements.

Outside the U.S., we have some employees, particularly in Europe, that are represented by an employee representative organization, such as a union, works council or employee association.

Roper has identified and implemented other human capital priorities, including providing competitive wages and benefits, and promoting a diverse and inclusive work environment. The Company is committed to increasing diversity and fostering an inclusive work environment that supports our large global workforce and helps us innovate for our customers. We continue to focus on building a pipeline for talent to create more opportunities for workplace diversity and to support greater representation within the Company.

Available Information

All reports we file electronically with the SEC, including our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and our annual proxy statements, as well as any amendments to those reports, are accessible at no cost on our website at www.ropertech.com as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. These filings are also accessible on the SEC’s website at www.sec.gov. Our Corporate Governance Guidelines; the charters of our Audit Committee, Compensation Committee, and Nominating and Governance Committee; and our Business Code of Ethics and Standards of Conduct are also available on our website. Any amendment to the Business Code of Ethics and Standards of Conduct and any waiver applicable to our directors, executive officers or senior financial officers will be posted on our website within the time period required by the SEC and the New York Stock Exchange (the “NYSE”). The information posted on our website is not incorporated into this Annual Report or any other filing made by Roper with the SEC.

ITEM 1A. RISK FACTORS

Risks Related to Our Business Operations

Our growth strategy includes acquisitions. We may not be able to identify suitable acquisition candidates, complete acquisitions or integrate acquisitions successfully.

Our future growth is likely to depend to some degree on our ability to acquire and successfully integrate new businesses. We intend to seek additional acquisition opportunities, both to expand into new markets and to enhance our position in existing markets. There are no assurances, however, that we will be able to successfully identify suitable candidates, negotiate appropriate terms, obtain financing on acceptable terms, complete proposed acquisitions, successfully integrate acquired businesses or expand into new markets. Once acquired, operations may not achieve anticipated levels of revenues, profitability or cash flows.

Acquisitions involve risks, including difficulties in the integration of the operations, technologies, services and products of the acquired companies and the diversion of management’s attention from other business concerns. Although our management will endeavor to evaluate the risks inherent in any particular transaction, including but not limited to cyber risks, there are no assurances that we will properly ascertain all such risks. Acquisitions may involve significant cash expenditures, debt incurrences, equity issuances and expenses. Difficulties encountered with acquisitions may have a material adverse effect on our business, financial condition and results of operations.

Our technology is important to our success and our failure to protect this technology could put us at a competitive disadvantage.

Many of our products and services rely on proprietary technology; therefore we believe that the development and protection of intellectual property rights through patents, copyrights, trade secrets, trademarks, confidentiality agreements and other contractual provisions are important to the future success of our business. Despite our efforts to protect proprietary rights, unauthorized parties or competitors may copy or otherwise obtain and use our products or technology. Actions to enforce these rights may result in substantial costs and diversion of resources, and we make no assurances that any such actions will be successful.

Unfavorable changes in foreign exchange rates may harm our business.

Several of our operating companies have transactions and balances denominated in currencies other than the U.S. dollar. Most of these transactions and balances are denominated in euros, Canadian dollars, or British pounds. Sales by our operating companies whose functional currency is not the U.S. dollar represented 11% and 12% of our total net revenues for the years ended December 31, 2022 and 2021, respectively. Unfavorable changes in exchange rates between the U.S. dollar and those currencies could significantly reduce our reported revenues and earnings.

We rely on information and technology, including third-party cloud computing platforms, for many of our business operations which could fail and cause disruption to our business operations.

Our business operations are dependent upon information technology networks and systems to securely transmit, process and store electronic information and to communicate among our locations around the world and with clients and suppliers. A shutdown of, or inability to access, one or more of our facilities, a power outage or a failure of one or more of our information technology, telecommunications or other systems could significantly impair our ability to perform such functions on a timely basis. Our compliance, cyber and data privacy programs, cybersecurity technology and risk management cannot eliminate all system risk. Cyberattacks, configuration or human error and/or other external hazards could result in the misappropriation of assets or sensitive information, corruption of data or operational disruption.

We increasingly rely on third-party data centers and cloud platforms, such as Amazon Web Services, Google Cloud Platform, and Microsoft Azure to host enterprise and customer systems. Our ability to monitor such third parties' security measures and the full impact of the systemic risk is limited. If any cloud platform that we use is unavailable to us for any reason, our customers may experience service interruptions, which could significantly impact our operations, reputation, business, and financial results. Failure of our systems or those of our third-party service providers, may result in interruptions in our service and loss of data or processing capabilities, all of which may cause a loss in customers, refunds of product fees, material harm to our reputation and operating results.

Global cybersecurity threats are rapidly evolving and becoming increasingly more sophisticated and attacks to networks, systems and endpoints can range from uncoordinated individual attempts to sophisticated and targeted measures known as advanced persistent threats, directed at the Company, its businesses, its customers and/or its third-party service providers, including, but not limited to, cloud providers and providers of network management services. These may include such things as unauthorized access, phishing attacks, denial of service, introduction of malware or ransomware and other disruptive problems caused by threat actors. While we have experienced, and expect to continue to experience, these types of threats and incidents, none of them to date have been material to the Company.

We seek to deploy measures to protect, detect, respond and recover from cyber threats, including identity and access controls, data protection, vulnerability management, incident response, secure product development, continuous monitoring of our networks, endpoints and systems, and maintenance of resilient backup and recovery capabilities. Our customers are increasingly requiring cybersecurity protections and mandating cybersecurity standards in our products and services, and we may incur additional costs to comply with such demands. Despite these efforts, we can make no assurance that we will be able to mitigate, detect, prevent, timely and adequately respond, or fully recover from the negative effects of cyberattacks or other security compromises, and such cybersecurity incidents, depending on their nature and scope, could potentially result in the misappropriation, destruction, corruption or unavailability of critical data and confidential or proprietary information (our own or that of third parties) and the disruption of business operations. The potential consequences of a material cybersecurity incident include financial loss, reputational damage, damage to our IT systems, data loss, litigation with third parties, theft of intellectual property, fines, diminution in the value of our investment in research and development, and increased cybersecurity protection and remediation costs due to the increasing sophistication and proliferation of threats, which in turn could adversely affect our competitiveness and results of operations. Any imposition of liability, particularly liability that is not covered by insurance or is in excess of insurance coverage, could materially harm our operating results and financial condition.

Product liability, insurance risks and increased insurance costs could harm our operating results.

Our business exposes us to product liability risks in the design, manufacture and distribution of our products. We currently have product liability insurance; however, we may not be able to maintain our insurance at a reasonable cost or in sufficient amounts to adequately protect us against losses. We also maintain other insurance policies, including directors' and officers' liability insurance and cyber insurance. We believe we have adequately accrued estimated losses, principally related to deductible amounts under our insurance policies, with respect to all product liability and other claims, based upon our past experience and available facts. However, a successful product liability or other claim or series of claims brought against us could have a material adverse effect on our business, financial condition and results of operations. In addition, a significant increase in our insurance costs or the imposition of a liability that is not covered by insurance or is in excess of insurance coverage, could have an adverse impact on our operating results.

Our operating results could be adversely affected by a reduction of business with our large customers.

In some of our businesses, we derive a significant amount of revenue from large customers. The loss or reduction of any significant contracts with any of these customers could reduce our revenues and cash flows. Additionally, many of our customers are government entities. In many situations, government entities can unilaterally terminate or modify our existing contracts without cause and without penalty to the government agency.

We face intense competition. If we do not compete effectively, our business may suffer.

We face intense competition from numerous competitors in our various businesses. Our products compete primarily on the basis of product quality, performance, innovation, technology, price, applications expertise, system and service flexibility, distribution channel access and established customer service capabilities. We may not be able to compete effectively on all of these fronts or with all of our competitors. Moreover, competition may require us to adjust prices to stay competitive. In addition, new competitors may emerge, and product lines may be threatened by new technologies or market trends that reduce the value of these product lines. To remain competitive, we must develop new products, respond to new technologies and enhance our existing products in a timely manner.

Our indebtedness may affect our business and may restrict our operating flexibility.

As of December 31, 2022, we had $6,661.7 in total consolidated indebtedness. In addition, we had approximately $3,482 undrawn availability under our senior unsecured credit facility. Subject to restrictions contained in our credit facility, we may incur additional indebtedness in the future, including indebtedness incurred to finance acquisitions.

Our level of indebtedness and the debt servicing costs associated with that indebtedness could have important effects on our operations and business strategy. For example, our indebtedness could:

- limit our ability to borrow additional funds;
- limit our ability to complete future acquisitions;
- limit our ability to pay dividends;
- limit our ability to make capital expenditures;
- place us at a competitive disadvantage relative to our competitors, some of which have lower debt service obligations and greater financial resources; and
- increase our vulnerability to general adverse economic and industry conditions.

Our ability to make scheduled principal payments of, to pay interest on, or to refinance our indebtedness and to satisfy our other debt obligations will depend upon our future operating performance, which may be affected by factors beyond our control. In addition, there can be no assurance that future borrowings or equity financing will be available to us on favorable terms for the payment or refinancing of our indebtedness. If we are unable to service our indebtedness, our business, financial condition and results of operations would be materially adversely affected.

Our credit facility contains covenants requiring us to achieve certain financial and operating results and maintain compliance with specified financial ratios. Our ability to meet the financial covenants or requirements in our credit facility may be affected by events beyond our control, and we may not be able to satisfy such covenants and requirements. A breach of these covenants or our inability to comply with the financial ratios, tests or other restrictions contained in our facility could result in an event of default under this facility. Upon the occurrence of an event of default under our credit facility, and the expiration of any grace periods, the lenders could elect to declare all amounts outstanding under the facility, together with accrued interest, to be immediately due and payable. If this were to occur, our assets may not be sufficient to fully repay the amounts due under this facility or our other indebtedness.

Our goodwill and intangible assets are a significant amount of our total assets, and any write-off of our intangible assets would negatively affect our results of operations.

Our total assets reflect substantial intangible assets, primarily goodwill. At December 31, 2022, goodwill totaled $15,946.1 compared to $16,037.8 of stockholders' equity, and represented 59% of our total assets of $26,980.8. The goodwill results from our acquisitions, representing the excess purchase price over the fair value of the net identifiable assets acquired. We assess at least annually whether there has been an impairment in the value of our goodwill and indefinite lived intangible assets. If future operating performance at one or more of our business units were to fall significantly below current levels, if competing or alternative technologies emerge, if interest rates rise or if business valuations decline, we could incur a non-cash charge to operating income. Any determination requiring the write-off of a significant portion of goodwill or unamortized intangible assets would negatively affect our results of operations, the effect of which could be material.

We depend on our ability to develop new products and software, and any failure to develop or market new products and software could adversely affect our business.

The future success of our business will depend, in part, on our ability to design and manufacture new competitive products, including software, and to enhance existing products and software offerings. This product development may require substantial internal investment. There can be no assurance that unforeseen problems will not occur with respect to the development, performance or market acceptance of new technologies, products, or software or that we will otherwise be able to successfully develop and market new products and software. Failure of our products or software offerings to gain market acceptance or our failure to successfully develop and market new products and software could reduce our margins, which would have an adverse effect on our business, financial condition and results of operations.

Changes in the supply of, or price for, raw materials, parts and components used in our products or for third-party services used in the delivery of our SaaS solutions could affect our business.

The availability and prices of raw materials, parts and components are subject to curtailment or change due to, among other things, suppliers' allocations to other purchasers, interruptions in production by suppliers, supply chain delays and disruptions, changes in exchange rates and prevailing price levels. For example, we expect to continue to be impacted by supply chain challenges, including increased material costs, component shortages and transportation disruptions and delays, all of which could escalate in the future. In addition, some of our products are provided by sole source suppliers and our SaaS offerings are increasingly reliant on a limited number of third-party cloud computing platforms. Any change in the supply of, or price for, these parts and components, as well as any increases in commodity prices or the price and availability of third-party cloud computing platforms could affect our business, financial condition and results of operations.

Our operating results may be adversely impacted by the performance of Indicor, in which we own a minority interest.

In 2022, we divested a 51% majority equity stake of our industrial businesses to Clayton, Dubilier & Rice, LLC ("CD&R") and retained an initial 49% minority equity interest in the new parent entity, Indicor. Although we have certain limited consent, board representation and other governance rights under existing contractual arrangements, we are a minority owner of Indicor and do not control its management, its policies or the operation of its business, and have no further funding requirements associated with our investment. As a result, our ability to realize the ultimate anticipated benefits of the transaction depend upon operation and management of Indicor by CD&R and the Indicor management team. In addition, Indicor is an industrial business that is subject to risks that are different than the risks associated with our existing businesses. Many of these risks are outside CD&R's or Indicor's control and could materially impact Indicor's business, financial condition and results of operations. Moreover, CD&R may have economic or other business interests that are inconsistent with ours, and we may be unable to prevent strategic decisions that may adversely affect the value of our investment in Indicor. We have applied the fair value option to value our equity investment in Indicor. The assessment of fair value requires significant judgments to be made. Although we believe that our judgments and assumptions are reasonable, changes in estimates or the application of alternative assumptions could produce significantly different results, as a result we could incur non-cash charges within non-operating income and a corresponding reduction in fair value.

Divestitures or other dispositions could negatively impact our business.

Divestitures pose risks and challenges that could negatively impact our business. For example, when we decide to sell or otherwise dispose of a business or assets, we may be unable to do so on satisfactory terms within our anticipated timeframe or at all, and even after reaching a definitive agreement to sell or dispose a business the sale is typically subject to satisfaction of pre-closing conditions which may not become satisfied. The consummation of any divestiture can be difficult, time-consuming and costly, and we may not be able to successfully complete identified divestitures. They may also cause diversion of management time and focus away from operating our business. In addition, divestitures or other dispositions may have other adverse financial and accounting impacts, and disputes may arise with buyers or with partners in businesses in which we own a minority interest that could be difficult or costly to resolve.

Risks Related to Government Regulations

Regulation of privacy and data security may adversely affect sales of our products and services and result in increased compliance costs.

There has been, and likely will continue to be, increased regulation with respect to the collection, use and handling of an individual’s personal and financial information. Regulatory authorities around the world have passed or are considering legislative and regulatory proposals concerning data protection, privacy and data security. In the United States, Virginia, Colorado, Connecticut, and Utah have passed new comprehensive privacy legislation, and joined California (which further enhanced its existing privacy laws) in directly regulating the collection, use and sharing of personal information. In addition, there has been an increased focus on industry-specific privacy laws, including in the financial, healthcare, and educational sectors. These statutes and regulations create civil penalties for violations, and in the case of California, creates a private right of action for data breaches, that increases the risk of data breach litigation. Absent a pre-emptive Federal privacy law, as more states pass privacy legislation, there is a strong possibility that we will be required to comply with a patchwork of inconsistent privacy regulations.

Globally, personal information collected within the European Union and United Kingdom remains subject to the 2018 General Data Protection Regulation (GDPR), which is a UK and European Union-wide legal framework that governs data collection, use, and sharing of an individual’s personal data and creates a range of consumer privacy rights. GDPR provides significant penalties for non-compliance (up to 4% of global revenue) and EU data protection authorities have already issued significant fines.

The interpretation and application of consumer and data protection laws and industry standards in the United States, Europe, China and elsewhere can be uncertain and currently is in flux. Cloud-based solutions may be subject to further regulation, including data localization requirements and other restrictions limiting the international transfer of data. The operational and cost impact of these cannot be fully known at this time. In addition to the possibility of fines, application of these existing laws in a manner inconsistent with our data and privacy practices require that we change our data and privacy practices, which could have an adverse effect on our business and results of operations. Complying with these various laws could cause us to incur substantial costs or require us to change our business practices in a manner adverse to our business. Also, any new law or regulation imposing greater fees or taxes or restriction on the collection, use or transfer of information or data internationally or over the Internet, could result in a decline in the use of our products and services and adversely affect sales and our results of operations. Finally, as we increasingly become a provider of technology solutions, our customers and regulators will expect that we can demonstrate compliance with current data privacy and security regulations as well as new industry-developed standards, and our inability to do so may adversely impact sales of our solutions and services to certain customers. This is particularly true for customers in highly-regulated industries, such as the healthcare industry and government contractors, and could result in regulatory actions, fines, legal proceedings and negatively impact our brand, reputation and our business.

Expectations relating to environmental, social and governance considerations expose the Company to potential liabilities, increased costs, reputational harm and other adverse effects on the Company’s business.

Many governments, regulators, investors, employees, customers and other stakeholders are increasingly focused on environmental, social and governance considerations relating to businesses, including climate change and greenhouse gas emissions, human capital and diversity, equity and inclusion. The Company makes statements about its environmental, social and governance goals and initiatives through information provided on its website, press statements and other communications, including through its ESG Report. Responding to these environmental, social and governance considerations and implementation of these goals and initiatives involves risks and uncertainties, including those described under “Forward-Looking Statements,” requires investments and are impacted by factors that may be outside the Company’s control. In addition, some stakeholders may disagree with the Company’s goals and initiatives and the focus of stakeholders may change and evolve over time. Stakeholders also may have very different views on where environmental, social and governance focus should be placed, including differing views of regulators in various jurisdictions in which we operate. Any failure, or perceived failure, by the Company to achieve its goals, further its initiatives, adhere to its public statements, comply with federal, state or international environmental, social and governance laws and regulations, or meet evolving and varied stakeholder expectations and standards could result in legal and regulatory proceedings against the Company and materially adversely affect the Company’s business, reputation, results of operations, financial condition and stock price.

Risks Related to Economic and Political Conditions

Economic, political and other risks associated with our international operations could adversely affect our business.

For the year ended December 31, 2022, 14% of our net revenues and 8% of our long-lived assets, excluding goodwill and intangibles, were attributable to operations outside the U.S. We expect our international operations to contribute materially to our business for the foreseeable future. Our international operations are subject to varying degrees of risk inherent in doing business outside the U.S. including, without limitation, the following:

- adverse changes in a specific country’s or region’s political or economic conditions, particularly in emerging markets;
- oil price volatility;
- trade protection measures, tariffs, and import or export requirements;
- subsidies or increased access to capital for firms that are currently, or may emerge as, competitors in countries in which we have operations;
- partial or total expropriation;
- potentially negative consequences from changes in tax laws;
- difficulty in staffing and managing widespread operations;
- differing labor regulations;
- differing protection of intellectual property;
- differing and unexpected changes in regulatory requirements, including any measures implemented to address the impacts of climate change; and
- potentially negative consequences from the United Kingdom’s exit from the European Union.

Any business disruptions due to political instability, armed hostilities, incidents of terrorism, incidents of directed cyber-attacks, public health crisis, extreme weather events or other natural disasters could adversely impact our financial performance.

If terrorist activity, armed conflict, directed cyber-attacks, political instability, public health crisis, such as an epidemic or pandemic, or extreme weather events or other natural disasters occur in the U.S. or other locations, such events may negatively impact our operations, cause general economic conditions to deteriorate or cause demand for our products to decline. A prolonged economic slowdown or recession could reduce the demand for our products, and therefore, negatively affect our future sales and profits. Any of these events could have a significant impact on our business, financial condition or results of operations.

Our business, financial condition and results of operations could be adversely affected by disruptions in the global economy caused by the ongoing conflict between Russia and Ukraine.

The global economy has been negatively impacted by the military conflict between Russia and Ukraine. Furthermore, governments in the United States, United Kingdom and European Union have each imposed export controls on certain products and financial and economic sanctions on certain industry sectors and parties in Russia. We have historically had limited operations in Russia and a limited number of suppliers in Ukraine. Nevertheless, the Russia-Ukraine military conflict could have a negative impact on the global economy. Further escalation of geopolitical tensions related to the military conflict, including increased trade barriers or restrictions on global trade, could result in, among other things, cyberattacks, supply disruptions, lower consumer demand, and changes to foreign exchange rates and financial markets, any of which may adversely affect our business and supply chain.

General Risk Factors

Impacts related to the COVID-19 pandemic could have an adverse effect on our business, financial condition, results of operations and cash flows.

We continue to closely monitor the impact of the COVID-19 global pandemic on our business, including how it has and will impact our customers, employees, suppliers, vendors and business partners. The COVID-19 global pandemic has created significant volatility, uncertainty and economic disruption, which may continue to affect our business operations and may materially and adversely affect our results of operations, cash flows and financial position.

The COVID-19 global pandemic has caused certain disruptions to our business and operations and could cause material disruptions to our business and operations in the future as a result of, among other things, quarantines, worker absenteeism as a result of illness or other factors, social distancing measures and other travel, health-related, business or other restrictions. The effects of the pandemic have created and exacerbated challenges with the attraction and retention of talent.

The COVID-19 global pandemic has and may continue to adversely impact, our suppliers and customers. As a result of the effects of the COVID-19 global pandemic our ability to obtain products or services from certain suppliers and to operate at certain locations have been and may continue to be impacted. As a result, our business, financial condition and results of operations have been adversely impacted and could be materially adversely affected if the COVID-19 global pandemic continues or there are resurgences of COVID-19 and its variants.

The extent to which the coronavirus continues to impact our business, results of operations and financial condition will depend on future developments, which are highly uncertain and are difficult to predict, including, but not limited to, ongoing or additional outbreaks of the virus or its variants in the jurisdictions in which we operate, the duration and spread of any such outbreaks, its severity, and the actions to contain the virus and its variants whether through the distribution and administration of available vaccines, vaccine mandates or otherwise could have a material impact on our results of operations and heighten many of our known risks described below in this “Risk Factors” section.

The potential insolvency or financial distress of third parties could adversely impact our business and results of operations.

We are exposed to the risk that third parties to various arrangements who owe us money or goods and services, or who purchase goods and services from us, will not be able to perform their obligations or continue to place orders due to insolvency or financial distress. In addition, the global COVID-19 pandemic has created heightened risk that third parties may be unable to perform their obligations or suffer financial distress due to the global economic impact of the pandemic and the regulatory measures that have been enacted by governments to contain the spread of the virus, however, we are unable predict the impact that COVID-19 will have on any of our customers, suppliers, vendors, and other business partners, and each of their financial conditions or their ability to perform their obligations. If third parties fail to perform their obligations under arrangements with us, we may be forced to replace the underlying commitment at current or above market prices or on other terms that are less favorable to us. In such events, we may incur losses, or our results of operations, financial condition or liquidity could otherwise be adversely affected.

Changes to our executive leadership team and any future loss of members of such team, and the resulting management transitions, could harm our operating results.

We have experienced significant changes to our executive leadership team in the past and may do so in the future. Leadership transitions and changes can be inherently difficult to manage and may cause uncertainty or disruption to our business or may increase the likelihood of turnover in key leadership positions. If we cannot effectively manage leadership transitions and changes, it could make it more difficult to successfully operate our business.

Legal proceedings in which we are, or may be, a party may adversely affect us.

We are currently, and may in the future, become subject to legal proceedings and commercial or contractual disputes. These are typically claims that arise in the normal course of business including, without limitation, commercial or contractual disputes with our suppliers or customers, intellectual property matters, third party liability, including product liability claims, and employment claims. We are and may in the future become subject to litigation regarding data or privacy incidents, as more fully described above in “*We rely on information and technology for many of our business operations which could fail and cause disruption to our business operations”*.

A downgrade in the ratings of our debt could restrict our ability to access the debt capital markets and increase our interest costs.

Unfavorable changes in the ratings that rating agencies assign to our debt may ultimately negatively impact our access to the debt capital markets and increase the costs we incur to borrow funds. Additionally, our credit agreement includes an increase in interest rates if the ratings for our debt are downgraded. Further, an increase in the level of our indebtedness may increase our vulnerability to adverse general economic and industry conditions and may affect our ability to obtain additional financing.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None

ITEM 2. PROPERTIES

Our corporate offices, consisting of 29,000 square feet of leased space, are located at 6901 Professional Parkway, Sarasota, Florida. As of December 31, 2022, we owned approximately 0.3 million square feet, and leased approximately 2.8 million square feet. Of the total 3.1 million square feet, 76% is concentrated in the United States. We consider our facilities to be in good operating condition and adequate for their present use and believe we have sufficient capacity to meet our anticipated operating requirements.

ITEM 3. LEGAL PROCEEDINGS

Information pertaining to legal proceedings can be found in Note 13 to the Consolidated Financial Statements included in this Annual Report, and is incorporated by reference herein.

ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable

EXECUTIVE OFFICERS OF THE REGISTRANT

Pursuant to General Instruction G(3) of Form 10-K, the following list of executive officers of the Company as of February 27, 2023 is included as an unnumbered Item in Part I of this report in lieu of being included in the Company's Proxy Statement relating to the 2023 Annual Meeting of Shareholders.

L. Neil Hunn, 50, has served as President and Chief Executive Officer since August 2018. He previously served as Executive Vice President and Chief Operating Officer from 2017 to 2018. Mr. Hunn also served as Group Vice President of Roper's medical segment from 2011 to 2018 and helped drive significant growth in the Company's medical technology and application software businesses. In addition to his operating responsibilities at Roper, Mr. Hunn led the execution of the majority of the company's capital deployment since joining Roper. Prior to joining Roper, Mr. Hunn served 10 years as Executive Vice President and Chief Financial Officer at MedAssets, an Atlanta-based SaaS company, and as President of its revenue cycle technology businesses. He successfully led MedAssets' initial public offering and the execution of several M&A transactions. Mr. Hunn also held roles at CMGI, an incubator of Internet businesses, and Parthenon Group, a strategy consulting firm.

Jason P. Conley, 47, has served as Executive Vice President and Chief Financial Officer since February 2023. Prior thereto he served as Vice President and Chief Accounting Officer from 2021 to February 2023 and as Vice President and Controller from 2017 to 2021. He previously served as the Chief Financial Officer at Managed Healthcare Associates, a Roper subsidiary, from 2013 to 2017. He also led the financial planning and investor relations activities for Roper from 2006 to 2013. Before Roper, Mr. Conley served in various finance and accounting leadership roles at Honeywell International and Deloitte.

John K. Stipancich, 54, has served as Executive Vice President, General Counsel and Corporate Secretary since 2018 and as Vice President, General Counsel and Corporate Secretary from 2016 to 2018. Prior to joining Roper, Mr. Stipancich was with Newell Brands, Inc., a consumer products company, from 2004 to 2016. At Newell Brands he served as Executive Vice President and Chief Financial Officer from 2015 to 2016. Prior thereto, he served in a number of leadership roles at Newell Brands including General Counsel and Corporate Secretary, and Executive Leader of its operations in Europe, the Middle East and Africa. Prior to his twelve years at Newell Brands, Mr. Stipancich served as Executive Vice President, General Counsel and Corporate Secretary for Evenflo Company and Assistant General Counsel for Borden, both KKR portfolio companies at the time. He started his legal career in the Cleveland office of the international law firm of Squire Patton Boggs.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock trades on the NYSE under the symbol "ROP". Based on information available to us and our transfer agent, there were approximately 202 record holders of our common stock as of February 17, 2023.

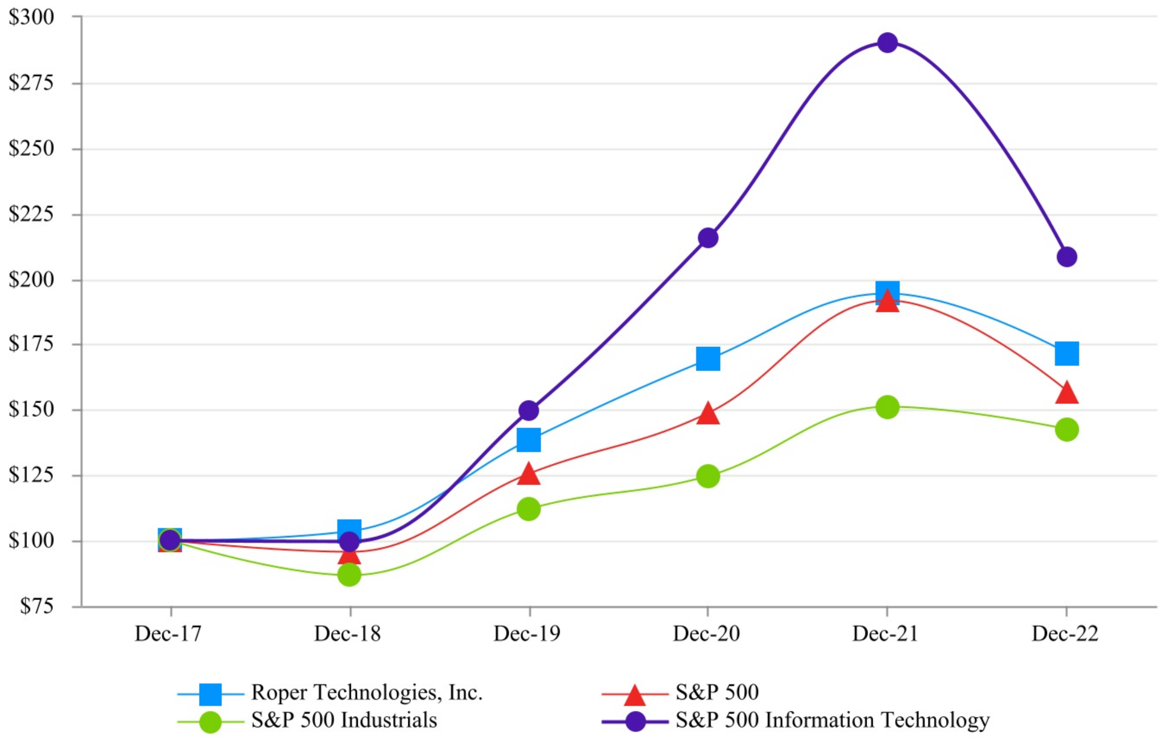
Dividends – We have declared a cash dividend in each quarter since our February 1992 initial public offering and we have annually increased our dividend rate since our initial public offering. In November 2022, our Board of Directors increased the quarterly dividend paid January 23, 2023 to $0.6825 per share from $0.62 per share, an increase of 10%. This is the thirtieth consecutive year in which the Company has increased its dividend. The timing, declaration and payment of future dividends will be at the sole discretion of our Board of Directors and will depend upon our profitability, cash flows, financial condition, capital needs, future prospects and other factors deemed relevant by our Board of Directors.

Performance Graph - This performance graph shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") or otherwise subject to the liabilities under that Section and shall not be deemed to be incorporated by reference into any of our filings under the Securities Act of 1933, as amended, or under the Exchange Act.

Roper has historically compared the cumulative total return on its common stock with that of the Standard & Poor's 500 Stock Index (the "S&P 500") and the Standard and Poor's 500 Industrials Index (the "S&P 500 Industrials"). As a result of the divestiture activity in 2022 and 2021, the Company will use the S&P 500 Information Technology Index (the "S&P 500 IT") in place of the S&P 500 Industrials on a go-forward basis to better reflect more relevant comparisons of our software and technology focused portfolio. The performance graph below presents the indices used in the prior year and the newly selected index.

The following graph compares, for the five year period ended December 31, 2022, the cumulative total stockholder return for our common stock, the S&P 500, the S&P 500 Industrials, and the S&P 500 IT indices. Measurement points are the last trading day of each of our fiscal years ended December 31, 2017, 2018, 2019, 2020, 2021 and 2022. The graph assumes that $100.00 was invested on December 31, 2017 in our common stock, the S&P 500, the S&P 500 Industrials, and the S&P 500 IT and assumes reinvestment of any dividends. The stock price performance on the following graph is not necessarily indicative of future stock price performance.

	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Roper Technologies, Inc.	$ 100.00	$ 103.52	$ 138.36	$ 169.34	$ 194.20	$ 171.59
S&P 500	100.00	95.62	125.72	148.85	191.58	156.88
S&P 500 Industrials	100.00	86.71	112.17	124.59	150.89	142.63
S&P 500 IT	100.00	99.71	149.86	215.63	290.08	208.30



The information set forth in Item 12 under the heading “Securities Authorized for Issuance under Equity Compensation Plans” is incorporated herein by reference.

ITEM 6. [RESERVED]

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

All currency amounts are in millions unless specified

Overview

Roper Technologies is a diversified technology company. Roper has a proven, long-term, successful track record of compounding cash flow and shareholder value. We operate market leading businesses that design and develop vertical software and technology enabled products for a variety of defensible niche markets.

We pursue consistent and sustainable growth in revenue, earnings and cash flow by enabling continuous improvement in the operating performance of our existing businesses and by acquiring other businesses that offer high value-added software, services, technology-enabled products and solutions that we believe are capable of achieving growth and maintaining high margins.

Discontinued Operations

On November 22, 2022, the Company completed the divestiture of a majority 51% equity stake in its industrial businesses, including its entire historical Process Technologies reportable segment and the industrial businesses within its historical Measurement & Analytical Solutions reportable segment, to Clayton, Dubilier & Rice, LLC. The businesses included in this transaction were Alpha, AMOT, CCC, Cornell, Dynisco, FTI, Hansen, Hardy, Logitech, Metrix, PAC, Roper Pump, Struers, Technolog, Uson, and Viatran (collectively "Indicor"). Following the sale of the majority stake, the Company retained an initial 49% minority equity interest in the new standalone parent company, Indicor, LLC. This transaction is referred to herein as the "Indicor Transaction."

During 2021, Roper entered into definitive agreements to divest our TransCore, Zetec and CIVCO Radiotherapy businesses ("2021 Divestitures"). As of March 31, 2022, Roper had completed the 2021 Divestitures.

The aggregate of the 2021 Divestitures and the Indicor Transaction have greatly reduced the cyclicality and asset intensity of the Company. In addition, the Company has an increased mix of recurring revenue and a higher margin profile. The financial results for Indicor and the 2021 Divestitures are reported as discontinued operations for all periods presented. Unless otherwise noted, discussion within Management's Discussion and Analysis of Financial Condition and Results of Operations relate to continuing operations. Information regarding discontinued operations is included in Note 3 of the Notes to Consolidated Financial Statements.

Update to Segment Reporting Structure

During the second quarter of 2022, we updated our reportable segment structure following the announcement of the Indicor Transaction. The Company's new reporting segment structure is classified based on business model and delivery of performance obligations. The three updated reportable segments (and businesses within each; including changes due to acquisitions since the realignment) are as follows:

–**Application Software** - Aderant, CBORD/Horizon, CliniSys, Data Innovations, Deltek, Frontline Education, IntelliTrans, PowerPlan, Strata, Vertafore

–**Network Software** - ConstructConnect, DAT, Foundry, iPipeline, iTradeNetwork, Loadlink, MHA, SHP, SoftWriters

–**Technology Enabled Products** - CIVCO Medical Solutions, FMI, Inovonics, IPA, Neptune, Northern Digital, rf IDEAS, Verathon

Following the Indicor Transaction and the realignment of our reportable segments, the day-to-day operations of our businesses, our organizational structure, and our strategy remain unchanged. All prior periods have been recast to reflect the changes noted above. Financial information about our reportable segments is presented in Note 14 of the Notes to Consolidated Financial Statements included in this Annual Report.

Application of Critical Accounting Policies

Our Consolidated Financial Statements are prepared in conformity with generally accepted accounting principles in the United States (“GAAP”). A discussion of our significant accounting policies can also be found in the Notes to Consolidated Financial Statements for the year ended December 31, 2022 included in this Annual Report.

GAAP offers acceptable alternative methods for accounting for certain issues affecting our financial results, such as determining inventory cost, depreciating long-lived assets and recognizing revenue. We have not changed the application of acceptable accounting methods or the significant estimates affecting the application of these principles in the last three years in a manner that had a material effect on our Consolidated Financial Statements.

The preparation of financial statements in accordance with GAAP requires the use of estimates, assumptions, judgments and interpretations that can affect the reported amounts of assets, liabilities, revenues and expenses, the disclosure of contingent assets and liabilities and other supplemental disclosures.

The development of accounting estimates is the responsibility of our management. Our management discusses those areas that require significant judgments with the Audit Committee of our Board of Directors. The Audit Committee has reviewed all financial disclosures in our annual filings with the SEC. Although we believe the positions we have taken with regard to uncertainties are reasonable, others might reach different conclusions and our positions can change over time as more information becomes available. If an accounting estimate changes, its effects are accounted for prospectively or through a cumulative catch up adjustment.

Our most significant accounting uncertainties are encountered in the areas of income taxes, valuation of other intangible assets, goodwill and indefinite-lived impairment analyses, and valuation of our initial 49% equity interest in Indicor. Estimates are considered to be significant if they meet both of the following criteria: (1) the estimate requires assumptions about matters that are uncertain at the time the estimate is made, and (2) changes in the estimate are reasonably likely to have a material financial impact from period-to-period.

Income taxes can be affected by estimates of whether and within which jurisdictions future earnings will occur and if, how and when cash is repatriated to the U.S., combined with other aspects of an overall income tax strategy. Additionally, taxing jurisdictions could retroactively disagree with our tax treatment of certain items, and some historical transactions have income tax effects going forward. Accounting rules require these future effects to be evaluated using current laws, rules and regulations, each of which can change at any time and in an unpredictable manner. If there is a material change in the actual effective tax rates, the time period within which the underlying temporary differences become taxable or deductible, or if the tax law changes are unfavorable there could be a resulting increase to income tax expense and the effective tax rate.

During 2022, our effective income tax rate was 23.1%, as compared to the 2021 rate of 22.0%. The rate was unfavorably impacted by the recognition of a net tax expense associated with an internal restructuring plan associated with the Indicor Transaction. We expect the effective tax rate for 2023 to be approximately 21% to 22%.

We account for goodwill in a purchase business combination as the excess purchase price over the fair value of the net identifiable assets acquired. Goodwill, which is not amortized, is tested for impairment on an annual basis in conjunction with our annual forecast process during the fourth quarter (or an interim basis if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying value).

When testing goodwill for impairment, we have the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the estimated fair value of a reporting unit is less than its carrying amount. If we elect to perform a qualitative assessment and determine that an impairment is more likely than not, we are then required to perform the quantitative impairment test; otherwise, no further analysis is required. Under the qualitative assessment, we consider various qualitative factors, including macroeconomic conditions, relevant industry and market trends, cost factors, overall financial performance, other entity-specific events and events affecting the reporting unit that could indicate a potential change in the fair value of our reporting unit or the composition of its carrying values. We also consider the specific future outlook for the reporting unit.

We also may elect not to perform the qualitative assessment and, instead, proceed directly to the quantitative impairment test. The quantitative assessment utilizes an equal weighted income approach (discounted cash flows) and market approach (consisting of a comparable company earnings multiples methodology) to estimate the fair value of a reporting unit. To determine the reasonableness of the estimated fair values, we review the assumptions to ensure that neither the income approach nor the market approach provides significantly different valuations. If the estimated fair value exceeds the carrying value, no further work is required and no impairment loss is recognized. If the carrying value exceeds the estimated fair value, a non-cash impairment loss is recognized in the amount of that excess.

Key assumptions used in the income and market approaches are updated when the analysis is performed for each reporting unit. The assumptions that have the most significant effect on the fair value calculations are the projected revenue growth rates, future operating margins, discount rates, terminal values and earnings multiples. While we use reasonable and timely information to prepare our cash flow and discount rate assumptions, actual future cash flows or market conditions could differ significantly and could result in future non-cash impairment charges related to recorded goodwill balances.

Recently acquired reporting units generally represent a higher inherent risk of impairment, which typically decreases as the businesses are integrated into our enterprise. Negative industry or economic trends, disruptions to our business, actual results significantly below projections, unexpected significant changes or planned changes in the use of the assets, divestitures and market capitalization declines may have a negative effect on the fair value of our reporting units.

As of the annual impairment test, the Company has 21 reporting units with individual goodwill amounts ranging from $17.5 to $3,363.1. In 2022, the Company performed its annual impairment test in the fourth quarter for all reporting units. The Company conducted its analysis qualitatively and assessed whether it was more likely than not that the respective fair value of these reporting units was less than the carrying amount. The Company determined that impairment of goodwill was not likely in any of its reporting units and thus was not required to perform a quantitative assessment for these reporting units as of October 1, 2022.

Trade names that are determined to have an indefinite useful economic life are not amortized, but separately tested for impairment during the fourth quarter of the fiscal year or on an interim basis if an event occurs that indicates the fair value is more likely than not below the carrying value. We first qualitatively assess whether the existence of events or circumstances leads to a determination that it is more likely than not that the estimated fair value of the indefinite-lived trade name is less than its carrying amount. If necessary, we conduct a quantitative assessment using the relief-from-royalty method, which we believe to be an acceptable methodology due to its common use by valuation specialists in determining the fair value of intangible assets. This methodology assumes that, in lieu of ownership, a third-party would be willing to pay a royalty in order to exploit the related benefits of these assets. The assumptions that have the most significant effect on the fair value calculations are the royalty rates, projected revenue growth rates, discount rates and terminal values. Each royalty rate is determined based on the profitability of the trade name to which it relates and observed market royalty rates. Revenue growth rates are determined after considering current and future economic conditions, recent sales trends, discussions with customers, planned timing of new product launches or other variables. Trade names resulting from recent acquisitions generally represent the highest risk of impairment, which typically decreases as the businesses are integrated into our enterprise.

During the fourth quarter of 2021, the Company determined the use of the Sunquest trade name would be discontinued given the strategic action to merge the Sunquest business into our CliniSys business, both of which are reported in our Application Software reportable segment. Considering the planned merger and updated market comparisons, the royalty rate utilized in the quantitative impairment assessment of the trade name was 0.5% as compared to a royalty rate of 3.5% used in the prior year. The royalty rate reduction was the significant assumption that resulted in a non-cash impairment charge of $94.4 recognized as a component of “Impairment of intangible assets” within the Consolidated Statements of Earnings.

The assessment of fair value for impairment purposes requires significant judgments to be made by management. Although our forecasts are based on assumptions that are considered reasonable by management and consistent with the plans and estimates management uses to operate the underlying businesses, there is significant judgment in determining the expected results attributable to the businesses and/or reporting units. Changes in estimates or the application of alternative assumptions could produce significantly different results.

The most significant identifiable intangible assets with definite useful economic lives recognized from our acquisitions are customer relationships. The fair value for customer relationships is determined as of the acquisition date using the excess earnings method. Under this methodology the fair value is determined based on the estimated future after-tax cash flows arising from the acquired customer relationships over their estimated lives after considering customer attrition and contributory asset charges. The assumptions that have the most significant effect on the fair value calculations are the customer attrition rates, projected customer revenue growth rates, margins, contributory asset charges and discount rates. When testing customer relationship intangible assets for potential impairment, management considers historical customer attrition rates and projected revenues and profitability related to customers that existed at acquisition. In evaluating the amortizable life for customer relationship intangible assets, management considers historical customer attrition patterns.

We evaluate whether there has been an impairment of identifiable intangible assets with definite useful economic lives, or of the remaining life of such assets, when certain indicators of impairment are present. In the event that facts and circumstances indicate that the cost or remaining period of amortization of any asset may be impaired, an evaluation of recoverability would be performed. If an evaluation is required, the estimated future gross, undiscounted cash flows associated with the asset would be compared to the asset's carrying amount to determine if a write-down to fair value or a revision in the remaining amortization period is required.

The Company has an initial 49% minority equity interest in Indicor which provides us with the ability to exercise significant influence, but not control, over the investee. We elected to apply the fair value option as we believe this is the most reasonable method to value the equity investment. This investment is classified within Level 3 of the fair value hierarchy as valuation of the investment at future dates will reflect management's estimate of assumptions that market participants would use in pricing the asset. Any changes to the valuation estimates or assumptions as described further in Note 10 of the Notes to the Consolidated Financial Statements could produce significantly different results.

Results of Operations
All currency amounts are in millions unless specified, percentages are net of revenues

Percentages may not sum due to rounding.

The following table sets forth selected information for the years indicated.

	Years ended December 31,		
	2022	2021	2020
Net revenues:			
Application Software [(1)]	$ 2,639.5	$ 2,366.7	$ 1,785.8
Network Software [(2)]	1,378.5	1,223.8	1,069.4
Technology Enabled Products	1,353.8	1,243.3	1,167.2
Total	$ 5,371.8	$ 4,833.8	$ 4,022.4
Gross margin:			
Application Software	68.8 %	69.4 %	68.4 %
Network Software	84.6	84.1	83.1
Technology Enabled Products	56.9	59.2	61.5
Total	69.9 %	70.5 %	70.3 %
Selling, general and administrative expenses:			
Application Software	41.8 %	42.7 %	42.2 %
Network Software	43.2	45.1	47.3
Technology Enabled Products	23.8	25.7	26.2
Total	37.6 %	38.9 %	38.9 %
Segment operating margin:			
Application Software	27.1 %	26.8 %	26.2 %
Network Software	41.4	39.0	35.8
Technology Enabled Products	33.2	33.4	35.3
Total	32.3 %	31.6 %	31.4 %
Corporate administrative expenses [(3)]	(3.9)%	(3.9)%	(4.5)%
Loss from impairment	—	(2.0)	—
Income from operations	28.4	25.7	26.9
Interest expense, net	(3.6)	(4.8)	(5.4)
Other income (expense), net	(0.9)	0.5	(0.1)
Earnings before income taxes	23.9	21.3	21.4
Income taxes	(5.5)	(4.7)	(4.7)
Net earnings from continuing operations	18.3 %	16.7 %	16.7 %

(1) Includes results from the acquisitions of Vertafore from September 3, 2020, EPSi from October 15, 2020, American Legal Net from December 30, 2021, Horizon Lab Systems, LLC from January 3, 2022, Common Cents Systems, Inc. from April 6, 2022, MGA Systems Holdings, Inc. from June 27, 2022, Common Sense Solutions, Inc. from July 12, 2022, viDesktop Inc. from August 19, 2022, TIP Technologies Inc. from September 23, 2022 and Frontline Education from October 4, 2022.
(2) Includes results from the acquisitions of FMIC from June 9, 2020, Team TSI from June 15, 2020, IFS from September 15, 2020, WELIS from September 18, 2020 and Construction Journal from December 21, 2021.
(3) Includes unallocated corporate administrative expenses and enterprise-wide stock-based compensation.

Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

Net revenues for the year ended December 31, 2022 were $5,371.8 as compared to $4,833.8 for the year ended December 31, 2021, an increase of 11.1%. The components of revenue growth for the year ended December 31, 2022 were as follows:

	Application Software	Network Software	Technology Enabled Products	Roper
Total Revenue Growth	11.5 %	12.6 %	8.9 %	11.1 %
Less Impact of:				
Acquisitions/Divestitures	5.3	1.2	—	2.9
Foreign Exchange	(1.3)	(1.3)	(0.9)	(1.2)
Organic Revenue Growth	7.5 %	12.7 %	9.8 %	9.4 %

In our Application Software segment, net revenues for the year ended December 31, 2022 were $2,639.5 as compared to $2,366.7 for the year ended December 31, 2021. The growth of 7.5% in organic revenues was broad-based across the segment led by our businesses serving the property and casualty insurance, acute healthcare, and government contracting markets. Gross margin decreased to 68.8% for the year ended December 31, 2022 as compared to 69.4% for the year ended December 31, 2021 due primarily to increased headcount to support growth, and a higher mix of SaaS and professional service revenue across a number of businesses. Selling, general and administrative ("SG&A") expenses as a percentage of revenues in the year ended December 31, 2022 decreased to 41.8%, as compared to 42.7% in the year ended December 31, 2021, due primarily to improved operating leverage on higher organic revenues partially offset by higher amortization of acquired intangibles from the acquisition of Frontline Education. The resulting operating margin was 27.1% in the year ended December 31, 2022 as compared to 26.8% in the year ended December 31, 2021.

In our Network Software segment, net revenues were $1,378.5 for the year ended December 31, 2022 as compared to $1,223.8 for the year ended December 31, 2021. The growth of 12.7% in organic revenues was led by our network software businesses serving the freight match, life insurance, and media and entertainment markets. Gross margin increased to 84.6% for the year ended December 31, 2022 from 84.1% for the year ended December 31, 2021, due primarily to favorable revenue mix. SG&A expenses as a percentage of net revenues decreased to 43.2% in the year ended December 31, 2022, as compared to 45.1% in the year ended December 31, 2021, due primarily to operating leverage on higher organic sales. The resulting operating margin was 41.4% in the year ended December 31, 2022 as compared to 39.0% in the year ended December 31, 2021.

In our Technology Enabled Products segment, net revenues were $1,353.8 for the year ended December 31, 2022 as compared to $1,243.3 the year ended December 31, 2021. The growth of 9.8% in organic revenues was primarily due to our water meter technology business and medical products businesses. Gross margin decreased to 56.9% in the year ended December 31, 2022, as compared to 59.2% in the year ended December 31, 2021, due primarily to higher material, component and freight costs as our businesses navigate the widespread global supply chain challenges. SG&A expenses as a percentage of net revenues decreased to 23.8% in the year ended December 31, 2022, as compared to 25.7% in the year ended December 31, 2021 due primarily to improved operating leverage on higher organic sales. The resulting operating margin was 33.2% in the year ended December 31, 2022 as compared to 33.4% in the year ended December 31, 2021.

Corporate expenses increased by $19.3 to $209.2, or 3.9% of revenues, in 2022 as compared to $189.9, or 3.9% of revenues, in 2021. The dollar increase was due primarily to higher professional service and acquisition related expenses partially offset by lower compensation expense.

Impairment of intangible assets was $94.4 for the year ended December 31, 2021, due to the strategic action to merge the Sunquest business into our CliniSys business resulting in impairment of the Sunquest trade name.

Interest expense, net, decreased $41.5, or 17.7%, for the year ended December 31, 2022 as compared to the year ended December 31, 2021. The decrease was due to lower weighted average debt balances and higher interest income earned on our cash and cash equivalents.

Other expense, net, of $50.1 for the year ended December 31, 2022 was composed primarily of a legal settlement expense of $45.0 related to the Berall v. Verathon patent litigation matter. Other income, net of $24.6 for the year ended December 31, 2021, was composed primarily of a gain on sale of minority investment of $27.1.

During 2022, our effective income tax rate was 23.1% as compared to our 2021 rate of 22.0%. The rate was unfavorably impacted by the recognition of a net tax expense associated with an internal restructuring plan related to the Indicor Transaction.

Order backlog is equal to our remaining performance obligations expected to be recognized within the next 12 months as discussed in Note 1 of the Notes to Consolidated Financial Statements. Backlog increased 25.3% to $2,912.6 at December 31, 2022 as compared to $2,325.1 at December 31, 2021. Organic growth in backlog was 18% and acquisitions contributed 8% which was partially offset by foreign exchange impact of 1%.

	2022	2021	Change
Application Software	$ 1,796.3	$ 1,541.9	16.5 %
Network Software	507.5	448.3	13.2
Technology Enabled Products	608.8	334.9	81.8
Total	$ 2,912.6	$ 2,325.1	25.3 %

Year Ended December 31, 2021 Compared to Year Ended December 31, 2020

Net revenues for the year ended December 31, 2021 were $4,833.8 as compared to $4,022.4 for the year ended December 31, 2020, an increase of 20.2%. The components of revenue growth for the year ended December 31, 2021 were as follows:

	Application Software	Network Software	Technology Enabled Products	Roper
Total Revenue Growth	32.5 %	14.4 %	6.5 %	20.2 %
Less Impact of:				
Acquisitions/Divestitures	23.2	2.1	—	10.9
Foreign Exchange	0.2	1.0	0.6	0.5
Organic Revenue Growth	9.1 %	11.3 %	5.9 %	8.8 %

In our Application Software segment, net revenues for the year ended December 31, 2021 were $2,366.7 as compared to $1,785.8 for the year ended December 31, 2020. The growth of 9.1% in organic revenues was broad-based across the segment led by our businesses serving the government contracting, acute healthcare and legal markets. Gross margin increased to 69.4% for the year ended December 31, 2021 as compared to 68.4% for the year ended December 31, 2020 due primarily to the acquisition of Vertafore and operating leverage on higher organic revenues. SG&A expenses as a percentage of revenues in the year ended December 31, 2021 increased to 42.7%, as compared to 42.2% in the year ended December 31, 2020, due primarily to higher amortization of acquired intangibles from the Vertafore and EPSi acquisitions, partially offset by operating leverage on higher organic revenues. The resulting operating margin was 26.8% in the year ended December 31, 2021 as compared to 26.2% in the year ended December 31, 2020.

In our Network Software segment, net revenues were $1,223.8 for the year ended December 31, 2021 as compared to $1,069.4 for the year ended December 31, 2020. The growth of 11.3% in organic revenues was broad-based across the segment led by our network software businesses serving the freight match, post-acute care and construction markets. Gross margin increased to 84.1% for the year ended December 31, 2021 from 83.1% for the year ended December 31, 2020, due primarily to revenue mix and operating leverage on higher organic revenues. SG&A expenses as a percentage of net revenues decreased to 45.1% in the year ended December 31, 2021, as compared to 47.3% in the year ended December 31, 2020, due primarily to operating leverage on higher organic sales. The resulting operating margin was 39.0% in the year ended December 31, 2021 as compared to 35.8% in the year ended December 31, 2020.

In our Technology Enabled Products segment, net revenues were $1,243.3 for the year ended December 31, 2021 as compared to $1,167.2 the year ended December 31, 2020. The growth of 5.9% in organic revenues was broad-based led by our water meter technology, and medical products businesses excluding Verathon, which declined due to unprecedented demand for their products used in the treatment of COVID-19 during 2020. Gross margin decreased to 59.2% in the year ended December 31, 2021, as compared to 61.5% in the year ended December 31, 2020, due primarily to reduced operating leverage associated with Verathon's normalized 2021 revenues and costs associated with navigating the widespread supply chain challenges. SG&A expenses as a percentage of net revenues decreased to 25.7% in the year ended December 31, 2021, as compared to 26.2% in the year ended December 31, 2020, due primarily to revenue mix. The resulting operating margin was 33.4% in the year ended December 31, 2021 as compared to 35.3% in the year ended December 31, 2020.

Corporate expenses increased by $10.1 to $189.9, or 3.9% of revenues, in 2021 as compared to $179.8, or 4.5% of revenues, in 2020. The dollar increase was due primarily to higher compensation related expenses, partially offset by lower acquisition related expenses.

Interest expense, net, increased $15.4, or 7.0%, for the year ended December 31, 2021 as compared to the year ended December 31, 2020. The increase was due to higher weighted average debt balances, partially offset by lower weighted average interest rates and $7.2 in interest expense for the origination fee on our bridge financing associated with the Vertafore acquisition in 2020.

Other income, net, of $24.6 for the year ended December 31, 2021 was composed primarily of a gain on sale of minority investment of $27.1. Other expense, net of $3.1 for the year ended December 31, 2020, was composed primarily of foreign exchange losses at our non-U.S. based subsidiaries.

During 2021, our effective income tax rate was 22.0% as compared to our 2020 rate of 21.8%. The increase was due primarily to a non-recurring item related to a UK tax rate change, which had a $20.4 unfavorable impact in 2021.

Order backlog is equal to our remaining performance obligations expected to be recognized within the next 12 months as discussed in Note 1 of the Notes to Consolidated Financial Statements. Backlog increased 22.0% to $2,325.1 at December 31, 2021 as compared to $1,905.5 at December 31, 2020, with the increase driven primarily by organic growth.

	2021	2020	Change
Application Software	$ 1,541.9	$ 1,366.9	12.8 %
Network Software	448.3	361.4	24.0
Technology Enabled Products	334.9	177.2	89.0
Total	$ 2,325.1	$ 1,905.5	22.0 %

Financial Condition, Liquidity and Capital Resources
All currency amounts are in millions unless specified

Selected cash flows for the years ended December 31, 2022, 2021 and 2020 are as follows.

	2022	2021	2020
Cash provided by/(used in) continuing operations from:			
Operating activities	$ 606.6	$ 1,655.8	$ 1,123.2
Investing activities	(4,351.8)	(249.2)	(6,067.6)
Financing activities	(1,453.9)	(1,807.1)	4,138.7
Cash provided by discontinued operations	5,677.9	456.0	393.8

Operating activities - The decrease in cash provided by operating activities from continuing operations in 2022 as compared to 2021 was due primarily to (i) the non-recurrence of $953.8 of cash taxes paid in connection with the 2021 Divestitures and the Indicor Transaction, (ii) $97.8 of higher cash taxes associated with changes to Internal Revenue Code Section 174 and (iii) less cash provided by working capital. These cash outflows were partially offset by higher net income from continuing operations net of non-cash expenses.

The increase in cash provided by operating activities from continuing operations in 2021 as compared to 2020 was due primarily to higher net income net of non-cash expenses and the non-recurrence of $201.9 of cash taxes paid on the disposal of Gatan in 2020. These increases were partially offset by lower cash provided by working capital as compared to 2020.

Investing activities - Cash used in investing activities from continuing operations during 2022 was primarily for business acquisitions, most notably Frontline Education, viDesktop and MGA Systems. Cash used in investing activities from continuing operations during 2021 was primarily for business acquisitions partially offset by proceeds from the sale of a minority investment. Cash used in investing activities from continuing operations during 2020 was primarily for business acquisitions, most notably Vertafore and EPSi.

Financing activities - Cash used in financing activities from continuing operations during 2022 was primarily due to repayments of $800.0 for our senior notes, net repayments of $470.0 on our unsecured credit facility and dividend payments. Cash used in financing activities from continuing operations during 2021 was primarily due to net repayments of $1,150.0 on our unsecured credit facility, $500.0 of repayments for our senior notes and dividend payments. Cash provided by financing activities from continuing operations during 2020 was primarily from the issuance of $3,300.0 of senior notes and $1,620.0 of net borrowings on the revolver, partially offset by $600.0 of repayments for senior notes and to a lesser extent dividend payments.

Discontinued operations - Cash provided by discontinued operations for the year ended December 31, 2022 was primarily due to proceeds from the sale of the majority stake in Indicor, TransCore and Zetec, slightly offset by less cash provided by operating cash flows from discontinued operations which was impacted by the timing of our divestiture activity. Cash provided by discontinued operations during the year ended December 31, 2021 was primarily due to cash provided by operating activities and proceeds from the sale of CIVCO Radiotherapy. Cash provided by discontinued operations during the year ended December 31, 2020 was primarily due to cash provided by operating activities.

Net working capital (total current assets, excluding cash and current assets held for sale, less total current liabilities, excluding debt and current liabilities held for sale) was negative $1,053.7 at December 31, 2022 compared to negative $990.9 at December 31, 2021, due primarily to increased deferred revenue, partially offset by movements in income tax-related balances and greater inventory build associated with mitigating supply chain challenges. Consistent negative net working capital demonstrates Roper's focus on asset-light business models.

Total debt excluding unamortized debt issuance costs was $6,700.3 at December 31, 2022 (29.5% of total capital) compared to $7,970.3 at December 31, 2021 (40.8% of total capital). Our total debt decreased at December 31, 2022 compared to December 31, 2021, due primarily to repayments of $800.0 for our senior notes and net repayments of $470.0 on our unsecured credit facility.

On July 21, 2022, the Company entered into a new five-year unsecured credit facility (the "Credit Agreement") among Roper, the financial institutions from time to time party thereto, JPMorgan Chase Bank, N.A., as administrative agent, Bank of America, N.A. and Wells Fargo Bank, N.A., as syndication agents, and Mizuho Bank, Ltd., MUFG Bank, Ltd., PNC Bank, National Association, TD Bank, N.A., Truist Bank and U.S Bank, National Association, as documentation agents, which replaced the existing $3,000.0 unsecured credit facility, dated as of September 2, 2020, as amended. The new facility comprises a five-year $3,500.0 revolving credit facility, which includes availability of up to $150.0 for letters of credit. Loans under the facility will be available in dollars, and letters of credit will be available in dollars and other currencies to be agreed. The Company may also, subject to compliance with specified conditions, request additional term loans or revolving credit commitments in an aggregate amount not to exceed $500.0.

The Credit Agreement requires the Company to maintain a Total Debt to Total Capital Ratio (as defined in the Credit Agreement) of 0.65 to 1.00 or less. Borrowings under the Credit Agreement are prepayable at Roper's option at any time in whole or in part without premium or penalty.

We were in compliance with all debt covenants related to our credit facility throughout the years ended December 31, 2022 and 2021.

At December 31, 2022, we had $6,700.0 of senior unsecured notes and no outstanding revolver borrowings. We had $19.0 of outstanding letters of credit at December 31, 2022, of which $18.3 was covered by our lending group, thereby reducing our revolving credit capacity commensurately.

We may redeem some or all of our senior unsecured notes at any time or from time to time, at 100% of their principal amount, plus a make-whole premium based on a spread to U.S. Treasury securities.

See Note 9 of the Notes to Consolidated Financial Statements included in this Annual Report for additional information regarding our credit facility and senior notes.

Cash and cash equivalents at our foreign subsidiaries at December 31, 2022 totaled $234.0 as compared to $310.8 at December 31, 2021, a decrease of 24.7%. The decrease was due primarily due to repatriation of $285.6 and cash divested in connection with the Indicor Transaction partially offset by cash generated from foreign operations. We intend to repatriate substantially all historical and future earnings.

Capital expenditures of $40.1, $28.5 and $24.7 were incurred during 2022, 2021 and 2020, respectively. Capitalized software expenditures of $30.2, $29.7 and $17.7 were incurred during 2022, 2021 and 2020, respectively. Capital expenditures and capitalized software expenditures were relatively consistent in 2022 as compared to 2021 and 2020. In the future, we expect the aggregate of capital expenditures and capitalized software expenditures as a percentage of annual net revenues to be between 1.0% and 1.5%.

Contractual Cash Obligations and Other Commercial Commitments and Contingencies
All currency amounts are in millions

The following tables quantify our contractual cash obligations and commercial commitments at December 31, 2022.

		Payments Due in Fiscal Year					
Contractual Cash Obligations [1]	**Total**	**2023**	**2024**	**2025**	**2026**	**2027**	**Thereafter**
Total debt	$ 6,700.3	$ 700.2	$ 500.1	$ 1,000.0	$ 700.0	$ 700.0	$ 3,100.0
Senior note interest	851.0	176.0	150.5	138.7	120.2	93.6	172.0
Purchase obligations [2]	790.7	411.9	138.5	126.4	81.5	12.1	20.3
Total	$ 8,342.0	$ 1,288.1	$ 789.1	$ 1,265.1	$ 901.7	$ 805.7	$ 3,292.3

[1] We have excluded the liability for uncertain tax positions and certain other tax liabilities as we are not able to reasonably estimate the timing of the payments. See Note 8 of the Notes to Consolidated Financial Statements included in this Annual Report.

[2] Represents minimum fixed price purchase commitments that are legally binding across Roper.

We believe that internally generated cash flows and the remaining availability under our credit facility will be adequate to finance normal operating requirements. Although we maintain an active acquisition program, any future acquisitions will be dependent on numerous factors and it is not feasible to reasonably estimate if or when any such acquisitions will occur and what the impact will be on our business, financial condition and results of operations. Such acquisitions may be financed by the use of existing credit lines, future cash flows from operations, future divestitures, the proceeds from the issuance of new debt or equity securities or any combination of these methods, the terms and availability of which will be subject to market and economic conditions generally.

We anticipate that our businesses will generate positive cash flows from operating activities, and that these cash flows will permit the reduction of currently outstanding debt in accordance with the repayment schedule. However, the rate at which we can reduce our debt during 2023 (and reduce the associated interest expense) will be affected by, among other things, the financing and operating requirements of any new acquisitions, the financial performance of our existing companies and the financial markets generally. None of these factors can be predicted with certainty.

Recently Issued Accounting Standards

See Note 1 of the Notes to Consolidated Financial Statements included in this Annual Report for information regarding the effect of new accounting pronouncements on our Consolidated Financial Statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to interest rate risks on our outstanding revolving credit borrowings, and to foreign currency exchange risks on our transactions denominated in currencies other than the U.S. dollar. We are also exposed to equity market risks pertaining to the traded price of our common stock.

At December 31, 2022, we had $6,700.0 of fixed rate borrowings with interest rates ranging from 1.00% to 4.20%. At December 31, 2022, the prevailing market rates for each of our long-term notes was at least 0.7% but no more than 4.1% higher than the fixed rates on our debt instruments. Our credit facility contains a $3,500.0 variable-rate revolver with no outstanding borrowings at December 31, 2022.

Several of our businesses have transactions and balances denominated in currencies other than the U.S. dollar. Most of these transactions or balances are denominated in euros, Canadian dollars or British pounds. Net revenues recognized by companies whose functional currency was not the U.S. dollar were 11% of our total revenues in 2022 and 89% of these revenues were recognized by companies with a functional currency that was either the euro, Canadian dollar or British pound. If these currency exchange rates had been 10% different throughout 2022 compared to currency exchange rates actually experienced, the impact on our net earnings would have been approximately 1%.

The trading price of our common stock influences the valuation of stock award grants and the effects these grants have on our results of operations. The stock price also influences the computation of potentially dilutive common stock to determine diluted earnings per share. In addition, the stock price also affects our employees' perceptions of programs that involve our common stock. The quantification of the effects of these changing prices on our future earnings and cash flows is not readily determinable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Roper Technologies, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

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

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

Basis for Opinions

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

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

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

As described in Management's Report on Internal Control over Financial Reporting, management has excluded seven entities from its assessment of internal control over financial reporting as of December 31, 2022 because they were acquired by the Company in purchase business combinations during 2022. We have also excluded these seven entities from our audit of internal control over financial reporting. These entities, each of which is wholly-owned, comprised, in the aggregate, total assets and total revenues excluded from management's assessment and our audit of internal control over financial reporting of approximately 1% and approximately 2%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2022.

Definition and Limitations of Internal Control over Financial Reporting

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

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

Critical Audit Matters

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

Acquisition of Frontline Technologies Parent, LLC – Valuation of Amortizable Customer Relationships

As described in Notes 1 and 2 to the consolidated financial statements, the Company acquired Frontline Technologies Parent, LLC on October 4, 2022, for a purchase price of $3,738 million. The acquired amortizable intangible assets include customer relationships of $1,757 million. The fair value for customer relationships is determined as of the acquisition date using the excess earnings method. Under this methodology, the fair value is determined based on the estimated future after-tax cash flows arising from the acquired customer relationships over their estimated lives after considering customer attrition and contributory asset charges. The assumptions that have the most significant effect on the fair value calculations are the customer attrition rates, projected customer revenue growth rates, margins, contributory asset charges and discount rates.

The principal considerations for our determination that performing procedures relating to the valuation of amortizable customer relationships in connection with the acquisition of Frontline Technologies Parent, LLC is a critical audit matter are (i) the significant judgment by management when developing the fair value estimate of the amortizable customer relationships; (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's significant assumptions related to the customer attrition rate, projected customer revenue growth rates, margins, contributory asset charges, and discount rate; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the acquisition accounting, including controls over management's valuation of the acquired amortizable customer relationships and the development of the significant assumptions used by management related to the customer attrition rate, projected customer revenue growth rates, margins, contributory asset charges, and discount rate. These procedures also included, among others (i) reading the purchase agreement; (ii) testing management's process for developing the fair value estimate of the amortizable customer relationships; (iii) evaluating the appropriateness of the excess earnings method; (iv) testing the completeness and accuracy of the underlying data used in the excess earnings method; and (v) evaluating the reasonableness of the significant assumptions used by management related to the customer attrition rate, projected customer revenue growth rates, margins, contributory asset charges, and discount rate. Evaluating management's significant assumptions related to projected customer revenue growth rates and margins involved evaluating whether the assumptions used by management were reasonable considering (i) the current and historical performance of the acquired business; (ii) the consistency with external industry and market data; and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in evaluating (i) the appropriateness of the Company's excess earnings method and (ii) the reasonableness of significant assumptions related to the customer attrition rate, contributory asset charges, and discount rate.

Equity Investment in Indicor – Initial Fair Value Estimate

As described in Notes 3 and 10 to the consolidated financial statements, on November 22, 2022, the Company completed the divestiture of a majority 51% stake in Indicor to Clayton, Dubilier & Rice, LLC ("CD&R") and retained an initial 49% minority equity interest which was valued at $535 million as of the transaction close date. The Company's equity interest is comprised of an equity value for the initial 49% retained ownership of approximately $650 million, partially offset by approximately $115 million of anticipated dilution associated with the Company's requirement to make quarterly payments ("Unit Adjustment") to CD&R, either (i) in cash or (ii) in-kind through the transfer of the Company's equity interests in Indicor to CD&R. The fair value of the investment reflects management's estimate of assumptions that market participants would use in pricing the equity interest, which requires significant judgments to be made by management. The valuation is based on the implied equity value associated with the sale price of the 51% equity interest in Indicor to CD&R for approximately $829 million, inclusive of the Unit Adjustment received by CD&R. As disclosed by management, the Company intends to make these quarterly payments in-kind and valued the Unit Adjustment at approximately $115 million based on an expected investment horizon of 5 years. In the event of a sale of Indicor, CD&R would be entitled to a liquidation preference equal to its initial investment of approximately $829 million, plus any Unit Adjustment paid in kind. Management's valuation assumes the expected exit of the Indicor investment is an initial public offering which is not subject to the liquidation preference.

The principal considerations for our determination that performing procedures relating to the initial fair value estimate of the equity investment in Indicor is a critical audit matter are (i) the significant judgment by management when developing the fair value estimate of the equity investment; (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's valuation method and significant assumptions related to the implied equity value of Indicor, the intent to make required quarterly payments in-kind, the expected investment horizon, and the expected exit of the investment; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's initial fair value estimate of the equity investment in Indicor, including controls over management's valuation method and development of the significant assumptions used by management related to the implied equity value of Indicor, the intent to make required quarterly payments in-kind, the expected investment horizon, and the expected exit of the investment. These procedures also included, among others (i) reading the legal agreements related to the divestiture transaction and confirming certain information with Indicor; (ii) testing management's process for developing the fair value estimate of the equity investment in Indicor; (iii) evaluating the appropriateness of the valuation method; (iv) testing the completeness and accuracy of the underlying data used by management; and (v) evaluating the reasonableness of the significant assumptions used by management related to the implied equity value of Indicor, the intent to make required quarterly payments in-kind, the expected investment horizon, and the expected exit of the investment. Evaluating management's significant assumptions related to the implied equity value of Indicor, the intent to make required quarterly payments in-kind, the expected investment horizon, and the expected exit of the investment involved evaluating whether the assumptions used by management were reasonable considering, as applicable, (i) the third-party sale price of the 51% equity interest in Indicor; (ii) the contractual terms of the legal agreements related to the divestiture transaction; (iii) management's ability and intent to carry out specific courses of action; (iv) the consistency with external industry and market data; and (v) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in evaluating (i) the appropriateness of the Company's valuation method and (ii) the reasonableness of the significant assumption related to the implied equity value of Indicor.

/s/ PricewaterhouseCoopers LLP
Tampa, Florida
February 27, 2023

We have served as the Company's auditor since 2002.

ROPER TECHNOLOGIES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in millions, except per share data)

	As of December 31, 2022	As of December 31, 2021
Assets		
Cash and cash equivalents	$ 792.8	$ 351.5
Accounts receivable, net	724.5	687.6
Inventories, net	111.3	69.2
Income taxes receivable	61.0	16.8
Unbilled receivables	91.5	81.9
Other current assets	151.3	136.1
Current assets held for sale	—	1,078.0
Total current assets	1,932.4	2,421.1
Property, plant and equipment, net	85.3	82.7
Goodwill	15,946.1	13,476.3
Other intangible assets, net	8,030.7	6,509.1
Deferred taxes	55.9	50.0
Equity investment	535.0	—
Other assets	395.4	369.8
Assets held for sale	—	804.9
Total assets	$ 26,980.8	$ 23,713.9
Liabilities and Stockholders' Equity		
Accounts payable	$ 122.6	$ 98.3
Accrued compensation	228.8	261.9
Deferred revenue	1,370.7	1,106.3
Other accrued liabilities	454.6	398.7
Income taxes payable	16.6	117.3
Current portion of long-term debt, net	699.2	799.2
Current liabilities held for sale	—	340.1
Total current liabilities	2,892.5	3,121.8
Long-term debt, net of current portion	5,962.5	7,122.6
Deferred taxes	1,676.8	1,466.2
Other liabilities	411.2	390.1
Liabilities held for sale	—	49.4
Total liabilities	10,943.0	12,150.1
Commitments and contingencies (Note 13)		
Stockholders' equity:		
Preferred stock, $0.01 par value per share; 1.0 shares authorized; none outstanding	—	—
Common stock, $0.01 par value per share; 350.0 shares authorized; 107.9 shares issued and 106.1 outstanding at December 31, 2022 and 107.3 shares issued and 105.5 outstanding at December 31, 2021	1.1	1.1
Additional paid-in capital	2,510.2	2,307.8
Retained earnings	13,730.7	9,455.6
Accumulated other comprehensive loss	(187.0)	(183.1)
Treasury stock, 1.8 shares at December 31, 2022 and 1.8 shares at December 31, 2021	(17.2)	(17.6)
Total stockholders' equity	16,037.8	11,563.8
Total liabilities and stockholders' equity	$ 26,980.8	$ 23,713.9

See accompanying notes to Consolidated Financial Statements.

ROPER TECHNOLOGIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EARNINGS
(Dollar and share amounts in millions, except per share data)

	Year ended December 31,		
	2022	2021	2020
Net revenues	$ 5,371.8	$ 4,833.8	$ 4,022.4
Cost of sales	1,619.0	1,426.2	1,194.1
Gross profit	3,752.8	3,407.6	2,828.3
Selling, general and administrative expenses	2,228.3	2,072.0	1,745.4
Impairment of intangible assets	—	94.4	—
Income from operations	1,524.5	1,241.2	1,082.9
Interest expense, net	192.4	233.9	218.5
Other income (expense), net	(50.1)	24.6	(3.1)
Earnings before income taxes	1,282.0	1,031.9	861.3
Income taxes	296.4	226.6	187.5
Net earnings from continuing operations	985.6	805.3	673.8
Earnings from discontinued operations, net of tax	202.8	291.4	275.9
Gain on disposition of discontinued operations, net of tax	3,356.3	55.9	—
Net earnings from discontinued operations	3,559.1	347.3	275.9
Net earnings	$ 4,544.7	$ 1,152.6	$ 949.7
Net earnings per share from continuing operations:			
Basic	$ 9.31	$ 7.65	$ 6.44
Diluted	$ 9.23	$ 7.56	$ 6.37
Net earnings per share from discontinued operations:			
Basic	$ 33.61	$ 3.30	$ 2.64
Diluted	$ 33.32	$ 3.26	$ 2.61
Net earnings per share:			
Basic	$ 42.92	$ 10.95	$ 9.08
Diluted	$ 42.55	$ 10.82	$ 8.98
Weighted-average common shares outstanding:			
Basic	105.9	105.3	104.6
Diluted	106.8	106.5	105.7

See accompanying notes to Consolidated Financial Statements.

ROPER TECHNOLOGIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions)

	Year ended December 31,		
	2022	**2021**	**2020**
Net earnings	$ 4,544.7	$ 1,152.6	$ 949.7
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments [1]	(3.9)	(36.1)	65.8
Total other comprehensive income (loss), net of tax	(3.9)	(36.1)	65.8
Comprehensive income	$ 4,540.8	$ 1,116.5	$ 1,015.5

[1] In connection with the Indicor Transaction, we reclassified $142.6 of foreign currency translation adjustments to “Gain on disposition of discontinued operations, net of tax” during the year ended December 31, 2022.

See accompanying notes to Consolidated Financial Statements.

ROPER TECHNOLOGIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in millions, except per share data)

	Common Stock						
	Shares	Amount	Additional paid-in capital	Retained earnings	Accumulated other comprehensive loss	Treasury stock	Total stockholders' equity
Balances at December 31, 2019	104.1	$ 1.1	$ 1,903.9	$ 7,818.0	$ (212.8)	$ (18.3)	$ 9,491.9
Adoption of ASC 326	—	—	—	(1.7)	—	—	(1.7)
Net earnings	—	—	—	949.7	—	—	949.7
Stock option exercises	0.7	—	105.5	—	—	—	105.5
Treasury stock sold	—	—	10.2	—	—	0.3	10.5
Currency translation adjustments, including tax provision of $14.6	—	—	—	—	65.8	—	65.8
Stock based compensation	—	—	119.0	—	—	—	119.0
Restricted stock activity	0.1	—	(41.1)	—	—	—	(41.1)
Dividends declared ($2.10 per share)	—	—	—	(219.8)	—	—	(219.8)
Balances at December 31, 2020	104.9	$ 1.1	$ 2,097.5	$ 8,546.2	$ (147.0)	$ (18.0)	$ 10,479.8
Net earnings	—	—	—	1,152.6	—	—	1,152.6
Stock option exercises	0.5	—	104.7	—	—	—	104.7
Cash settlement of share-based awards in connection with disposition of discontinued operations	—	—	(6.7)	—	—	—	(6.7)
Treasury stock sold	—	—	14.7	—	—	0.4	15.1
Currency translation adjustments, including tax benefit of $6.2	—	—	—	—	(36.1)	—	(36.1)
Stock based compensation	—	—	138.0	—	—	—	138.0
Restricted stock activity	0.1	—	(40.4)	—	—	—	(40.4)
Dividends declared ($2.31 per share)	—	—	—	(243.2)	—	—	(243.2)
Balances at December 31, 2021	105.5	$ 1.1	$ 2,307.8	$ 9,455.6	$ (183.1)	$ (17.6)	$ 11,563.8
Net earnings	—	—	—	4,544.7	—	—	4,544.7
Stock option exercises	0.5	—	110.0	—	—	—	110.0
Cash settlement of share-based awards in connection with disposition of discontinued operations	—	—	(11.1)	—	—	—	(11.1)
Treasury stock sold	—	—	13.9	—	—	0.4	14.3
Currency translation adjustments, including tax benefit of $41.9	—	—	—	—	(3.9)	—	(3.9)
Stock based compensation	—	—	131.4	—	—	—	131.4
Restricted stock activity	0.1	—	(41.8)	—	—	—	(41.8)
Dividends declared ($2.54 per share)	—	—	—	(269.6)	—	—	(269.6)
Balances at December 31, 2022	106.1	$ 1.1	$ 2,510.2	$ 13,730.7	$ (187.0)	$ (17.2)	$ 16,037.8

See accompanying notes to Consolidated Financial Statements.

ROPER TECHNOLOGIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	Year ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net earnings from continuing operations	$ 985.6	$ 805.3	$ 673.8
Adjustments to reconcile net earnings from continuing operations to cash flows from operating activities:			
Depreciation and amortization of property, plant and equipment	37.3	44.0	40.6
Amortization of intangible assets	612.8	571.9	451.0
Amortization of deferred financing costs	11.8	13.5	10.9
Non-cash stock compensation	118.5	123.0	108.3
Impairment of intangible assets	—	94.4	—
Gain on disposal of assets and businesses, net of associated income tax	—	(21.6)	—
Income tax provision, excluding tax associated with gain on disposal of businesses and assets	296.4	221.1	187.5
Changes in operating assets and liabilities, net of acquired businesses:			
Accounts receivable	2.5	(73.7)	22.3
Unbilled receivables	(11.1)	(16.4)	(4.5)
Inventories	(43.1)	(0.3)	(8.4)
Accounts payable	21.3	16.0	4.9
Other accrued liabilities	(7.6)	27.0	74.6
Deferred revenue	52.9	162.2	60.7
Cash tax paid for gain on disposal of businesses	(953.8)	—	(201.9)
Cash income taxes paid, excluding tax associated with gain on disposal of businesses	(498.9)	(273.9)	(277.7)
Other, net	(18.0)	(36.7)	(18.9)
Cash provided by operating activities from continuing operations	606.6	1,655.8	1,123.2
Cash provided by operating activities from discontinued operations	128.0	356.1	401.9
Cash provided by operating activities	734.6	2,011.9	1,525.1
Cash flows from (used in) investing activities:			
Acquisitions of businesses, net of cash acquired	(4,280.1)	(217.0)	(6,018.1)
Capital expenditures	(40.1)	(28.5)	(24.7)
Capitalized software expenditures	(30.2)	(29.7)	(17.7)
Proceeds used in disposal of businesses	—	—	(4.5)
Proceeds from sale of assets	—	27.1	—
Other, net	(1.4)	(1.1)	(2.6)
Cash used in investing activities from continuing operations	(4,351.8)	(249.2)	(6,067.6)
Proceeds from disposition of discontinued operations	5,561.8	115.6	—
Cash used in investing activities from discontinued operations	(0.5)	(9.3)	(6.3)
Cash provided by (used in) investing activities	1,209.5	(142.9)	(6,073.9)
Cash flows from (used in) financing activities:			
Proceeds from senior notes	—	—	3,300.0
Payment of senior notes	(800.0)	(500.0)	(600.0)
(Payments) borrowings under revolving line of credit, net	(470.0)	(1,150.0)	1,620.0
Debt issuance costs	(3.9)	—	(42.0)
Cash dividends to stockholders	(262.3)	(236.4)	(214.1)
Treasury stock sales	14.3	15.1	10.5
Proceeds from stock-based compensation, net	68.2	64.3	64.4
Other, net	(0.2)	(0.1)	(0.1)
Cash (used in) provided by financing activities from continuing operations	(1,453.9)	(1,807.1)	4,138.7
Cash used in financing activities from discontinued operations	(11.4)	(6.4)	(1.8)
Cash (used in) provided by financing activities from continuing operations	(1,465.3)	(1,813.5)	4,136.9

(Continued)

ROPER TECHNOLOGIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS - CONTINUED
(in millions)

	Year ended December 31,		
	2022	2021	2020
Effect of exchange rate changes on cash	(37.5)	(12.3)	10.5
Net increase (decrease) in cash and cash equivalents	441.3	43.2	(401.4)
Cash and cash equivalents, beginning of year	351.5	308.3	709.7
Cash and cash equivalents, end of year	$ 792.8	$ 351.5	$ 308.3
Supplemental disclosures:			
Cash paid for:			
Interest	$ 206.5	$ 222.2	$ 197.7
Noncash investing activities:			
Net assets of businesses acquired:			
Fair value of assets, including goodwill	$ 4,891.8	$ 249.8	$ 6,715.4
Liabilities assumed	(611.7)	(32.8)	(697.3)
Cash paid, net of cash acquired	$ 4,280.1	$ 217.0	$ 6,018.1

See accompanying notes to Consolidated Financial Statements.

(1) Summary of Accounting Policies

Basis of Presentation - These financial statements present consolidated information for Roper Technologies, Inc. and its subsidiaries ("Roper," the "Company," "we," "our" or "us"). All significant intercompany accounts and transactions have been eliminated. Certain prior period amounts have been reclassified to conform to current period presentation.

Nature of the Business - Roper is a diversified technology company. The Company operates market leading businesses that design and develop vertical software and technology enabled products for a variety of defensible niche markets.

Discontinued Operations - On November 22, 2022, the Company completed the divestiture of a majority 51% equity stake in its industrial businesses, including its entire historical Process Technologies reportable segment and the industrial businesses within its historical Measurement & Analytical Solutions reportable segment, to Clayton, Dubilier & Rice, LLC ("CD&R"). The businesses included in this transaction were Alpha, AMOT, CCC, Cornell, Dynisco, FTI, Hansen, Hardy, Logitech, Metrix, PAC, Roper Pump, Struers, Technolog, Uson, and Viatran (collectively "Indicor"). Following the sale of the majority stake, the Company retained an initial 49% minority equity interest in the new standalone parent company, Indicor, LLC. This transaction is referred to herein as the "Indicor Transaction."

During 2021, the Company signed definitive agreements to divest its TransCore, Zetec and CIVCO Radiotherapy businesses, ("2021 Divestitures"). As of March 31, 2022, Roper had completed the 2021 Divestitures.

The financial results for Indicor and the 2021 Divestitures are presented as discontinued operations for all periods presented. Unless otherwise noted, discussion within these Notes to Consolidated Financial Statements relate to continuing operations. Refer to Note 3 for additional information on discontinued operations.

Update to Segment Reporting Structure - During the second quarter of 2022, we updated our reportable segment structure following the announcement of the Indicor Transaction. The Company's new reporting segment structure is classified based on business model and delivery of performance obligations. The three updated reportable segments (and businesses within each; including changes due to acquisitions since the realignment) are as follows:

–**Application Software** - Aderant, CBORD/Horizon, CliniSys, Data Innovations, Deltek, Frontline Education, IntelliTrans, PowerPlan, Strata, Vertafore

–**Network Software** - ConstructConnect, DAT, Foundry, iPipeline, iTradeNetwork, Loadlink, MHA, SHP, SoftWriters

–**Technology Enabled Products** - CIVCO Medical Solutions, FMI, Inovonics, IPA, Neptune, Northern Digital, rf IDEAS, Verathon

Following the Indicor Transaction and the realignment of our reportable segments, the day-to-day operations of our businesses, our organizational structure, and our strategy remain unchanged. All prior periods have been recast to reflect the changes noted above.

Recent Accounting Pronouncements - The Financial Accounting Standards Board ("FASB") establishes changes to accounting principles under GAAP in the form of accounting standards updates ("ASUs") to the FASB's Accounting Standards Codification ("ASC"). The Company considers the applicability and impact of all ASUs. Any ASUs not listed below were assessed and determined to be either not applicable or are expected to have an immaterial impact on the Company's results of operations, financial position or cash flows.

Recently Adopted Accounting Pronouncements

In October 2021, the FASB issued an update to improve the accounting for acquired revenue contracts with customers in a business combination by promoting consistency in the recognition of an acquired contract liability and the subsequent revenue recognized by the acquirer. The update is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, with early adoption permitted. The Company early-adopted this update in the fourth quarter of 2021. This update did not have a material impact on the acquisitions completed in 2022 and 2021.

The Company adopted ASC Topic 326, Financial Instruments - Credit Losses (“ASC 326”), as of January 1, 2020 using the modified retrospective transition method. We recorded a noncash cumulative effect decrease to retained earnings of $1.7, net of income taxes, on our opening consolidated balance sheet as of January 1, 2020.

Significant Accounting Policies

Cash and Cash Equivalents - Roper considers highly liquid financial instruments with remaining maturities at acquisition of three months or less to be cash equivalents. Roper had $432.9 of cash equivalents at December 31, 2022. Roper had no cash equivalents at December 31, 2021.

Contingencies - Management continually assesses the probability of any adverse judgments or outcomes to its potential contingencies. Disclosure of the contingency is made if there is at least a reasonable possibility that a loss or an additional loss may have been incurred. In the assessment of contingencies as of December 31, 2022, management concluded that there were no matters for which there was a reasonable possibility of a material loss.

Earnings per Share - Basic earnings per share were calculated using net earnings and the weighted-average number of shares of common stock outstanding during the respective year. Diluted earnings per share were calculated using net earnings and the weighted-average number of shares of common stock and potential common stock associated with stock options outstanding during the respective year.

The effects of potential common stock were determined using the treasury stock method:

	Year ended December 31,		
	2022	**2021**	**2020**
Basic weighted-average shares outstanding	105.9	105.3	104.6
Effect of potential common stock:			
Common stock awards	0.9	1.2	1.1
Diluted weighted-average shares outstanding	106.8	106.5	105.7

As of and for the years ended December 31, 2022, 2021 and 2020, there were 0.834, 0.521 and 0.208 outstanding stock options, respectively, that were not included in the determination of diluted earnings per share because doing so would have been antidilutive.

Estimates - The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Equity Investment - The Company has an initial 49% minority equity interest in Indicor which provides us with the ability to exercise significant influence, but not control, over the investee. We elected to apply the fair value option as we believe this is the most reasonable method to value the equity investment. Subsequent changes in fair value will be recognized as a discrete non-operating line item in the Consolidated Statements of Operations beginning in the first quarter of 2023. See Note 10 for additional information on this investment.

Foreign Currency Translation and Transactions - Assets and liabilities of subsidiaries whose functional currency is not the U.S. dollar were translated at the exchange rate in effect at the balance sheet date, and revenues and expenses were translated at average exchange rates for the period in which those entities were included in Roper’s financial results. Translation adjustments are reflected as a component of other comprehensive income. Foreign currency transaction gains and losses are recorded in the Consolidated Statements of Earnings within “Other income (expense), net.” Foreign currency transaction gains / (losses) were not material in any periods presented.

Goodwill and Other Intangibles - Roper accounts for goodwill in a purchase business combination as the excess of the cost over the estimated fair value of net assets acquired. Business combinations can also result in other intangible assets being recognized. Amortization of intangible assets, if applicable, occurs over their estimated useful lives. Goodwill, which is not amortized, is tested for impairment on an annual basis (or an interim basis if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying value). When testing goodwill for impairment, the Company has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the estimated fair value of a reporting unit is less than its carrying amount. If the Company elects to perform a qualitative assessment and determines that an impairment is more likely than not, then performance of the quantitative impairment test is required. The quantitative process utilizes both an income approach (discounted cash flows) and a market approach (consisting of a comparable public company earnings multiples methodology) to estimate the fair value of a reporting unit. To determine the reasonableness of the estimated fair values, the Company reviews the assumptions to ensure that neither the income approach nor the market approach provides significantly different valuations. If the estimated fair value exceeds the carrying value, no further work is required and no impairment loss is recognized. If the carrying value exceeds the estimated fair value, a non-cash impairment loss is recognized in the amount of that excess.

When performing the quantitative assessment, key assumptions used in the income and market methodologies are updated when the analysis is performed for each reporting unit. The assumptions that have the most significant effect on the fair value calculations are the projected revenue growth rates, future operating margins, discount rates, terminal values and earnings multiples. While the Company uses reasonable and timely information to prepare its discounted cash flow analysis, actual future cash flows or market conditions could differ significantly resulting in future impairment charges related to recorded goodwill balances.

As of the annual impairment test, Roper has 21 reporting units with individual goodwill amounts ranging from $17.5 to $3,363.1. In 2022, the Company performed its annual impairment test in the fourth quarter for all reporting units. The Company conducted its analysis qualitatively and assessed whether it was more likely than not that the respective fair value of these reporting units was less than the carrying amount. The Company determined that impairment of goodwill was not likely in any of its reporting units and thus was not required to perform a quantitative analysis for these reporting units.

Recently acquired reporting units generally represent a higher inherent risk of impairment, which typically decreases as the businesses are integrated into the enterprise. Negative industry or economic trends, disruptions to its business, actual results significantly below expected results, unexpected significant changes or planned changes in the use of the assets, divestitures and market capitalization declines may have a negative effect on the fair value of Roper’s reporting units.

The following events or circumstances, although not comprehensive, would be considered to determine whether interim testing of goodwill would be required:

- a significant adverse change in legal factors or in the business climate;
- an adverse action or assessment by a regulator;
- unanticipated competition;
- a loss of key personnel;
- a more-likely-than-not expectation that a reporting unit or a significant portion of a reporting unit will be sold or otherwise disposed of;
- the testing for recoverability of a significant asset group within a reporting unit; and
- recognition of a goodwill impairment loss in the financial statements of a subsidiary that is a component of a reporting unit.

Business combinations can also result in other intangible assets being recognized. Amortization of intangible assets, if applicable, occurs over their estimated useful lives. Trade names that are determined to have indefinite useful economic lives are not amortized, but separately tested for impairment during the fourth quarter of the fiscal year or on an interim basis if an event occurs that indicates the fair value is more likely than not below the carrying value. Roper first qualitatively assesses whether the existence of events or circumstances leads to a determination that it is more likely than not that the estimated fair value of an indefinite-lived trade name is less than its carrying amount. If necessary, Roper conducts a quantitative review using the relief-from-royalty method. This methodology assumes that, in lieu of ownership, a third party would be willing to pay a royalty in order to exploit the related benefits of these assets. To the extent the Company determines a fair value, the inputs used represent a Level 3 fair value measurement in the FASB fair value hierarchy given that the inputs are unobservable. The assumptions that have the most significant effect on the fair value calculations are the royalty rates, projected revenue growth rates, discount rates and terminal values. Each royalty rate is determined based on the profitability of the trade name to which it relates and observed market royalty rates. Revenue growth rates are determined after considering current and future economic conditions, recent sales trends, discussions with customers, planned timing of new product launches or other variables. Trade names resulting from recent acquisitions generally represent the highest risk of impairment, which typically decreases as the businesses are integrated into Roper.

During the fourth quarter of 2021, the Company determined the use of the Sunquest trade name would be discontinued given the strategic action to merge the Sunquest business into our CliniSys business, both of which are reported in our Application

Software reportable segment. Considering the planned merger and updated market comparisons, the royalty rate utilized in the quantitative impairment assessment of the trade name was 0.5% as compared to a royalty rate of 3.5% used in the prior year. The royalty rate reduction was the significant assumption that resulted in a non-cash impairment charge of $94.4 recognized as a component of “Impairment of intangible assets” within the Consolidated Statements of Earnings.

The assessment of fair value for impairment purposes requires significant judgments to be made by management. Although forecasts are based on assumptions that are considered reasonable by management and consistent with the plans and estimates management uses to operate the underlying businesses, there is significant judgment in estimating future operating results. Changes in estimates or the application of alternative assumptions could produce significantly different results.

The most significant identifiable intangible assets with definite useful economic lives recognized from our acquisitions are customer relationships. The fair value for customer relationships is determined as of the acquisition date using the excess earnings method. Under this methodology the fair value is determined based on the estimated future after-tax cash flows arising from the acquired customer relationships over their estimated lives after considering customer attrition and contributory asset charges. The assumptions that have the most significant effect on the fair value calculations are the customer attrition rates, projected customer revenue growth rates, margins, contributory asset charges and discount rates. When testing customer relationship intangible assets for potential impairment, management considers historical customer attrition rates and projected revenues and profitability related to customers that existed at acquisition. In evaluating the amortizable life for customer relationship intangible assets, management considers historical customer attrition patterns.

Roper evaluates whether there has been an impairment of identifiable intangible assets with definite useful economic lives, or of the remaining life of such assets, when certain indicators of impairment are present. In the event that facts and circumstances indicate that the cost or remaining period of amortization of any asset may be impaired, an evaluation of recoverability would be performed. If an evaluation is required, the estimated future gross, undiscounted cash flows associated with the asset would be compared to the asset’s carrying amount to determine if a write-down to fair value or a revision in the remaining amortization period is required.

Impairment of Long-Lived Assets - The Company determines whether there has been an impairment of long-lived assets, excluding goodwill and other intangible assets, when certain indicators of impairment are present. In the event that facts and circumstances indicate that the cost or life of any long-lived assets may be impaired, an evaluation of recoverability would be performed. If an evaluation is required, the estimated future gross, undiscounted cash flows associated with the asset would be compared to the asset’s carrying amount to determine if a write-down to fair value or revision to remaining life is required. Future adverse changes in market conditions or poor operating results of underlying long-lived assets could result in losses or an inability to recover the carrying value of the long-lived assets that may not be reflected in the assets’ current carrying value, thereby possibly requiring an impairment charge or acceleration of depreciation or amortization expense in the future.

Income Taxes - The Company recognizes in the Consolidated Financial Statements only those tax positions determined to be “more likely than not” of being sustained upon examination based on the technical merits of the positions. Interest and penalties related to unrecognized tax benefits are classified as a component of income tax expense.

The Company records a valuation allowance to reduce its deferred tax assets if, based on the weight of available evidence, both positive and negative, for each respective tax jurisdiction, it is more likely than not that some portion or all of such deferred tax assets will not be realized. Available evidence which is considered in determining the amount of valuation allowance required includes, but is not limited to, the Company’s estimate of future taxable income and any applicable tax-planning strategies.

Certain assets and liabilities have different basis for financial reporting and income tax purposes. Deferred income taxes have been provided for these differences at the enacted tax rates expected to be paid. See Note 8 for information regarding income taxes.

Inventories - Inventories are valued at the lower of cost and net realizable value. Cost is determined using the first-in, first-out method. The Company writes down its inventory for estimated obsolescence or excess inventory equal to the difference between the cost of inventory and the estimated net realizable value based upon assumptions about future demand and market conditions.

Product Warranties - The Company sells certain of its products to customers with a product warranty that allows customers to return a defective product during a specified warranty period following the purchase in exchange for a replacement product, repair at no cost to the customer or the issuance of a credit to the customer. The Company accrues its estimated exposure to warranty claims based upon current and historical product sales data, warranty costs incurred and any other related information known to the Company.

Property, Plant and Equipment and Depreciation and Amortization - Property, plant and equipment is stated at cost less accumulated depreciation and amortization. Depreciation and amortization are provided for using principally the straight-line method over the estimated useful lives of the assets as follows:

Buildings	20-30 years
Machinery	8-12 years
Other equipment and software	3-5 years

Research, Development and Engineering - Research, development and engineering ("R,D&E") costs include salaries and benefits, rents, supplies, and other costs related to products under development or improvements to existing products. R,D&E costs are expensed as incurred and are included within selling, general and administrative expenses. R,D&E expenses totaled $529.8, $484.8 and $382.4 for the years ended December 31, 2022, 2021 and 2020, respectively.

Revenue Recognition - The reported results reflect the application of ASC 606 guidance. The amount of revenue recognized reflects the consideration which the Company expects to be entitled to receive in exchange for these products and/or services. To achieve this principle, the Company applies the following five steps:

- identify the contract with the customer;
- identify the performance obligations in the contract;
- determine the transaction price;
- allocate the transaction price to performance obligations in the contract; and
- recognize revenue when or as the Company satisfies a performance obligation.

Disaggregated Revenue - We disaggregate our revenues by reportable segment into four categories: (i) recurring revenue comprised of Software-as-a-Service ("SaaS") licenses and software maintenance; (ii) reoccurring revenue comprised of transactional and volume-based fees related to software licenses; (iii) non-recurring revenue comprised of term and perpetual software licenses, professional services associated with software products and hardware sold with our software licenses; and (iv) product revenue. See details in the table below.

	Year Ended December 31, 2022			
Revenue Stream	**Application Software**	**Network Software**	**Technology Enabled Products**	**Total**
Software related				
Recurring	$ 1,946.0	$ 981.4	$ 12.0	$ 2,939.4
Reoccurring	124.2	246.2	—	370.4
Non-recurring	569.3	150.9	1.2	721.4
Total Software Revenues	2,639.5	1,378.5	13.2	4,031.2
Product Revenue	—	—	1,340.6	1,340.6
	$ 2,639.5	$ 1,378.5	$ 1,353.8	$ 5,371.8

	Year Ended December 31, 2021			
Revenue Stream	**Application Software**	**Network Software**	**Technology Enabled Products**	**Total**
Software related				
Recurring	$ 1,708.0	$ 837.5	$ 7.8	$ 2,553.3
Reoccurring	111.4	249.5	—	360.9
Non-recurring	547.3	136.8	0.8	684.9
Total Software Revenues	2,366.7	1,223.8	8.6	3,599.1
Product Revenue	—	—	1,234.7	1,234.7
	$ 2,366.7	$ 1,223.8	$ 1,243.3	$ 4,833.8

	Year Ended December 31, 2020			
Revenue Stream	**Application Software**	**Network Software**	**Technology Enabled Products**	**Total**
Software related				
Recurring	$ 1,251.5	$ 707.4	$ 5.8	$ 1,964.7
Reoccurring	64.8	235.5	—	300.3
Non-recurring	469.5	126.5	0.6	596.6
Total Software Revenues	1,785.8	1,069.4	6.4	2,861.6
Product Revenue	—	—	1,160.8	1,160.8
	$ 1,785.8	$ 1,069.4	$ 1,167.2	$ 4,022.4

We recognize revenue over time or at a point in time depending on our evaluation of when the customer obtains control over the promised products or services. For software arrangements that include multiple performance obligations, we allocate revenue to each performance obligation based on estimates of the price that we would charge the customer for each promised product or service if it were sold on a standalone basis. Software licenses may be combined with implementation/installation services as a single performance obligation if the implementation/installation significantly modifies or customizes the functionality of the software license.

Software and related services

- Recurring - consists primarily of SaaS subscriptions and post contract support ("PCS") which are recognized ratably over the contractual term.
- Reoccurring - consists primarily of transactional and volume-based fees which are highly reoccurring and recognized at a point-in-time under a usage-based model.

- Non-recurring - consists primarily of perpetual, time-based ("term") software licenses, or installation/implementation services and associated hardware. Revenues from perpetual and term licenses are generally recognized at a point-in-time. Revenues from software implementation projects are generally recognized over time using the input method, utilizing the ratio of costs or labor hours incurred to total estimated costs or labor, as the measure of performance.

Payment for software licenses is generally required within 30 to 60 days of the transfer of control. Payment for PCS is generally required within 30 to 60 days of the commencement of the service period, which is primarily offered to customers over a one-year timeframe. Payment terms do not contain a significant financing component. Payment for implementation/installation services that are recognized over time are typically commensurate with milestones defined in the contract, or billable hours incurred.

Products

Revenue from product sales is recognized when control transfers to the customer, which is generally when the product is shipped. Non-project-based installation and repair services are performed by certain of our businesses for which revenue is recognized upon completion.

Payment terms are generally 30 to 60 days from the transfer of control. Payment terms do not contain a significant financing component.

Accounts receivable, net - Accounts receivable, net includes amounts billed and currently due from customers. The amounts due are stated at their net estimated realizable value. Accounts receivable are stated net of an allowance for doubtful accounts and sales allowances of $16.6 and $15.7 at December 31, 2022 and 2021, respectively. We make estimates of expected allowance for doubtful accounts based upon our assessment of various factors, including historical experience, the age of the accounts receivable balances, changes to customer creditworthiness and other factors that may affect our ability to collect from customers.

Unbilled receivables - Our unbilled receivables include unbilled amounts typically resulting from sales under software milestone billings associated with multi-year term license renewals and software implementations when the input method of revenue recognition is utilized and revenue recognized exceeds the amount billed to the customer, and right to payment is not solely due to the passage of time. Amounts may not exceed their net realizable value.

Deferred revenues - We record deferred revenues when cash payments are received or due in advance of our performance. Our deferred revenues relate primarily to software and related services. In most cases, we recognize these deferred revenues ratably over time as the SaaS or PCS performance obligation is satisfied. The non-current portion of deferred revenue is included in “Other liabilities” in our Consolidated Balance Sheets.

Our unbilled receivables and deferred revenues are reported in a net position on a contract-by-contract basis at the end of each reporting period. The net balances are classified as current or non-current based on expected timing of revenue recognition and billable milestones.

Deferred commissions - Our incremental direct costs of obtaining a contract, which consist of sales commissions primarily for our software sales, are deferred and amortized on a straight-line basis over the period of contract performance or a longer period, depending on facts and circumstances. We classify deferred commissions as current or non-current based on the expected timing of expense recognition. Where the amortization period would have been one year or less, we expense the associated incremental direct cost as incurred. The current and non-current portions of deferred commissions are included in “Other current assets” and “Other assets,” respectively, in our Consolidated Balance Sheets. At December 31, 2022 and 2021, the current portion of deferred commissions was $33.1 and $32.5, respectively, and the non-current portion of deferred commissions was $31.7 and $24.2, respectively. The Company recognized $30.7, $27.2 and $30.1 of expense related to deferred commissions for the years ended December 31, 2022, 2021 and 2020, respectively.

Remaining performance obligations - Remaining performance obligations represent the transaction price of firm orders for which work has not been performed and excludes unexercised contract options. As of December 31, 2022, the aggregate amount of the transaction price allocated to remaining performance obligations was $4,214.0. We expect to recognize revenue on approximately 69% of our remaining performance obligations over the next 12 months, with the remainder to be recognized thereafter.

Capitalized Software - The Company accounts for capitalized software under applicable accounting guidance which, among other provisions, requires capitalization of certain internal-use software costs once certain criteria are met. Overhead, general and administrative and training costs are not capitalized. Capitalized software balances, net of accumulated amortization, were $83.9 and $65.9 at December 31, 2022 and 2021, respectively, which are included in “Other Assets” our Consolidated Balance Sheets.

Stock-Based Compensation - The Company recognizes expense for the grant date fair value of its employee stock awards on a straight-line basis (or, in the case of performance-based awards, on a graded basis) over the employee’s requisite service period (generally the vesting period of the award). The fair value of option awards is estimated using the Black-Scholes option valuation model.

(2) Business Acquisitions and Dispositions

Acquisitions

2022 Acquisitions - Roper completed seven business acquisitions in the year ended December 31, 2022. The results of operations of the acquired businesses are included in Roper's Consolidated Financial Statements since the date of each acquisition. Pro forma results of operations and the revenue and net income subsequent to the acquisition date for the acquisitions completed during fiscal 2022 have not been presented because the effects of the acquisitions, individually and in the aggregate, were not material to our financial results.

The largest of the 2022 acquisitions was Frontline Technologies Parent, LLC ("Frontline Education"), a leading provider of K-12 school administration software, connecting solutions for human capital management, student and special programs, and business operations with powerful analytics to empower educators. Roper acquired Frontline Education on October 4, 2022, for a purchase price of $3,738.0. The purchase price comprised an enterprise value of $3,725.0, adjusted for cash acquired and the settlement of certain liabilities. Additionally, the purchase price contemplated a net present value tax benefit of approximately $350 which is expected to be utilized over the next 15 years. The results of Frontline Education are reported in the Application Software reportable segment.

The Company recorded $2,197.6 in goodwill and $1,918.6 of other identifiable intangibles in connection with the Frontline Education acquisition. Of the $1,918.6 of acquired intangible assets, $83.0 was assigned to trade names that are not subject to amortization. The remaining $1,835.6 of acquired intangible assets include customer relationships of $1,757.0 (20 year useful life) and unpatented technology of $78.6 (5 year useful life).

Net assets acquired also includes approximately $258 of deferred revenue and approximately $181 of net deferred tax liabilities, primarily attributable to acquired intangible assets, partially offset by federal tax attributes. Approximately $1,100 of goodwill is expected to be deductible for tax purposes.

During the year ended December 31, 2022, Roper completed six additional bolt-on acquisitions with an aggregate purchase price of $578.8, net of cash acquired and debt assumed.

On January 3, 2022, Roper acquired the outstanding membership interests of Horizon Lab Systems, LLC, a provider of laboratory information management systems in the toxicology, environmental, public health and agricultural markets. This acquisition has been integrated into our CliniSys business and its results are reported in the Application Software reportable segment.

On April 6, 2022, Roper acquired the issued and outstanding shares of Common Cents Systems, Inc. (ApolloLIMS), a provider of laboratory information management systems in the toxicology and public health markets. This acquisition has been integrated into our CliniSys business and its results are reported in the Application Software reportable segment.

On June 27, 2022, Roper acquired the issued and outstanding shares of MGA Systems Holdings, Inc., a leading provider of purpose-built insurance software for managing general agents. This acquisition has been integrated into our Vertafore business and its results are reported in the Application Software reportable segment.

On August 19, 2022, Roper acquired substantially all of the assets of viDesktop Inc., a leading provider of end-to-end human resources management software used for recruiting and integration, productivity management, resource allocation, performance management, learning and development, and diversity and inclusion at professional service firms. This acquisition has been integrated into our Aderant business and its results are reported in the Application Software reportable segment.

During the third quarter of 2022, Roper acquired TIP Technologies Inc. and Common Sense Solutions Inc., which have been integrated with our Deltek business and their results are reported in the Application Software reportable segment.

The Company recorded $361.5 in goodwill, $9.5 assigned to trade names that are not subject to amortization and $239.3 of other identifiable intangibles in connection with these six acquisitions. The amortizable intangible assets include customer relationships of $223.4 (18.2 year weighted average useful life) and technology of $15.9 (4.9 year weighted average useful life).

2021 Acquisitions - Roper completed seven business acquisitions in the year ended December 31, 2021 with an aggregate purchase price of $225.9, net of cash acquired and debt assumed. The results of operations of the acquired businesses are included in Roper's Consolidated Financial Statements since the date of each acquisition. Pro forma results of operations and the revenue and net income subsequent to the acquisition date for the acquisitions completed during fiscal 2021 have not been presented because the effects of the acquisitions, individually and in the aggregate, were not material to our financial results.

During the first three quarters of 2021, Roper completed four acquisitions which were integrated into our Deltek business and its results are reported in the Application Software reportable segment.

On November 18, 2021, Roper acquired substantially all of the assets of Agency Zoom, LLC ("Agency Zoom"), a provider of sales, marketing and service automation software solutions for insurance agencies. Agency Zoom was integrated into our Vertafore business and its results are reported in the Application Software reportable segment.

On December 21, 2021, Roper acquired a majority of the assets of The Construction Journal, LTD. ("Construction Journal"), a provider of selling, marketing, and licensing software solutions for the commercial construction industry. Construction Journal was integrated into our ConstructConnect business and its results are reported in the Network Software reportable segment.

On December 30, 2021, Roper acquired 100% of the shares of American LegalNet, Inc. ("ALN"), a provider of court forms, eFiling, calendaring and docketing software solutions. ALN was integrated into our Aderant business and its results are reported in the Application Software reportable segment.

The Company recorded $138.8 in goodwill and $104.9 of other identifiable intangibles in connection with these seven acquisitions. The amortizable intangible assets include customer relationships of $94.6 (12.9 year weighted average useful life) and technology of $10.3 (5.3 year weighted average useful life).

2020 Acquisitions - Roper completed six business acquisitions in the year ended December 31, 2020. The results of operations of the acquired businesses are included in Roper's Consolidated Financial Statements since the date of each acquisition. Pro forma results of operations and the revenue and net income subsequent to the acquisition date for the acquisitions completed during fiscal 2020 have not been presented because the effects of the acquisitions, individually and in the aggregate, were not material to our financial results.

The largest of the 2020 acquisitions was Vertafore, Inc. ("Vertafore"), a leading provider of SaaS solutions for the property and casualty insurance industry. Roper acquired 100% of the shares of Project Viking Holdings, Inc. (the parent company of Vertafore) on September 3, 2020, for a purchase price of $5,398.6. The purchase price comprises an enterprise value of $5,335.0 and the settlement of certain liabilities, net of cash acquired. Additionally, the purchase price contemplated approximately $120 of federal tax attributes that were substantially utilized by the end of 2021. The results of Vertafore are reported in the Application Software reportable segment.

The Company recorded $3,229.1 in goodwill and $2,660.0 of other identifiable intangibles in connection with the Vertafore acquisition. The majority of the goodwill is not expected to be deductible for tax purposes. Of the $2,660.0 of acquired intangible assets, $120.0 was assigned to trade names that are not subject to amortization. The remaining $2,540.0 of acquired intangible assets include customer relationships of $2,230.0 (17 year useful life) and unpatented technology of $310.0 (8 year useful life).

Net assets acquired also includes approximately $489 of deferred tax liabilities, which are due primarily to approximately $638 of deferred tax liabilities associated with acquired intangible assets, partially offset primarily by approximately $120 of federal tax attributes that were substantially utilized by the end of 2021.

During the year ended December 31, 2020, Roper completed five additional bolt-on acquisitions with an aggregate purchase price of $612.8, net of cash acquired and debt assumed.

On June 9, 2020, Roper acquired substantially all of the assets of Freight Market Intelligence Consortium ("FMIC"), a leading provider of subscription-based freight transaction benchmarking and analysis service. FMIC was integrated into our DAT business and its results are reported in the Network Software reportable segment.

On June 15, 2020, Roper acquired substantially all of the assets of Team TSI Corporation ("Team TSI"), a leading provider of subscription-based data analytics serving long term health care facilities. Team TSI was integrated into our SHP business and its results are reported in the Network Software reportable segment.

On September 15, 2020, Roper acquired substantially all of the assets of Impact Financial Systems ("IFS"), a leading provider of service request automation solutions for client onboarding, transaction automation, maintenance and advisor transitions. IFS was integrated into our iPipeline business and its results are reported in the Network Software reportable segment.

On September 18, 2020, Roper acquired all of the membership interests of WELIS, a premier provider of life insurance illustration systems to carriers in the US. WELIS was integrated into our iPipeline business and its results are reported in the Network Software reportable segment.

On October 15, 2020, Roper acquired substantially all of the assets of EPSi, a leading provider of financial decision support and planning tools for hospitals and health systems. EPSi was integrated into our Strata business and its results are reported in the Application Software reportable segment.

The Company recorded $303.9 in goodwill and $313.0 of other identifiable intangibles in connection with these five acquisitions. The amortizable intangible assets include customer relationships of $283.7 (16 year weighted average useful life) and technology of $29.3 (5 year weighted average useful life).

Dispositions

On March 17, 2021, Roper completed the sale of a minority investment in Sedaru, Inc. for $27.1 in cash. The sale resulted in a pretax gain of $27.1, which is reported within "Other income (expense), net" in the Consolidated Statements of Earnings. In addition, we recognized income tax expense of $5.5 in connection with the sale, which is included within "Income taxes" in the Consolidated Statements of Earnings.

(3) Discontinued Operations

The Company concluded that the 2021 Divestitures and the Indicor Transaction each represented a strategic shift that will have a major effect on the Company's operations and financial results. These transactions have greatly reduced the cyclicality and asset intensity of the Company. In addition, the Company has an increased mix of recurring revenue and a higher margin profile. Accordingly, the financial results related to the 2021 Divestitures and Indicor are presented in the Consolidated Financial Statements as discontinued operations for all periods presented. Current and non-current assets and liabilities of the 2021 Divestitures and Indicor are presented in the Consolidated Balance Sheets as assets and liabilities of discontinued operations classified as held for sale for periods presented, as applicable.

2021 Divestitures - During 2021, the Company signed definitive agreements to divest its TransCore, Zetec and CIVCO Radiotherapy businesses as described below.

- On March 17, 2022, Roper closed on the divestiture of our TransCore business to an affiliate of Singapore Technologies Engineering Ltd., for approximately $2,680 in cash. The sale resulted in a pretax gain of $2,073.7 and income tax expense of $550.5, which are reported within "Gain on disposition of discontinued operations, net of tax" in the Consolidated Statements of Earnings for the year ended December 31, 2022. TransCore was previously included in the historical Network Software & Systems reportable segment.
- On January 5, 2022, Roper closed on the divestiture of our Zetec business to Eddyfi NDT Inc. for approximately $350 in cash. The sale resulted in a pretax gain of $255.3 and income tax expense of $60.9, which are reported within "Gain on disposition of discontinued operations, net of tax" in the Consolidated Statements of Earnings for the year ended December 31, 2022. Zetec was previously included in the historical Process Technologies reportable segment.

- On November 1, 2021, Roper closed on the divestiture of our CIVCO Radiotherapy business to an affiliate of Blue Wolf Capital Partners LLC, for approximately $120 in cash. The sale resulted in a pretax gain of $77.2 and income tax expense of $21.3, which are reported within "Gain on disposition of discontinued operations, net of tax" in the Consolidated Statements of Earnings for the year ended December 31, 2021. The CIVCO Radiotherapy business was previously included in the historical Measurement & Analytical Solutions reportable segment.

The following table summarizes the major classes of assets and liabilities related to the discontinued operations of the TransCore and Zetec businesses as reported in the Consolidated Balance Sheets at December 31:

	December 31, 2021 [1]
Accounts receivable, net	$ 74.7
Inventories, net	47.8
Unbilled receivables	158.2
Goodwill	405.5
Other intangible assets, net	31.0
Other current assets	71.4
Current assets held for sale	$ 788.6
Accounts payable	$ 40.3
Accrued compensation	27.0
Deferred taxes	29.5
Other current liabilities	62.3
Current liabilities held for sale	$ 159.1

[1] All assets and liabilities held for sale were classified as current as it was probable that the sale of TransCore and Zetec would be completed within one year from the balance sheet date.

The following table summarizes the major classes of revenue and expenses constituting net earnings from discontinued operations attributable to the TransCore, Zetec and CIVCO Radiotherapy businesses:

	Year ended December 31,		
	2022	2021	2020
Net revenues	$ 100.4	$ 638.0	$ 672.9
Cost of sales	71.2	372.9	400.7
Gross profit	29.2	265.1	272.2
Selling, general and administrative expenses [1]	19.9	124.0	114.6
Income from operations	9.3	141.1	157.6
Other income, net	0.1	1.5	0.3
Earnings before income taxes [2]	9.4	142.6	157.9
Income taxes	(6.2)	28.5	33.7
Earnings from discontinued operations, net of tax	15.6	114.1	124.2
Gain on disposition of discontinued operations, net of tax [3]	1,717.5	55.9	—
Net earnings from discontinued operations	$ 1,733.1	$ 170.0	$ 124.2

[1] Includes stock-based compensation expense of $0.9, $5.4 and $4.8 for the years ended December 31, 2022, 2021, and 2020, respectively. Stock-based compensation for discontinued operations was previously reported as a component of unallocated corporate general and administrative expenses.

[2] During the year ended December 31, 2022, there was no depreciation of property, plant and equipment or amortization of intangible assets given the asset classification as held for sale during the period. Depreciation and amortization of $5.2 and $7.9 for the years ended December 31, 2021, and 2020, respectively.

[3] In connection with the 2021 Divestitures, we recognized $4.5 and $0.9 associated with accelerated vesting of share-based awards for the years ended December 31, 2022 and 2021, respectively.

Indicor - On November 22, 2022, Roper completed the divestiture of a majority 51% stake in Indicor to CD&R for approximately $2,604 in cash. The consideration was comprised of a cash distribution of approximately $1,775 funded by third-party indebtedness incurred by Indicor and approximately $829 related to the majority 51% equity stake. The Company retained an initial 49% minority equity interest. The sale resulted in a pre-tax gain of $2,046.0, which included $142.6 of foreign currency translation losses and $535.0 associated with the initial remaining 49% interest in Indicor (described further in Note 10). The Company recognized income tax expense of $407.2 associated with the gain. The following table summarizes the major classes of assets and liabilities related to the discontinued operations of Indicor, as reported in the Consolidated Balance Sheets:

		December 31, 2021
Accounts receivable, net	$	151.8
Inventories, net		106.9
Other current assets		30.7
Current assets held for sale	$	289.4
Goodwill		618.2
Other intangible assets, net		79.4
Deferred taxes		51.1
Other assets		56.2
Assets held for sale	$	804.9
Accounts payable	$	52.5
Accrued compensation		47.9
Deferred revenue		23.9
Income taxes payable		14.7
Other current liabilities		42.0
Current liabilities held for sale	$	181.0
Deferred taxes	$	13.3
Noncurrent operating lease liabilities		24.1
Other liabilities		12.0
Liabilities held for sale	$	49.4

The following table summarizes the major classes of revenue and expenses constituting net earnings from discontinued operations attributable to Indicor:

	Year ended December 31,		
	2022	2021	2020
Net revenues	$ 916.1	$ 944.0	$ 831.8
Cost of sales	432.1	434.2	389.3
Gross profit	484.0	509.8	442.5
Selling, general and administrative expenses[1]	250.5	265.7	251.9
Impairment of intangible assets	—	5.1	—
Income from operations	233.5	239.0	190.6
Other income (expense), net	(0.7)	0.1	(0.5)
Earnings before income taxes [2]	232.8	239.1	190.1
Income taxes	45.6	61.8	38.4
Earnings from discontinued operations, net of tax	187.2	177.3	151.7
Gain on disposition of discontinued operations, net of tax	1,638.8	—	—
Net earnings from discontinued operations	$ 1,826.0	$ 177.3	$ 151.7

[1] Certain costs previously reported as a component of unallocated corporate general and administrative expenses have been reclassified to discontinued operations. These costs primarily include stock-based compensation expense of $10.3, $13.1, and $8.7 for the years ended December 31, 2022, 2021, and 2020, respectively.

[2] Includes depreciation and amortization of $6.4, $18.2 and $21.3 for the years ended December 31, 2022, 2021, and 2020, respectively.

(4) Inventories

The components of inventories at December 31 were as follows:

	2022	2021
Raw materials and supplies	$ 60.6	$ 36.4
Work in process	24.9	19.1
Finished products	31.3	18.4
Inventory reserves	(5.5)	(4.7)
	$ 111.3	$ 69.2

(5) Property, Plant and Equipment

The components of property, plant and equipment at December 31 were as follows:

	2022	2021
Land	$ 1.0	$ 1.0
Buildings	43.0	45.6
Machinery and other equipment	113.2	104.2
Computer equipment	107.5	109.7
Software	71.9	68.0
	336.6	328.5
Accumulated depreciation	(251.3)	(245.8)
	$ 85.3	$ 82.7

Depreciation and amortization expense related to property, plant and equipment was $37.3, $44.0 and $40.6 for the years ended December 31, 2022, 2021 and 2020, respectively.

(6) Goodwill and Other Intangible Assets

The carrying value of goodwill by segment was as follows:

	Application Software	Network Software	Technology Enabled Products	Total
Balances at December 31, 2020	$ 8,802.3	$ 3,604.5	$ 931.6	$ 13,338.4
Goodwill acquired	85.9	52.9	—	138.8
Currency translation adjustments	(5.8)	(3.0)	0.1	(8.7)
Reclassifications and other	6.9	0.9	—	7.8
Balances at December 31, 2021	$ 8,889.3	$ 3,655.3	$ 931.7	$ 13,476.3
Goodwill acquired	2,559.1	—	—	2,559.1
Currency translation adjustments	(32.1)	(56.3)	(1.4)	(89.8)
Reclassifications and other	1.2	(0.7)	—	0.5
Balances at December 31, 2022	$ 11,417.5	$ 3,598.3	$ 930.3	$ 15,946.1

Reclassifications and other during the years ended December 31, 2022 were due primarily to purchase accounting and tax adjustments for acquisitions completed in 2022 and 2021. See Note 2 for information regarding acquisitions.

Other intangible assets were comprised of:

	Cost	Accumulated amortization	Net book value
Assets subject to amortization:			
Customer related intangibles	$ 7,379.6	$ (1,989.8)	$ 5,389.8
Unpatented technology	886.4	(414.6)	471.8
Software	149.5	(122.4)	27.1
Patents and other protective rights	8.5	(1.0)	7.5
Trade names	12.1	(5.6)	6.5
Assets not subject to amortization:			
Trade names	606.4	—	606.4
Balances at December 31, 2021	$ 9,042.5	$ (2,533.4)	$ 6,509.1
Assets subject to amortization:			
Customer related intangibles	$ 9,300.7	$ (2,437.7)	$ 6,863.0
Unpatented technology	954.6	(506.9)	447.7
Software	149.0	(134.0)	15.0
Patents and other protective rights	10.3	(1.2)	9.1
Trade names	9.7	(3.1)	6.6
Assets not subject to amortization:			
Trade names	689.3	—	689.3
Balances at December 31, 2022	$ 11,113.6	$ (3,082.9)	$ 8,030.7

Amortization expense of other intangible assets was $600.5, $565.1, and $446.4 during the years ended December 31, 2022, 2021 and 2020, respectively. Amortization expense is expected to be $676.0 in 2023, $632.0 in 2024, $606.0 in 2025, $576.0 in 2026 and $542.0 in 2027.

(7) Accrued Liabilities

Accrued liabilities at December 31 were as follows:

	2022	2021
Interest	$ 40.2	$ 42.6
Customer deposits	48.9	46.5
Accrued dividend	74.0	66.8
Rebates	51.5	62.5
Operating lease liability	46.4	41.5
Sales and other taxes payable	22.9	25.0
Patent litigation accrual (1)	45.0	—
Other	125.7	113.8
	$ 454.6	$ 398.7

(1) Refer to Note 13 for details regarding the Berall v. Verathon patent litigation matter.

(8) Income Taxes

Earnings before income taxes for the years ended December 31, 2022, 2021 and 2020 consisted of the following components:

	2022	2021	2020
United States	$ 1,026.4	$ 814.7	$ 676.2
Other	255.6	217.2	185.1
	$ 1,282.0	$ 1,031.9	$ 861.3

Components of income tax expense for the years ended December 31, 2022, 2021 and 2020 were as follows:

	2022	2021	2020
Current:			
Federal	$ 322.9	$ 110.2	$ 142.9
State	80.8	50.8	48.0
Foreign	65.9	59.9	54.6
Deferred:			
Federal	(136.9)	27.5	(32.2)
State	(31.1)	(27.2)	(26.8)
Foreign	(5.2)	5.4	1.0
	$ 296.4	$ 226.6	$ 187.5

Reconciliations between the statutory federal income tax rate and the effective income tax rate for the years ended December 31, 2022, 2021 and 2020 were as follows:

	2022	2021	2020
Federal statutory rate	21.0 %	21.0 %	21.0 %
Foreign operations, net	0.8	2.5	2.1
R&D tax credits	(3.0)	(2.1)	(1.6)
State taxes, net of federal benefit	3.7	2.8	3.3
Stock-based compensation	(1.0)	(2.4)	(3.3)
Impact of UK tax rate change	—	2.0	—
Legal entity restructuring	0.8	(1.4)	—
Other, net	0.8	(0.4)	0.3
	23.1 %	22.0 %	21.8 %

The deferred income tax balance sheet accounts arise from temporary differences between the amount of assets and liabilities recognized for financial reporting and tax purposes.

Components of the deferred tax assets and liabilities at December 31 were as follows:

	2022	2021
Deferred tax assets:		
Reserves and accrued expenses	$ 192.4	$ 179.6
Net operating loss carryforwards	84.6	51.0
R&D credits	8.9	12.5
Capitalized R&D expenditures	97.8	—
Interest expense limitation carryforwards	41.1	10.9
Outside basis differences on assets held for sale	—	57.4
Lease liability	50.1	46.2
Valuation allowance	(37.1)	(31.9)
Total deferred tax assets	$ 437.8	$ 325.7
Deferred tax liabilities:		
Reserves and accrued expenses	$ 12.0	$ 17.3
Amortizable intangible assets	1,818.7	1,656.2
Accrued tax on unremitted foreign earnings	5.8	24.7
ROU asset	48.0	43.7
Outside basis difference in Indicor	174.2	—
Total deferred tax liabilities	$ 2,058.7	$ 1,741.9

As of December 31, 2022, the Company has $46.6 of tax-effected U.S. federal net operating loss carryforwards and $38.0 of tax-effected state net operating loss carryforwards without regard to federal benefit of state. The majority of the net operating loss carryforwards are subject to limitation under the Internal Revenue Code of 1986, as amended ("IRC") Section 382; however, the Company expects to utilize such losses in their entirety prior to expiration.

As of December 31, 2022, the Company has $41.1 of IRC Section 163(j) interest expense limitation carryforwards which have an indefinite carryforward period.

Collectively, the deferred tax assets for the federal and state net operating loss carryforward, interest expense limitation carryforward and the deferred tax liability for amortizable intangible assets each increased from 2021 to 2022 due primarily to the acquisition of Frontline Education.

During the year ended December 31, 2022, the Company generated a $97.8 deferred tax asset related to changes under the Tax Cuts and Jobs Act which requires taxpayers to capitalize and amortize research and development ("R&D") expenditures under section 174 for tax years beginning after December 31, 2021. The Company will amortize these costs for tax purposes over 5 years if the R&D was performed in the U.S. and over 15 years if the R&D was performed outside the U.S.

In connection with the Indicor Transaction, the Company recognized a deferred tax liability of $174.2 in outside basis difference associated with the initial retained 49% minority equity interest in Indicor. The Company expects to settle this liability upon exit of the investment.

As of December 31, 2022, the Company determined that a total valuation allowance of $37.1 was necessary to reduce U.S. federal and state deferred tax assets by $31.0 and foreign deferred tax assets by $6.1, where it was more likely than not that all such deferred tax assets will not be realized. As of December 31, 2022, the Company believes it is more likely than not that the remaining net deferred tax assets will be realized based on the Company's estimates of future taxable income and any applicable tax-planning strategies within various tax jurisdictions.

The Company recognizes in the Consolidated Financial Statements only those tax positions determined to be "more likely than not" of being sustained upon examination based on the technical merits of the positions.

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

	2022	2021	2020
Beginning balance	$ 40.5	$ 63.5	$ 57.6
Additions for tax positions of prior periods	—	2.2	6.0
Additions for tax positions of the current period	2.3	3.3	3.5
Additions due to acquisitions	—	1.0	6.2
Reductions for tax positions of prior periods	(11.2)	(0.5)	(3.6)
Reductions attributable to lapses of applicable statute of limitations	(2.6)	(4.6)	(6.2)
Reductions attributable to settlements with taxing authorities	—	(24.4)	—
Ending balance	$ 29.0	$ 40.5	$ 63.5

The total amount of unrecognized tax benefits that, if recognized, would impact the effective tax rate is $28.8. Interest and penalties related to unrecognized tax expense were $0.3 in 2022 and are classified as a component of income tax expense. Accrued interest and penalties were $4.6 at December 31, 2022 and $4.3 at December 31, 2021. During the next twelve months, it is reasonably possible that the unrecognized tax benefits may decrease by a net $2.3, mainly due to anticipated statute of limitations lapses in various jurisdictions.

The Company and its subsidiaries are subject to examinations for U.S. federal income tax as well as income tax in various state, city and foreign jurisdictions. The Company's federal income tax returns for 2019 through the current period remain open to examination and the relevant state, city and foreign statutes vary. The Company does not expect the assessment of any significant additional tax in excess of amounts reserved.

The Company intends to distribute all historical unremitted foreign earnings up to the amount of excess foreign cash, as well as all future foreign earnings that can be repatriated without incremental U.S. federal tax cost. Any remaining outside basis differences relating to the Company's investment in foreign subsidiaries are not expected to be material and will be indefinitely reinvested.

(9) Long-Term Debt

On July 21, 2022, the Company entered into a new five-year unsecured credit facility (the "Credit Agreement") among Roper, the financial institutions from time to time party thereto, JPMorgan Chase Bank, N.A., as administrative agent, Bank of America, N.A. and Wells Fargo Bank, N.A., as syndication agents, and Mizuho Bank, Ltd., MUFG Bank, Ltd., PNC Bank, National Association, TD Bank, N.A., Truist Bank and U.S Bank, National Association, as documentation agents, which replaced the existing $3,000.0 unsecured credit facility, dated as of September 2, 2020, as amended. The new facility comprises a five-year $3,500.0 revolving credit facility, which includes availability of up to $150.0 for letters of credit. Loans under the facility will be available in dollars, and letters of credit will be available in dollars and other currencies to be agreed. The Company may also, subject to compliance with specified conditions, request additional term loans or revolving credit commitments in an aggregate amount not to exceed $500.0.

The Company will have the right to add foreign subsidiaries as borrowers under the Credit Agreement, subject to the satisfaction of specified conditions. The Company will guarantee the payment and performance by the foreign subsidiary borrowers of their obligations under the Credit Agreement. The Company's obligations under the Credit Agreement are not guaranteed by any of its subsidiaries. However, the Company has the right, subject to the satisfaction of certain conditions set forth in the Credit Agreement, to cause any of its wholly-owned domestic subsidiaries to become guarantors.

Loans under the Credit Agreement can be borrowed as term Secured Overnight Financing Rate ("SOFR") loans or Alternate Base Rate ("ABR") Loans, at the Company's option. Each term SOFR loan will bear interest at a rate per annum equal to the applicable Adjusted Term SOFR rate plus a spread ranging from 0.795% to 1.300%, as determined by the Company's senior unsecured long-term debt rating at such time. Based on the Company's current rating, the spread for SOFR loans would be 0.910%. Each ABR Loan will bear interest at a rate per annum equal to the Alternate Base Rate plus a spread ranging from 0.000% to 0.300%, as determined by the Company's senior unsecured long-term debt rating at such time. Based on the Company's current rating, the spread for ABR Loans would be 0.000%.

Outstanding letters of credit issued under the Credit Agreement will be charged a quarterly fee depending on the Company's senior unsecured long-term debt rating. Based on the Company's current rating, the quarterly fee would be payable at a rate of 0.910% per annum, plus a fronting fee of 0.125% per annum on the undrawn and unexpired amount of all letters of credit.

Additionally, the Company will pay a quarterly facility fee on the used and unused portions of the revolving credit facility depending on the Company's senior unsecured long-term debt rating. Based on the Company's current rating, the quarterly fee would accrue at a rate of 0.090% per annum.

Amounts outstanding under the Credit Agreement may be accelerated upon the occurrence of customary events of default. The Credit Agreement requires the Company to maintain a Total Debt to Total Capital Ratio of 0.65 to 1.00 or less. Borrowings under the Credit Agreement are prepayable at Roper's option at any time in whole or in part without premium or penalty.

At December 31, 2022, there were no outstanding borrowings under the Credit Agreement. Comparably, at December 31, 2021, there was $470.0 of outstanding borrowings under the credit agreement in place at the time. The Company was in compliance with its debt covenants throughout the years ended December 31, 2022 and 2021.

On June 22, 2020, the Company completed a public offering of $600.0 aggregate principal amount of 2.00% senior unsecured notes due June 30, 2030 ("2030 Notes"). The 2030 Notes bear interest at a fixed rate and are payable semi-annually in arrears on June 30 and December 30 of each year, beginning December 30, 2020. The net proceeds from the sale of the 2030 Notes were used for general corporate purposes, including acquisitions.

On September 1, 2020, the Company completed a public offering of $300.0 aggregate principal amount of 0.45% senior unsecured notes due August 15, 2022 ("2022 Notes"), $700.0 aggregate principal amount of 1.00% senior unsecured notes due September 15, 2025 ("2025 Notes"), $700.0 aggregate principal amount of 1.40% senior unsecured notes due September 15, 2027 ("2027 Notes") and $1,000.0 aggregate principal amount of 1.75% senior unsecured notes due February 15, 2031 ("2031 Notes" and, together with the 2022 Notes, 2025 Notes, and 2027 Notes, the "Notes"). The 2022 Notes and 2031 Notes bear interest at a fixed rate and are payable semi-annually in arrears on February 15 and August 15 of each year, beginning February 15, 2021 and the 2025 Notes and 2027 Notes bear interest at a fixed rate and are payable semi-annually in arrears on March 15 and September 15 of each year, beginning March 15, 2021. The net proceeds from the sale of the Notes, together with cash on hand and borrowings under the Credit Agreement, were used to fund the purchase price of the acquisition of Vertafore, Inc. and related costs.

On August 26, 2019, the Company completed a public offering of $500.0 aggregate principal amount of 2.35% senior unsecured notes due September 15, 2024 and $700.0 aggregate principal amount of 2.95% senior unsecured notes due September 15, 2029. The notes bear interest at a fixed rate and are payable semi-annually in arrears on March 15 and September 15 of each year, beginning March 15, 2020. The net proceeds were used to fund a portion of the purchase of iPipeline Holdings, Inc.

On August 28, 2018, the Company completed a public offering of $700.0 aggregate principal amount of 3.65% senior unsecured notes due September 15, 2023 and $800.0 aggregate principal amount of 4.20% senior unsecured notes due September 15, 2028 (the "2018 Offering"). The notes bear interest at a fixed rate and are payable semi-annually in arrears on March 15 and September 15 of each year, beginning March 15, 2019.

On December 19, 2016, the Company completed a public offering of $500.0 aggregate principal amount of 2.80% senior unsecured notes due December 15, 2021 and $700.0 aggregate principal amount of 3.80% senior unsecured notes due December 15, 2026. The notes bear interest at a fixed rate and are payable semi-annually in arrears on June 15 and December 15 of each year, beginning June 15, 2017.

On December 7, 2015, the Company completed a public offering of $600.0 aggregate principal amount of 3.00% senior unsecured notes due December 15, 2020 and $300.0 aggregate principal amount of 3.85% senior unsecured notes due December 15, 2025. The notes bear interest at a fixed rate and are payable semi-annually in arrears on June 15 and December 15 of each year, beginning June 15, 2016.

On November 21, 2012, the Company completed a public offering of $500.0 aggregate principal amount of 3.125% senior unsecured notes due November 15, 2022. The notes bear interest at a fixed rate and are payable semi-annually in arrears on May 15 and November 15 of each year, beginning May 15, 2013.

Roper may redeem some or all of these notes at any time or from time to time, at 100% of their principal amount, plus a make-whole premium based on a spread to U.S. Treasury securities.

On August 15, 2022 $500.0 of 3.125% senior notes due 2022 were redeemed using cash flows generated from operations.

On August 15, 2022, $300.0 of 0.450% senior notes due 2022 were repaid at maturity using cash flows generated from operations.

On November 15, 2021, $500.0 of 2.800% senior notes due 2021 were redeemed predominantly using cash flows generated from operations.

On November 15, 2020, $600.0 of 3.000% senior notes due 2020 were redeemed using revolver borrowings under the Credit Agreement.

The Company's senior notes are unsecured senior obligations of the Company and rank equally in right of payment with all of Roper's existing and future unsecured and unsubordinated indebtedness. The notes are effectively subordinated to any of its existing and future secured indebtedness to the extent of the value of the collateral securing such indebtedness. The notes are not guaranteed by any of Roper's subsidiaries and are effectively subordinated to all existing and future indebtedness and other liabilities of Roper's subsidiaries.

Total debt at December 31 consisted of the following:

	2022	2021
Unsecured credit facility	$ —	$ 470.0
$500 3.125% senior notes due 2022	—	500.0
$300 0.450% senior notes due 2022	—	300.0
$700 3.650% senior notes due 2023	700.0	700.0
$500 2.350% senior notes due 2024	500.0	500.0
$300 3.850% senior notes due 2025	300.0	300.0
$700 1.000% senior notes due 2025	700.0	700.0
$700 3.800% senior notes due 2026	700.0	700.0
$700 1.400% senior notes due 2027	700.0	700.0
$800 4.200% senior notes due 2028	800.0	800.0
$700 2.950% senior notes due 2029	700.0	700.0
$600 2.000% senior notes due 2030	600.0	600.0
$1,000 1.750% senior notes due 2031	1,000.0	1,000.0
Other	0.3	0.3
Less unamortized debt issuance costs	(38.6)	(48.5)
Total debt	6,661.7	7,921.8
Less current portion	(699.2)	(799.2)
Long-term debt	$ 5,962.5	$ 7,122.6

The interest rate on the borrowings under the unsecured credit facility is calculated based upon various recognized indices plus a margin as defined in the Credit Agreement. At December 31, 2022, Roper had $19.0 of outstanding letters of credit.

Future maturities of total debt during each of the next five years ending December 31 and thereafter are as follows:

2023	$ 700.2
2024	500.1
2025	1,000.0
2026	700.0
2027	700.0
Thereafter	3,100.0
Total	$ 6,700.3

(10) Fair Value

Financial assets and liabilities are valued using market prices on active markets (Level 1), less active markets (Level 2) and little or no market activity (Level 3). Level 1 instrument valuations are obtained from real-time quotes for transactions in active exchange markets involving identical assets. Level 2 instrument valuations are obtained from readily available pricing sources for comparable instruments, identical instruments in less active markets, or models using market observable inputs. Level 3 instrument valuations typically reflect management's estimate of assumptions that market participants would use in pricing the asset or liability.

Debt – Roper's debt at December 31, 2022 included $6,700.0 of fixed-rate senior notes with the following fair values:

$700 3.650% senior notes due 2023	692
$500 2.350% senior notes due 2024	478
$300 3.850% senior notes due 2025	291
$700 1.000% senior notes due 2025	629
$700 3.800% senior notes due 2026	670
$700 1.400% senior notes due 2027	594
$800 4.200% senior notes due 2028	772
$700 2.950% senior notes due 2029	608
$600 2.000% senior notes due 2030	481
$1,000 1.750% senior notes due 2031	770

The fair values of the senior notes are based on the trading prices of the notes, which the Company has determined to be Level 2 in the FASB fair value hierarchy.

Indicor Investment – In connection with the Indicor Transaction, the Company retained an initial 49% equity interest in Indicor valued at $535.0 as of the transaction close date. The valuation is based on the implied equity value associated with the sale price of the 51% equity interest in Indicor to CD&R for approximately $829, inclusive of the Unit Adjustment received by CD&R as discussed below. Roper's equity interest is comprised of an equity value for the initial 49% retained ownership of approximately $650, partially offset by approximately $115 of anticipated dilution associated with the Unit Adjustment. The fair value of the investment reflects management's estimate of assumptions that market participants would use in pricing the equity interest, which the Company has determined to be Level 3 in the FASB fair value hierarchy.

As part of the investment, Roper is also required to make quarterly payments ("Unit Adjustment"), to CD&R, either (i) in cash, with total payments of approximately $29 per year on a pre-tax basis, or (ii) in-kind through the transfer of Roper's equity interests in Indicor to CD&R, of approximately a 1.7% ownership interest on an annual basis. Roper intends to make these quarterly payments in-kind. Roper valued the Unit Adjustment at approximately $115 based on an expected investment horizon of 5 years. The Company's obligation to make such quarterly payments will cease upon the earlier of:

- Indicor achieving $425.0 of earnings before interest, taxes, depreciation and amortization in any three twelve month periods, whether or not consecutive; or
- Upon the initial public offering of Indicor.

In the event of a sale of Indicor, CD&R would be entitled to a liquidation preference equal to its initial investment of approximately $829, plus any Unit Adjustment paid in-kind. Management's valuation assumes the expected exit of the Indicor investment is an initial public offering which is not subject to the liquidation preference. Roper's approval is required prior to a sale of Indicor which would trigger the liquidation preference.

The assessment of fair value for the equity investment requires significant judgments to be made by management. Although our assumptions are considered reasonable and are consistent with the plans and estimates, there is significant judgment in determining these assumptions. Changes in estimates or the application of alternative assumptions could produce significantly different results.

There were no changes in fair value between the initial recognition and December 31, 2022. Subsequent changes in fair value will be recognized as a discrete non-operating line item in the Consolidated Statements of Operations beginning in the first quarter of 2023.

(11) Retirement and Other Benefit Plans

Roper maintains three defined contribution retirement plans under the provisions of Section 401(k) of the IRC covering substantially all U.S. employees. Roper partially matches employee contributions. Costs related to all such plans were $34.1, $30.2 and $24.3 for 2022, 2021 and 2020, respectively.

Roper also maintains various defined benefit retirement plans covering employees of non-U.S. and certain U.S. subsidiaries and a plan that supplements certain employees for the contribution ceiling applicable to the Section 401(k) plans. The costs and accumulated benefit obligations associated with each of these plans were not material.

(12) Stock-Based Compensation

The Roper Technologies, Inc. 2021 Incentive Plan ("2021 Plan") is a stock-based compensation plan used to grant incentive stock options, nonqualified stock options, restricted stock, stock appreciation rights or equivalent instruments to Roper's employees, officers, directors and consultants. The 2021 Plan was approved by shareholders at the Annual Meeting of Shareholders on June 14, 2021. The 2021 Plan replaces the Roper Technologies, Inc. Amended and Restated 2016 Incentive Plan ("2016 Plan"), and no additional grants will be made from the 2016 Plan. At December 31, 2022, 8.387 shares were available to grant under the 2021 Plan.

Under the Roper Technologies, Inc., Employee Stock Purchase Plan ("ESPP"), employees in the U.S. and Canada are allowed to designate up to 10% of eligible earnings to purchase Roper's common stock at a 10% discount on the lower of the closing price of the stock on the first and last day of each quarterly offering period. Common stock sold to employees pursuant to the stock purchase plan may be either treasury stock, stock purchased on the open market, or newly issued shares.

Stock-based compensation expense is not allocated to our reportable segments, which are described further in Note 14. Stock based compensation expense for the years ended December 31, 2022, 2021 and 2020 included as a component of "Selling, general and administrative expenses" was as follows:

	2022	2021	2020
Stock-based compensation	$ 117.8	$ 123.0	$ 108.3
Tax benefit recognized in net earnings	18.6	19.8	17.3

Stock Options – Stock options are granted at prices not less than 100% of market value of the underlying stock at the date of grant. Stock options typically vest over a weighted average period of 3 years from the grant date and expire 10 years after the grant date. The Company recorded $38.1, $40.4, and $34.9 of compensation expense relating to outstanding options during 2022, 2021 and 2020, respectively, as a component of general and administrative expenses at Corporate.

The Company estimates the fair value of its option awards using the Black-Scholes option valuation model. The stock volatility for each grant is measured using the weighted-average of historical daily price changes of the Company's common stock over the most recent period equal to the expected life of the grant. The expected term of options granted is derived from historical data to estimate option exercises and employee forfeitures, and represents the period of time that options granted are expected to be outstanding. The risk-free rate for periods aligns with the expected life of the option is based on the U.S. Treasury yield curve in effect at the time of grant. The weighted-average fair value of options granted in 2022, 2021 and 2020 were calculated using the following weighted-average assumptions:

	2022	2021	2020
Weighted-average fair value ($)	116.55	95.17	63.22
Risk-free interest rate (%)	2.19	0.94	0.81
Average expected option life (years)	5.63	5.61	5.64
Expected volatility (%)	24.59	25.14	20.39
Expected dividend yield (%)	0.55	0.56	0.62

The following table summarizes the Company's activities with respect to its share-based compensation plans for the years ended December 31, 2022 and 2021:

	Number of shares	Weighted-average exercise price per share	Weighted-average contractual term	Aggregate intrinsic value
Outstanding at December 31, 2020	3.366	$ 255.32		
Granted	0.516	405.20		
Exercised	(0.537)	195.07		
Canceled	(0.122)	312.97		
Outstanding at December 31, 2021	3.223	287.15	6.61	$ 659.9
Granted	0.399	452.08		
Exercised	(0.460)	239.11		
Canceled	(0.177)	359.06		
Outstanding at December 31, 2022	2.985	312.34	6.18	$ 366.3
Exercisable at December 31, 2022	1.842	$ 256.87	4.90	$ 322.8

The following table summarizes information for stock options outstanding at December 31, 2022:

	Outstanding options			Exercisable options	
Exercise price	Number	Average exercise price	Average remaining life (years)	Number	Average exercise price
$115.22 - $170.66	0.366	$ 153.15	2.1	0.366	$ 153.15
$170.67 - $267.22	0.326	199.08	4.0	0.324	198.79
$267.23 - $279.28	0.247	273.07	5.5	0.247	273.07
$279.29 - $316.24	0.296	281.55	5.3	0.289	280.89
$316.25 -$324.71	0.435	323.09	7.2	0.209	323.09
$324.72 - $347.81	0.333	327.22	6.2	0.332	327.19
$347.82 - $398.19	0.160	372.19	7.0	0.069	368.53
$398.20 - $413.85	0.425	403.57	8.2	—	—
$413.86 - $491.86	0.397	453.54	9.2	0.006	450.17
$115.22 - $491.86	2.985	$ 312.34	6.2	1.842	$ 256.87

At December 31, 2022, there was $51.7 of total unrecognized compensation expense related to nonvested options granted under the Company's share-based compensation plans. That cost is expected to be recognized over a weighted-average period of 1.84 years. The total intrinsic value of options exercised in 2022, 2021 and 2020 was $92.7, $138.2 and $155.4, respectively. Cash received from option exercises under all plans in 2022, 2021, and 2020 was $110.0, $104.7, and $105.5 respectively.

Restricted Stock Grants – During 2022 and 2021, the Company granted 0.271 and 0.228 shares, respectively, of restricted stock to certain employee and director participants under its share-based compensation plans. Restricted stock grants generally vest over a period of 1 to 4 years. The Company recorded $77.6, $82.7 and $72.6 of compensation expense related to outstanding shares of restricted stock held by employees and directors during 2022, 2021 and 2020, respectively. A summary of the Company's nonvested shares activity for 2022 and 2021 is as follows:

	Number of shares	Weighted-average grant date fair value
Nonvested at December 31, 2020	0.601	$ 320.36
Granted	0.228	409.36
Vested	(0.294)	308.79
Forfeited	(0.037)	350.53
Nonvested at December 31, 2021	0.498	$ 365.79
Granted	0.271	446.42
Vested	(0.272)	360.14
Forfeited	(0.052)	386.06
Nonvested at December 31, 2022	0.445	$ 416.00

At December 31, 2022, there was $89.4 of total unrecognized compensation expense related to nonvested awards granted to both employees and directors under the Company's share-based compensation plans. That cost is expected to be recognized over a weighted-average period of 1.7 years.

Employee Stock Purchase Plan – During 2022, 2021 and 2020, participants of the ESPP purchased 0.039, 0.040 and 0.031 shares, respectively, of Roper's common stock for total consideration of $14.3, $15.1, and $10.5, respectively. All of these shares were purchased from Roper's treasury shares.

(13) Contingencies

Roper, in the ordinary course of business, is party to various pending or threatened legal actions, including product liability, intellectual property, data privacy and employment practices that, in general, are of a nature consistent with those over the past several years. After analyzing the Company's contingent liabilities on a gross basis and, based upon past experience with resolution of such legal claims and the availability and limits of the primary, excess, and umbrella liability insurance coverages with respect to pending claims, management believes that adequate provision has been made to cover any potential liability not covered by insurance, and that the ultimate liability, if any, arising from these actions should not have a material adverse effect on Roper's consolidated financial position, results of operations or cash flows. However, no assurances can be given in this regard.

Roper's subsidiary, Vertafore, Inc., was named in three putative class actions, two in the U.S. District Court for the Southern District of Texas (Allen, et al. v. Vertafore, Inc., Case 4:20-cv-4139, filed December 4, 2020 and Masciotra, et al. v. Vertafore, Inc. (originally filed on December 8, 2020 as Case 1:20-cv-03603 in the U.S. District Court for the District of Colorado and subsequently transferred)), and one in the U.S. District Court for the Northern District of Texas (Mulvey, et al. v. Vertafore, Inc., Case 3:21-cv-00213-E, filed January 31, 2021). In July 2021, the court granted Vertafore's motion to dismiss the Allen Case. In March 2022, the U.S. Fifth Circuit Court of Appeals affirmed the lower court's dismissal of the Allen case, and that dismissal was affirmed on appeal, effectively concluding the litigation. In July 2021, the plaintiff in the Masciotra case voluntarily dismissed his action without prejudice. In February 2023, the court granted Vertafore's motion to dismiss the Mulvey case on similar grounds as the dismissal of the Allen case. Plaintiff has the right to appeal the dismissal of the Mulvey case. Both the Allen and Mulvey cases purported to represent approximately 27.7 million individuals who held Texas driver's licenses prior to February 2019. In November 2020, Vertafore announced that as a result of human error, three data files were inadvertently stored in an unsecured external storage service that appears to have been accessed without authorization. The files, which included driver information for licenses issued before February 2019, contained Texas driver license numbers, as well as names, dates of birth, addresses and vehicle registration histories. The files did not contain any Social Security numbers or financial account information. These cases sought recovery under the Driver's Privacy Protection Act, 18 U.S.C. § 2721.

Roper's subsidiary, Verathon, Inc. ("Verathon"), was a defendant in a patent infringement action pending in the United States District Court for the Western District of Washington (Berall v. Verathon, Inc., Case No. 2:2021mc00043). The plaintiff claimed that video laryngoscopes and certain accessories sold by Verathon and other manufacturers from approximately 2004 through 2016 infringed U.S. Patent 5,827,178 (the "'178 Patent"). In the first quarter of 2023, Verathon and the plaintiff agreed to settle the matter for $45.0 which fully concludes the matter and which is recorded as a component of "Other income (expense), net" within the Consolidated Statements of Earnings for the year ended December 31, 2022.

Roper or its subsidiaries have been named defendants along with numerous industrial companies in asbestos-related litigation claims in certain U.S. states. To date, no significant resources have been required by Roper to respond to asbestos claims. In the first quarter of 2022, Roper completed a transaction in which it transferred the remainder of our exposure for asbestos claims to a third party. In connection with this transaction, Roper incurred a one-time charge of $4.1, which is recorded as a component of "Other income (expense), net" within the Consolidated Statements of Earnings for the year ended December 31, 2022.

As of December 31, 2022, Roper had $19.0 of letters of credit issued to guarantee its performance under certain services contracts or to support certain insurance programs and $43.0 of outstanding surety bonds. Certain contracts require Roper to provide a surety bond as a guarantee of its performance of contractual obligations.

(14) Segment and Geographic Area Information

As discussed in Note 1, our businesses are now reported in three segments classified based on business model and delivery of performance obligations. The segments are: Application Software, Network Software, and Technology Enabled Products. The three reportable segments (and businesses within each; including changes due to acquisitions since the realignment) are as follows:

–**Application Software** - Aderant, CBORD/Horizon, CliniSys, Data Innovations, Deltek, Frontline Education, IntelliTrans, PowerPlan, Strata, Vertafore

–**Network Software** - ConstructConnect, DAT, Foundry, iPipeline, iTradeNetwork, Loadlink, MHA, SHP, SoftWriters

–**Technology Enabled Products** - CIVCO Medical Solutions, FMI, Inovonics, IPA, Neptune, Northern Digital, rf IDEAS, Verathon

There were no material transactions between Roper's reportable segments during 2022, 2021 and 2020. Operating profit by reportable segment and by geographic area is defined as net revenues less operating costs and expenses. These costs and expenses do not include unallocated corporate administrative expenses, enterprise-wide stock-based compensation, or non-cash impairments. Items below income from operations on Roper's Consolidated Statements of Earnings are not allocated to reportable segments.

Operating assets are those assets used primarily in the operations of each reportable segment or geographic area. Corporate assets are principally comprised of cash and cash equivalents, deferred tax assets, recoverable insurance claims, deferred compensation assets and property and equipment.

Selected financial information by reportable segment for 2022, 2021 and 2020 follows:

	Application Software	Network Software	Technology Enabled Products	Corporate	Total
2022					
Net revenues	$ 2,639.5	$ 1,378.5	$ 1,353.8	$ —	$ 5,371.8
Operating profit	714.0	570.6	449.1	(209.2)	1,524.5
Assets:					
Operating assets	624.7	224.7	307.4	7.1	1,163.9
Intangible assets, net	17,758.4	5,118.5	1,099.9	—	23,976.8
Other	340.2	124.2	95.4	1,280.3	1,840.1
Total					26,980.8
Capital expenditures	20.7	8.8	9.2	1.4	40.1
Capitalized software expenditures	28.5	1.7	—	—	30.2
Depreciation and other amortization	455.8	164.2	29.8	0.3	650.1
2021					
Net revenues	$ 2,366.7	$ 1,223.8	$ 1,243.3	$ —	$ 4,833.8
Operating profit [2]	633.1	476.8	415.6	(189.9)	1,335.6
Assets:					
Operating assets	576.0	215.5	250.7	15.4	1,057.6
Intangible assets, net	13,498.4	5,364.8	1,122.2	—	19,985.4
Other	205.8	50.4	33.8	498.0	788.0
Total [1]					21,831.0
Capital expenditures	18.0	5.0	4.5	1.0	28.5
Capitalized software expenditures	26.3	3.4	—	—	29.7
Depreciation and other amortization	418.7	164.8	32.1	0.3	615.9
2020					
Net revenues	$ 1,785.8	$ 1,069.4	$ 1,167.2	$ —	$ 4,022.4
Operating profit	467.9	382.7	412.1	(179.8)	1,082.9
Assets:					
Operating assets	524.7	196.0	234.1	3.8	958.6
Intangible assets, net	13,837.1	5,428.6	1,143.4	—	20,409.1
Other	173.1	48.4	46.9	444.2	712.6
Total [1]					22,080.3
Capital expenditures	12.9	5.8	5.9	0.1	24.7
Capitalized software expenditures	16.3	1.4	—	—	17.7
Depreciation and other amortization	293.2	164.9	33.2	0.3	491.6

[1] Total excludes assets held for sale of $1,882.9 and $1,944.5 associated with the 2021 Divestitures and Indicor, as applicable, on December 31, 2021 and 2020, respectively.
[2] Operating profit excludes $94.4 of non-cash impairment charges.

Summarized data for Roper's U.S. and foreign operations (principally in Canada, Europe and Asia) for 2022, 2021 and 2020, based upon the country of origin of the Roper entity making the sale, was as follows:

	United States	Non-U.S.	Eliminations	Total
2022				
Sales to unaffiliated customers	$ 4,610.2	$ 761.6	$ —	$ 5,371.8
Sales between geographic areas	55.5	82.2	(137.7)	—
Net revenues	$ 4,665.7	$ 843.8	$ (137.7)	$ 5,371.8
Long-lived assets	$ 196.5	$ 17.1	$ —	$ 213.6
2021				
Sales to unaffiliated customers	$ 4,105.6	$ 728.2	$ —	$ 4,833.8
Sales between geographic areas	81.1	81.9	(163.0)	—
Net revenues	$ 4,186.7	$ 810.1	$ (163.0)	$ 4,833.8
Long-lived assets	$ 167.3	$ 19.8	$ —	$ 187.1
2020				
Sales to unaffiliated customers	$ 3,384.6	$ 637.8	$ —	$ 4,022.4
Sales between geographic areas	81.6	119.2	(200.8)	—
Net revenues	$ 3,466.2	$ 757.0	$ (200.8)	$ 4,022.4
Long-lived assets	$ 156.4	$ 21.2	$ —	$ 177.6

Export sales from the U.S. during the years ended December 31, 2022, 2021 and 2020 were $191.8, $179.9 and $180.0, respectively. In the year ended December 31, 2022, these exports were shipped primarily to Canada (42%), Europe (26%), Asia (16%) and other (16%).

Sales to customers outside the U.S. accounted for a significant portion of Roper's revenues. Sales are attributed to geographic areas based upon the location where the product is ultimately delivered. Roper's net revenues for the years ended December 31, 2022, 2021 and 2020 are shown below by region, except for Canada, which is presented separately:

	Application Software	Network Software	Technology Enabled Products	Total
2022				
Canada	$ 57.8	$ 95.9	$ 68.6	$ 222.3
Europe	241.2	65.7	117.7	424.6
Asia	4.9	12.2	56.2	73.3
Rest of the world	35.1	7.5	43.7	86.3
Total	$ 339.0	$ 181.3	$ 286.2	$ 806.5
2021				
Canada	$ 51.2	$ 85.2	$ 61.7	$ 198.1
Europe	248.2	59.2	125.3	432.7
Asia	3.7	10.9	49.4	64.0
Rest of the world	37.1	6.5	37.5	81.1
Total	$ 340.2	$ 161.8	$ 273.9	$ 775.9
2020				
Canada	$ 43.4	$ 73.6	$ 63.7	$ 180.7
Europe	205.5	50.7	123.6	379.8
Asia	3.3	10.9	45.6	59.8
Rest of the world	37.7	6.0	45.0	88.7
Total	$ 289.9	$ 141.2	$ 277.9	$ 709.0

(15) Concentration of Risk

Financial instruments which potentially subject the Company to credit risk consist primarily of cash and cash equivalents, trade receivables and unbilled receivables.

The Company maintains cash and cash equivalents with various major financial institutions around the world. The Company limits the amount of credit exposure with any one financial institution and believes that no significant concentration of credit risk exists with respect to cash and cash equivalent balances.

Trade and unbilled receivables subject the Company to the potential for credit risk with customers. To reduce credit risk, the Company performs ongoing evaluations of its customers' financial condition.

(16) Contract Balances

Contract balances at December 31 are set forth in the following table:

Balance Sheet Account		2022		2021		Change
Unbilled receivables	$	91.5	$	81.9	$	9.6
Contract liabilities - current		(1,370.7)		(1,106.3)		(264.4)
Deferred revenue - non-current		(111.5)		(69.9)		(41.6)
Net contract assets/(liabilities)	$	(1,390.7)	$	(1,094.3)	$	(296.4)

The change in our net contract assets/(liabilities) from December 31, 2021 to December 31, 2022 was due primarily to net contract liabilities associated with the acquisitions completed during the year ended December 31, 2022, the timing of payments and invoicing relating to Software-as-a-Service ("SaaS") and post contract support ("PCS") renewals, partially offset by the increase in unbilled receivables due to the timing of invoicing related to software milestone billings associated with multi-year term license renewals and software implementations.

Revenue recognized during the year ended December 31, 2022 and 2021 that was included in the contract liability balance on December 31, 2021 and 2020 was $1,053.1 and $937.2, respectively. In order to determine revenues recognized in the period from contract liabilities, we allocate revenue to the individual deferred revenue balance outstanding at the beginning of the year until the revenue exceeds that balance.

Impairment losses recognized on our accounts receivable and unbilled receivables were immaterial in the each of years ended December 31, 2022, 2021 and 2020, respectively.

(17) Leases

The Company's operating leases are primarily for real property in support of our business operations. Although many of our leases contain renewal options, we generally are not reasonably certain to exercise these options at the commencement date. Accordingly, renewal options are generally not included in the lease term for determining the ROU asset and lease liability at commencement. Variable lease payments generally depend on an inflation-based index and such payments are not included in the original estimate of the lease liability. These variable lease payments are not material.

For the years ended December 31, 2022, 2021 and 2020, the Company recognized $48.7, $51.8 and $47.2 in operating lease expense, respectively.

The following table presents the supplemental cash flow information related to the Company's operating leases for the year ended December 31:

		2022		2021		2020
Operating cash flows used for operating leases	$	48.3	$	51.5	$	48.8
Right-of-use assets obtained in exchange for operating lease obligations		53.9		28.2		49.1

The following table presents the lease balances within the Consolidated Balance Sheet related to the Company’s operating leases as of December 31:

Lease Assets and Liabilities	**Balance Sheet Account**	**2022**	**2021**
ASSETS:			
Operating lease ROU assets	Other assets	$ 196.1	$ 188.1
LIABILITIES:			
Current operating lease liabilities	Other accrued liabilities	46.4	41.5
Operating lease liabilities	Other liabilities	164.2	156.9
Total operating lease liabilities		$ 210.6	$ 198.4

Future minimum lease payments under non-cancellable leases were as follows:

2023	$ 50.7
2024	43.8
2025	36.4
2026	29.1
2027	22.9
Thereafter	42.2
Total operating lease payments	225.1
Less: Imputed interest	14.5
Total operating lease liabilities	$ 210.6

Weighted average remaining lease term - operating leases (years)	6
Weighted average discount rate (%)	2.4

(18) Quarterly Financial Data (unaudited)

The unaudited interim financial information below has been adjusted to incorporate the presentation of discontinued operations. See Note 3 for further information on discontinued operations.

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2022				
Net revenues	$ 1,279.8	$ 1,310.8	$ 1,350.3	$ 1,430.9
Gross profit	897.2	911.5	941.8	1,002.3
Income from operations	355.9	362.9	393.2	412.5
Net earnings from continuing operations	236.4	225.0	276.9	247.3
Net earnings from discontinued operations	1,784.1	43.8	50.1	1,681.1
Net earnings	2,020.5	268.8	327.0	1,928.4
Net earnings per share from continuing operations:				
Basic	$ 2.24	$ 2.13	$ 2.61	$ 2.33
Diluted	$ 2.22	$ 2.11	$ 2.59	$ 2.32
Net earnings per share from discontinued operations:				
Basic	$ 16.89	$ 0.41	$ 0.47	$ 15.85
Diluted	$ 16.72	$ 0.41	$ 0.47	$ 15.74
Net earnings per share:				
Basic	$ 19.13	$ 2.54	$ 3.08	$ 18.18
Diluted	$ 18.94	$ 2.52	$ 3.06	$ 18.06
2021				
Net revenues	$ 1,155.3	$ 1,189.8	$ 1,232.1	$ 1,256.6
Gross profit	816.3	839.2	871.7	880.4
Income from operations	317.6	316.2	346.9	260.5
Net earnings from continuing operations	223.0	204.4	210.8	167.1
Net earnings from discontinued operations	66.0	81.9	78.7	120.7
Net earnings	289.0	286.3	289.5	287.8
Net earnings per share from continuing operations:				
Basic	$ 2.12	$ 1.94	$ 2.00	$ 1.58
Diluted	$ 2.11	$ 1.92	$ 1.97	$ 1.57
Net earnings per share from discontinued operations:				
Basic	$ 0.63	$ 0.78	$ 0.75	$ 1.15
Diluted	$ 0.62	$ 0.77	$ 0.74	$ 1.13
Net earnings per share:				
Basic	$ 2.75	$ 2.72	$ 2.75	$ 2.73
Diluted	$ 2.73	$ 2.69	$ 2.71	$ 2.70

The sum of the four quarters may not agree with the total for the year due to rounding.

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

None

ITEM 9A. CONTROLS AND PROCEDURES

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our principal executive officer and principal 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 (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework in Internal Control-Integrated Framework, our management concluded that our internal control over financial reporting was effective as of December 31, 2022. Our internal control over financial reporting as of December 31, 2022 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

Our management excluded the seven acquisitions completed during 2022 from its assessment of internal control over financial reporting as of December 31, 2022. These acquisitions are wholly-owned subsidiaries whose total assets (excluding goodwill and other identifiable intangibles, which are included within the scope of the assessment) represent approximately 1%, and whose aggregate total revenues represent approximately 2%, of the related Consolidated Financial Statement amounts as of and for the year ended December 31, 2022.

Evaluation of Disclosure Controls and Procedures

As required by SEC rules, we have evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this report. This evaluation was carried out under the supervision and with the participation of our management, including our principal executive officer and principal financial officer. Based on this evaluation, we have concluded that our disclosure controls and procedures were effective as of December 31, 2022.

Disclosure controls and procedures are our controls and other procedures designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act are accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting that occurred during the fourth quarter of 2022 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

None

PART III

Except as otherwise indicated, the following information required by the Instructions to Form 10-K is incorporated herein by reference from the sections of the Roper Proxy Statement for the annual meeting of shareholders ("2023 Proxy Statement"), which we anticipate filing with the SEC within 120 days after the end of the fiscal year to which this report relates, as specified below:

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information about our directors required by this *Item 10 - Directors, Executive Officers and Corporate Governance* is contained under the caption "Proposal 1 - Election of Directors" is contained in the 2023 Proxy Statement.

Information regarding our audit committee is contained in the 2023 Proxy Statement under the captions "Corporate Governance" and "Board Committees and Meetings."

If applicable, information required under this Item with respect to compliance with Section 16(a) of the Exchange Act will be included in the Proxy Statement under the caption "Delinquent Section 16(a) Reports," which information is incorporated by reference.

Information required under this Item with respect to Executive Officers of the Company is included as a supplemental item at the end of Part I of this report.

Code of Ethics

Roper has a code of ethics for directors, officers (including the Company's principal executive officer, principal financial officer and principal accounting officer) and employees. The Code of Ethics is available on the Company's website at https://www.ropertech.com/code-of-ethics. The Company posts any amendments to or waivers of its Code of Ethics (to the extent applicable to the Company's directors or executive officers) at the same location on the Company's website. In addition, copies of the Code of Ethics may be obtained in print without charge upon written request by any stockholder to the Company's Corporate Secretary at 6901 Professional Parkway, Suite 200, Sarasota, Florida 34240.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this *Item 11 - Executive Compensation* is contained in the 2023 Proxy Statement under the captions "Compensation Discussion and Analysis," "Executive Compensation," "Director Compensation," "Compensation Committee Report," and "Compensation Committee Interlocks and Insider Participation."

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

(All share amounts are in millions)

Other than as set forth below, the information required by this *Item 12 - Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters* and not otherwise set forth below is contained in the 2023 Proxy Statement under the caption "Beneficial Ownership."

Securities Authorized for Issuance under Equity Compensation Plans

The following table provides information as of December 31, 2022 regarding compensation plans (including individual compensation arrangements) under which our equity securities are authorized for issuance.

Plan Category	(a) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	(b) Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	(c) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a))
Equity Compensation Plans Approved by Shareholders [1]			
Stock options	2.985	$ 312.34	
Restricted stock awards [2]	0.445	—	
Subtotal	3.430		8.387
Equity Compensation Plans Not Approved by Shareholders	—	—	—
Total	3.430	$ —	8.387

(1) Consists of the Amended and Restated 2006 Incentive Plan, the 2016 Incentive Plan and the 2021 Incentive Plan. No additional awards may be granted under the 2006 Incentive Plan or the 2016 Incentive Plan.

(2) The weighted-average exercise price is not applicable to restricted stock awards.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this *Item 13 - Certain Relationships and Related Transactions, and Director Independence* is contained in the 2023 Proxy Statement under the captions "Director Independence" and "Review and Approval of Related Person Transactions."

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this *Item 14 - Principal Accounting Fees and Services* is contained in the 2023 Proxy Statement under the captions "Proposal 4 - Ratification of the Appointment of PricewaterhouseCoopers LLP as our Independent Registered Public Accounting Firm for the Year Ending December 31, 2023," and "Independent Public Accountants Fees."

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as a part of this Annual Report.

(1) Consolidated Financial Statements: The following Consolidated Financial Statements are included in Part II, Item 8 of this report.

Consolidated Balance Sheets as of December 31, 2022 and 2021

Consolidated Statements of Earnings for the Years ended December 31, 2022, 2021 and 2020

Consolidated Statements of Comprehensive Income for the Years ended December 31, 2022, 2021 and 2020

Consolidated Statements of Stockholders' Equity for the Years ended December 31, 2022, 2021 and 2020

Consolidated Statements of Cash Flows for the Years ended December 31, 2022, 2021 and 2020

Notes to Consolidated Financial Statements

(b) Exhibits

Exhibit No.	Description of Exhibit
(a)2.1	Membership Interests Purchase Agreement by and Between TransCore Holdings, Inc., as Seller, and ST Engineering Urban Solutions USA Inc, as Buyer, and, solely for the purposes of certain provisions, Roper Technologies, Inc., as Seller Parent, and Singapore Technologies Engineering LTD, as Parent.*
(b)2.2	Equity Purchase Agreement by and among RIPIC Holdco Inc., Roper International Holding, Inc., RIPIC Equity LLC CD&R Tree Delaware Holdings, L.P. AND, solely for purposes of section 6.25, Roper Technologies, Inc. dated as of May 29, 2022.*
(c)2.3	Equity Purchase and Merger Agreement by and among the Company, Roper T2 LLC, Project Franklin Merger Sub LLC, Frontline Technologies Parent LLC, Roper Operations Company II LLC, the Blocker Sellers and the Representative, dated as of August 30, 2022.*
(d)3.1	Restated Certificate of Incorporation as amended through April 24, 2015.
(e)3.2	Amended and Restated By-Laws.
(f)4.1	Indenture between Registrant and Wells Fargo Bank, dated as of August 4, 2008.
(g)4.2	Indenture between Registrant and Wells Fargo Bank, dated as of November 26, 2018.
(h)4.3	Form of Note.
(i)4.4	Form of 3.650% Senior Notes due 2023.
(i)4.5	Form of 4.200% Senior Notes due 2028.
(j)4.6	Form of 3.850% Senior Notes due 2025.
(k)4.7	Form of 3.800% Senior Notes due 2026.
(l)4.8	Form of 2.350% Senior Notes due 2024.
(l)4.9	Form of 2.950% Senior Notes due 2029.
(m)4.10	Form of 2.000% Senior Notes due 2030.
(n)4.11	Form of 1.000% Senior Notes due 2025.
(n)4.12	Form of 1.400% Senior Notes due 2027.
(n)4.13	Form of 1.750% Senior Notes due 2031.
4.14	Description of Registrant’s Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934, filed herewith.
(o)10.1	Employee Stock Purchase Plan, as amended and restated. †
(p)10.2	First Amendment to Roper Technologies, Inc. Employee Stock Purchase Plan (As Amended and Restated effective July 1, 2020).†
10.3	Non-Qualified Retirement Plan, as amended, filed herewith. †
(q)10.4	Credit Agreement dated as of July 21, 2022, among Roper, the foreign subsidiary borrowers from time to time party thereto, the financial institutions party thereto, JPMorgan Chase Bank, N.A., as administrative agent, Bank of America, N.A. and Wells Fargo Bank, N.A., as syndication agents, and Mizuho Bank, Ltd., MUFG Bank, Ltd., PNC Bank, National Association, TD Bank, N.A., Truist Bank and U.S Bank, National Association, as documentation agents.
(r)10.5	Amended and Restated 2006 Incentive Plan. †
(s)10.6	Form of Restricted Stock Agreement for Employees under the 2006 Plan. †
(s)10.7	Form of Non-Statutory Stock Option Agreement under the 2006 Plan. †
(t)10.8	Offer letter to John K. Stipancich. †
(u)10.9	Form of director and officer indemnification agreement. †
(v)10.10	2016 Incentive Plan. †
(w)10.11	Amendment No. 1 to the 2016 Incentive Plan.†
(x)10.12	Form of Cash Settled Restricted Stock Unit Award Agreement for Non-US Employees, under the 2016 Incentive Plan. †
(y)10.13	Form of Non-Statutory Stock Option Agreement, under the 2016 Incentive Plan.†
(z)10.14	Form of Restricted Stock Award Agreement, under the 2016 Incentive Plan.†
(aa)10.15	Form of Performance Based Restricted Stock Award Agreement, under the 2016 Incentive Plan.†
(bb)10.16	Offer Letter to Neil Hunn. †
(cc)10.17	Long-Term Incentive Opportunity Agreement for Neil Hunn. †
(dd)10.18	Retirement Agreement and General Release, dated February 1, 2019, by and between the Company and Paul Soni. †
(ee)10.19	2021 Incentive Plan. †
(ff)10.20	Form of Performance Based Restricted Stock Award Agreement, under the 2021 Incentive Plan.†
(ff)10.21	Form of Non-Statutory Stock Option Agreement, under the 2021 Incentive Plan.†
(ff)10.22	Form of Restricted Stock Award Agreement, under the 2021 Incentive Plan.†
(gg)10.23	Roper Technologies, Inc. Director Compensation Plan. †

(hh)10.24	Form of Non-Employee Director Restricted Stock Unit Award Agreement under the 2021 Incentive Plan (included in Exhibit 10.23).
(ii)10.25	Form of Non-Employee Director Restricted Stock Award Agreement under the 2021 Incentive Plan (included in Exhibit 10.23).
(jj)10.26	Separation Agreement and Full Release dated December 13, 2022 by and between Roper Technologies, Inc. and Robert Crisci. †
(kk)10.27	Service Provider Agreement dated December 13, 2022 by and between Roper Technologies, Inc. and Robert Crisci. †
21.1	List of Subsidiaries, filed herewith.
23.1	Consent of Independent Registered Public Accountants, filed herewith.
31.1	Rule 13a-14(a)/15d-14(a) Certification of Chief Executive Officer, filed herewith.
31.2	Rule 13a-14(a)/15d-14(a) Certification of Chief Financial Officer, filed herewith.
32.1	Section 1350 Certification of Chief Executive and Chief Financial Officers, filed herewith.
101.INS	XBRL Instance Document, furnished herewith.
101.SCH	XBRL Taxonomy Extension Schema Document, furnished herewith.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document, furnished herewith.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document, furnished herewith.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document, furnished herewith.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document, furnished herewith.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).
†	Management contract or compensatory plan or arrangement.
*	The related exhibits and schedules are not being filed herewith. The Company agrees to furnish supplementally a copy of any such exhibits and schedules to the Securities and Exchange Commission upon request.
a)	Incorporated herein by reference to Exhibit 2.1 to the Company's Quarterly Report on Form 10-Q filed on November 4, 2021 (file no. 1-12273).
b)	Incorporated herein by reference to Exhibit 2.1 to the Company's Quarterly Report on Form 10-Q filed on August 3, 2022 (file no. 1-12273).
c)	Incorporated herein by reference to Exhibit 2.1 to the Roper Technologies, Inc. Current Report on Form 8-K filed August 30, 2022 (file no. 1-12273).
d)	Incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on April 24, 2015 (file no. 1-12273).
e)	Incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed June 14, 2021 (file no. 1-12273).
f)	Incorporated herein by reference to Exhibit 4.2 to the Company's Quarterly Report on Form 10-Q filed on November 7, 2008 (file no. 1-12273).
g)	Incorporated herein by reference to Exhibit 4.1 to the Registration Statement on Form S-3/ASR filed November 26, 2018 (file no. 333-228532).
h)	Incorporated herein by reference to Exhibit 4.2 to the Registration Statement on Form S-3/ASR filed November 25, 2015 (file no. 333-208200).
i)	Incorporated herein by reference to Exhibit 4.1 to the Roper Technologies, Inc. Current Report on Form 8-K filed August 28, 2018 (file no. 1-12273).
j)	Incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed December 7, 2015 (file no. 1-12273).
k)	Incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed December 19, 2016 (file no. 1-12273).
l)	Incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed August 26, 2019 (file no. 1-12273).
m)	Incorporated herein by reference to Exhibit 4.1 to the Roper Technologies, Inc. Current Report on Form 8-K filed June 22, 2020 (file no. 1-12273).
n)	Incorporated herein by reference to Exhibit 4.1 to the Roper Technologies, Inc. Current Report on Form 8-K filed September 1, 2020 (file no. 1-12273).
o)	Incorporated herein by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed August 5, 2020. (file no. 1-12273).
p)	Incorporated herein by reference to Exhibit 10.2 to the Roper Technologies, Inc. Quarterly Report on Form 10-Q filed August 3, 2022 (file no. 1-12273).
q)	Incorporated herein by reference to Exhibit 10.1 to the Roper Technologies, Inc. Current Report on Form 8-K filed July 22, 2022 (file no. 1-12273).
r)	Incorporated herein by reference to Appendix A to the Company's Definitive Proxy Statement on Schedule 14A filed April 30, 2012 (file no. 1-12273).
s)	Incorporated herein by reference to Exhibits 10.3 and 10.5 to the Company's Current Report on Form 8-K filed December 6, 2006 (file no. 1-12273).
t)	Incorporated herein by reference to Exhibit 10.17 to the Company's Annual Report on Form 10-K filed on February 27, 2017 (file no. 1-12273).
u)	Incorporated herein by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed November 5, 2018 (file no. 1-12273).
v)	Incorporated by reference to Appendix B to the Company's Definitive Proxy Statement on Schedule 14A filed April 26, 2016 (file no. 1-12273).
w)	Incorporated herein by reference to Exhibit 10.20 to the Company's Annual Report on Form 10-K filed on February 27, 2017 (file no. 1-12273).
x)	Incorporated herein by reference to Exhibit 10.21 to the Company's Annual Report on Form 10-K filed on February 27, 2017 (file no. 1-12273).
y)	Incorporated herein by reference to Exhibit 10.16 to the Company's Annual Report on Form 10-K filed on February 25, 2019 (file no. 1-12273).
z)	Incorporated herein by reference to Exhibit 10.17 to the Company's Annual Report on Form 10-K filed on February 25, 2019 (file no. 1-12273).
aa)	Incorporated herein by reference to Exhibit 10.18 to the Company's Annual Report on Form 10-K filed on February 25, 2019 (file no. 1-12273).
bb)	Incorporated herein by reference to Exhibit 10.22 to the Company's Annual Report on Form 10-K filed on February 23, 2018 (file no. 1-12273).
cc)	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed November 25, 2019 (file no. 1-12273).
dd)	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 1, 2019 (file no. 1-12273).
ee)	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed June 14, 2021 (file no. 1-12273).
ff)	Incorporated herein by reference to Exhibit 10.2, 10.3 and 10.4 to the Company's Current Report on Form 8-K filed June 14, 2021 (file no. 1-12273).
gg)	Incorporated herein by reference to Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q filed on August 5, 2021 (file no. 1-12273).

	12273).
hh)	Incorporated herein by reference to Exhibit 10.6 to the Company’s Quarterly Report on Form 10-Q filed on August 5, 2021 (file no. 1-12273).
ii)	Incorporated herein by reference to Exhibit 10.7 to the Company’s Quarterly Report on Form 10-Q filed on August 5, 2021 (file no. 1-12273).
jj)	Incorporated herein by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K/A filed December 15, 2022 (file no. 1-12273).
kk)	Incorporated herein by reference to Exhibit 10.2 to the Company’s Current Report on Form 8-K/A filed December 15, 2022 (file no. 1-12273).

ITEM 16. FORM 10-K SUMMARY

None

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, Roper has duly caused this Report to be signed on its behalf by the undersigned, therewith duly authorized**.**

ROPER TECHNOLOGIES, INC.
(Registrant)

By:	/s/ L. Neil Hunn L. Neil Hunn, President and Chief Executive Officer	February 27, 2023

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of Roper and in the capacities and on the dates indicated.

/s/ L. NEIL HUNN L. Neil Hunn	President and Chief Executive Officer (Principal Executive Officer)	February 27, 2023
/s/ JASON P. CONLEY Jason P. Conley	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 27, 2023
/s/ BRANDON CROSS Brandon Cross	Vice President and Corporate Controller (Principal Accounting Officer)	February 27, 2023
/s/ AMY WOODS BRINKLEY Amy Woods Brinkley	Chair of the Board of Directors	February 27, 2023
/s/ SHELLYE L. ARCHAMBEAU Shellye L. Archambeau	Director	February 27, 2023
/s/ IRENE M. ESTEVES Irene M. Esteves	Director	February 27, 2023
/s/ ROBERT D. JOHNSON Robert D. Johnson	Director	February 27, 2023
/s/ THOMAS P. JOYCE, JR. Thomas P. Joyce, Jr.	Director	February 27, 2023
/s/ LAURA G. THATCHER Laura G. Thatcher	Director	February 27, 2023
/s/ RICHARD F. WALLMAN Richard F. Wallman	Director	February 27, 2023
/s/ CHRISTOPHER WRIGHT Christopher Wright	Director	February 27, 2023

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

Roper Technologies, Inc. (the "company," "we," or "our") has one class of securities, our common stock, registered under Section 12 of the Securities Exchange Act of 1934, as amended.

DESCRIPTION OF COMMON STOCK

The description of our common stock is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to our restated certificate of incorporation, as amended ("Certificate of Incorporation") and amended and restated by-laws ("By-laws"), each of which are incorporated by reference as an exhibit to the Annual Report on Form 10-K of which this exhibit is a part. We encourage you to read our Articles of Incorporation, our By-laws and the applicable provisions of the Delaware General Corporation Law ("DGCL") for additional information.

Authorized Capital Stock

Our authorized capital stock consists of 350,000,000 shares of common stock, par value $0.01 per share, and 1,000,000 shares of preferred stock, par value $0.01 per share.

Common Stock

Voting. Each holder of shares of our common stock is entitled to one vote on each matter properly submitted to a vote of our stockholders. Holders of shares of our common stock do not have cumulative voting rights.

Dividend Rights. Holders of shares of our common stock may receive dividends when declared by our board of directors out of our funds that we can legally use to pay dividends. We may pay dividends in cash, stock or other property. In certain cases, holders of common stock may not receive dividends until we have satisfied our obligations to holders of any outstanding preferred stock.

Liquidation. In the event of a liquidation, dissolution or winding up of our affairs, whether voluntary or involuntary, after payment of our liabilities and obligations to creditors, our remaining assets will be distributed ratably among the holders of shares of our common stock on a per share basis. If we have any preferred stock outstanding at such time, holders of shares of our preferred stock may be entitled to distribution and/or liquidation preferences. In either such case, we will need to pay the applicable distribution to the holders of our preferred stock before distributions are paid to the holders of our common stock.

Rights and Preferences. Our common stock has no preemptive, redemption, conversion, sinking fund, or subscription rights. The rights, powers, preferences and privileges of holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Listing. Our common stock is listed on the New York Stock Exchange (NYSE) under the symbol "ROP."

Transfer agent and registrar. The transfer agent and registrar for the common stock is Computershare Trust Company, N.A.

Fully Paid. All of our outstanding shares of common stock are fully paid and nonassessable, which means that the full purchase price for the outstanding shares of our common stock has been paid and the holders of such shares will not be assessed any additional monies for such shares.

Certain Anti-Takeover Effects of Delaware Law

General. Certain provisions of our Certificate of Incorporation, By-laws and applicable law may make it less likely that our management would be changed or someone would acquire our company without the consent of our board of directors. These provisions may delay, deter or prevent tender offers or takeover attempts that stockholders may believe are in their best interests, including tender offers or takeover attempts that might allow stockholders to receive a premium over the market price of their common stock.

Preferred Stock. Under our Certificate of Incorporation, our board of directors can at any time, and without stockholder approval, issue one or more new series of preferred stock. In some cases, the issuance of preferred stock without stockholder approval could discourage or make more difficult attempts to take control of our company through a merger, tender offer, proxy contest or otherwise. Preferred stock with special voting rights or other features issued to persons favoring our management could stop a takeover by preventing the person trying to take control of our company from acquiring enough shares necessary to take control.

Proposal and Nominating Procedures; Proxy Access. Stockholders can propose that business be considered at an annual meeting of stockholders, and, in addition to our board of directors, can nominate candidates for our board of directors. However, a stockholder must follow the advance notice procedures described in Section 1.08 of our By-laws. In general, a stockholder must submit a written notice of the proposal and the stockholder's interest in the proposal, or of the nomination, to our corporate secretary at least 90 days and at most 120 days before the first anniversary date of the annual meeting for the preceding year. In addition to the proposal and director nomination process described above, our By-laws permit a shareholder, or a group of up to 20 shareholders, that has owned at least 3% of our outstanding common stock continuously for at least three years to nominate and include in our proxy materials up to the greater of two directors or 20% of the number of our directors then in office, provided that the shareholders and the nominees satisfy the requirements specified in the By-laws.

Removal of Directors; Vacancies. Any director may be removed from office at any time, with or without cause, only by the affirmative vote of the holders of at least a majority of the voting power of all of the shares of the corporation entitled to vote for the election of directors. Our By-laws further provide that only our board of directors may fill vacant directorships, except in limited circumstances.

Elimination of Stockholder Action through Written Consent. Our Certificate of Incorporation provides that stockholder action can be taken only at an annual or special meeting of stockholders and cannot be taken by written consent in lieu of a meeting.

Elimination of the Ability to Call Special Meetings. Our By-laws provide that special meetings of our stockholders can only be called by order of the board of directors or the executive committee. Stockholders are not authorized to call a special meeting or to require our board of directors to call a special meeting.

Amendment of By-laws. Under our Certificate of Incorporation and By-laws, our board of directors can adopt, amend or repeal the By-laws by a majority vote of the directors then in office. Our stockholders also have the power to amend or repeal our By-laws at any meeting at which a quorum is present by a vote of two-thirds of the number of shares of stock entitled to vote present in person or by proxy at such meeting.

Business Combination Statute. We are subject to Section 203 of the DGCL. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in various "business combination" transactions with any interested stockholder for a period of three years following the date of the transactions in which the person became an interested stockholder, unless:

- the transaction is approved by the board of directors prior to the date the interested stockholder obtained such status;

- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced; or

- on or subsequent to such date the business combination is approved by the board and authorized at an annual or special meeting of stockholders by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

A “business combination” is defined to include mergers, asset sales, and other transactions resulting in financial benefit to a stockholder. In general, an “interested stockholder” is a person who, together with affiliates and associates, owns (or within three years, did own) 15% or more of a corporation’s voting stock. The statute could prohibit or delay mergers or other takeover or change in control attempts with respect to our company and, accordingly, may discourage attempts to acquire us even though such a transaction may offer our stockholders the opportunity to sell their stock at a price above the prevailing market price.

Forum Selection

Pursuant to our amended and restated by-laws, a state court located within the State of Delaware (or, if the Court of Chancery does not have jurisdiction, the federal district court for the District of Delaware) is the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Company, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director or officer or other employee of the Company to the Company or the Company’s stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law or our restated certificate of incorporation or amended and restated by-laws, or (iv) any action asserting a claim governed by the internal affairs doctrine. Additionally, unless the Company consents in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be, to the fullest extent permitted by law, the sole and exclusive forum for any action asserting a claim arising under the Securities Act of 1933, as amended (the “Securities Act”).

ROPER INDUSTRIES, INC.
NON-QUALIFIED RETIREMENT PLAN

Amended and Restated Effective as of January 1, 2013

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ARTICLE I
ESTABLISHMENT AND PURPOSE

Roper Industries, Inc. (the "**Company**") originally established the Roper Industries, Inc. Non-Qualified Retirement Plan (the "**Plan**") with an effective date of January 1, 1995. The Company subsequently amended and restated the Plan effective as of March 1, 2002 and again effective as of January 1, 2009. The Company again hereby amends and restates the Plan, effective as January 1, 2013. This amended and restated Plan supersedes all previous versions of the Plan and shall apply to all individuals eligible to participate in this Plan and to those individuals previously eligible to participate in the Plan who continue to have a Plan account balance.

The purpose of the Plan is to attract and retain key employees and non-employee directors by providing each eligible employee with an opportunity to make up employee and employer contributions that were lost under an applicable savings plan, as defined below, because of statutory, regulatory and plan limits. The Plan is intended to be and shall be interpreted and administered, for purposes of Title I of ERISA, as an unfunded defined contribution plan maintained for the purpose of providing deferred compensation to a select group of management or highly compensated Employees (commonly known as a "top-hat plan" under ERISA). As such, the Plan is not intended to meet the qualification requirements of Code Section 401(a). However, the Company intends for the Plan to meet the requirements of Code Section 409A. Accordingly, the Plan shall be operated and interpreted consistently with the requirements of Code Section 409A.

As a top-hat plan, the Plan constitutes an unsecured promise by a Participating Employer to pay benefits in the future. Participants in the Plan shall have the status of general unsecured creditors of the Company or the Adopting Employer, as applicable. Each Participating Employer shall be solely responsible for payment of the benefits of its employees and their beneficiaries. Any amounts set aside to defray the liabilities assumed by the Company or an Adopting Employer will remain the general assets of the Company or the Adopting Employer and shall remain subject to the claims of the Company's or the Adopting Employer's creditors until such amounts are distributed to the Participants.

ARTICLE II
DEFINITIONS

2.1 **Account** means a bookkeeping account maintained by the Company to record the payment obligation of a Participating Employer to a Participant as determined under the terms of the Plan. The Company may maintain an Account to record the total obligation to a Participant and component Accounts to reflect amounts payable at different times and in different forms. Reference to an Account means any such Account established by the Company, as the context requires. Notwithstanding anything herein to the contrary, all Accounts are intended to constitute unfunded obligations within the meaning of ERISA Sections 201(2), 301(a)(3) and 401(a)(1).

2.2 **Account Balance** means, with respect to any Account, the total of all contributions, income, expenses, gains and losses credited to the Plan on behalf of such Participant.

2.3 **Adopting Employer** means an Affiliate who, with the consent of the Company, has adopted the Plan for the benefit of its eligible employees.

2.4 **Affiliate** means a corporation, trade or business that, together with the Company, is treated as a single employer under Code Section 414(b) or (c).

2.5 **Applicable Savings Plan** means the tax-qualified defined contribution retirement plan with a cash or deferred arrangement feature (as defined under Code Section 401(k)) sponsored by the Participating Employer in which the Participant is eligible to participate.

2.6 **Beneficiary** means a natural person, estate, or trust designated by a Participant to receive payments to which a Beneficiary is entitled in accordance with provisions of the Plan. The Participant's spouse, if living, otherwise the Participant's estate, shall be the Beneficiary if: (a) the Participant has failed to properly designate a Beneficiary, or (b) all designated Beneficiaries have predeceased the Participant. A former spouse shall have no interest under the Plan, as Beneficiary or otherwise, unless the Participant designates such person as a Beneficiary after dissolution of the marriage, except to the extent provided under the terms of a domestic relations order as described in Code Section 414(p)(1)(B).

2.7 **Business Day** means each day on which the New York Stock Exchange is open for business.

2.8 **Change in Control** means, with respect to a Participating Employer that is organized as a corporation, the occurrence of any of the following (and shall be deemed to have occurred as of the date upon which any one of the following occurs): (a) a change in the ownership of the Participating Employer, (b) a change in the effective control of the Participating Employer, or (c) a change in the ownership of a substantial portion of the assets of the Participating Employer.

For purposes of this Section, a change in the ownership of the Participating Employer occurs on the date on which any one person, or more than one person acting as a group, acquires ownership of stock of the Participating Employer that, together with stock held by such person or group constitutes more than 50% of the total fair market value or total voting power of the stock of the Participating Employer. A change in the effective control of the Participating Employer occurs on the date on which either (a) a person, or more than one person acting as a group, acquires ownership of stock of the Participating Employer possessing 30% or more of the total voting power of the stock of the Participating Employer, taking into account all such stock acquired during the 12-month period ending on the date of the most recent acquisition, or (b) a majority of the members of the Participating Employer's Board of Directors is replaced during any 12-month period by directors whose appointment or election is not endorsed by a majority of the members of such Board of Directors prior to the date of the appointment or election, but only if no other corporation is a majority shareholder of the Participating Employer. A change in the ownership of a substantial portion of assets occurs on the date on which any one person, or more than one person acting as a group, other than a person or group of persons that is related to the Participating Employer, acquires assets from the Participating Employer that have a total gross fair market value equal to or more than 40% of the total gross fair market value of all of the assets of the Participating Employer immediately prior to such acquisition or acquisitions, taking into account all such assets acquired during the 12-month period ending on the date of the most recent acquisition. An event constitutes a Change in Control with respect to a Participant only if the Participant performs services for the Participating Employer that has experienced the Change in Control, or the Participant's relationship to the affected Participating Employer otherwise satisfies the requirements of Treasury Regulation Section 1.409A-3(i)(5)(ii).

The determination as to the occurrence of a Change in Control shall be based on objective facts and in accordance with the requirements of Code Section 409A.

2.9 **Claimant** means a Participant or Beneficiary filing a claim under Article XII of this Plan.

2.10 **Code** means the Internal Revenue Code of 1986, as amended from time to time.

2.11 **Code Section 409A** means section 409A of the Code, and regulations and other guidance issued by the Treasury Department and Internal Revenue Service thereunder. References to such Section or guidance in this Plan include references to such provisions as they may be modified.

2.12 **Committee** means the committee appointed by the Board of Directors of the Company (or the appropriate committee of such board) to administer the Plan. If no designation is made, the Chief Executive Officer of the Company or his delegate shall have and exercise the powers of the Committee.

2.13 **Company** means Roper Industries, Inc.

2.14 **Company Contribution** means a credit by a Participating Employer to a Participant's Account(s) in accordance with the provisions of Article V of the Plan. Company Contributions are credited at the sole discretion of the Participating Employer and the fact that a Company Contribution is credited in one year shall not obligate the Participating Employer to continue to make such Company Contribution in subsequent years. Unless the context clearly indicates otherwise, a reference to Company Contribution shall include Earnings attributable to such contribution.

2.15 **Compensation** means base salary, bonus, commission, and such other cash (if any) approved by the Committee as Compensation that may be deferred under this Plan. Compensation shall not include any compensation that has been previously deferred under this Plan or any other arrangement subject to Code Section 409A. With respect to any Non-Employee Director and notwithstanding the foregoing, Compensation shall mean the Total Annual Retainer, Meeting Fees, as defined in the Roper Industries, Inc. Director Compensation Plan.

2.16 **Compensation Deferral Agreement** means an agreement between a Participant and a Participating Employer that specifies (a) the amount of each component of Compensation that the Participant has elected to defer to the Plan in accordance with the provisions of Article IV, and (b) the Payment Schedule applicable to one or more Accounts. The Committee may permit different deferral amounts for each component of Compensation and may establish a minimum or maximum deferral amount for each such component. Unless otherwise specified by the Committee in the Compensation Deferral Agreement, Participants may defer up to 100% of their base salary and up to 100% of other types of Compensation for a Plan Year. A Compensation Deferral Agreement may also specify the investment allocation described in Section 8.4.

2.17 **Death Benefit** means the benefit payable under the Plan to a Participant's Beneficiary(ies) upon the Participant's death as provided in Section 6.1 of the Plan.

2.18 **Deferral** means a credit to a Participant's Account(s) that records that portion of the Participant's Compensation that the Participant has elected to defer to the Plan in accordance with the provisions of Article IV. Unless the context of the Plan clearly indicates otherwise, a reference to Deferrals includes Earnings attributable to such Deferrals.

Deferrals shall be calculated with respect to the gross cash Compensation payable to the Participant prior to any deductions or withholdings, but shall be reduced by the Committee as necessary so that it does not exceed 100% of the cash Compensation of the Participant remaining after deduction of all required income and employment taxes, other employee benefit deductions, and other deductions required by law. Changes to payroll withholdings that affect the amount of Compensation being deferred to the Plan shall be allowed only to the extent permissible under Code Section 409A.

2.19 **Disability Benefit** means the benefit payable under the Plan to a Participant in the event such Participant is determined to be Disabled. For the avoidance of doubt, Non-Employee Directors are not eligible for Disability Benefits under the Plan.

2.20 **Disabled** means that a Participant is, by reason of any medically-determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than twelve months, (a) unable to engage in any substantial gainful activity, or (b) receiving income replacement benefits for a period of not less than three months under an accident and health plan covering employees of the Participant's employer. The Committee shall determine whether a Participant is Disabled in accordance with Code Section 409A; provided, however, that a Participant shall be deemed to be Disabled if determined to be totally disabled by the Social Security Administration or the Railroad Retirement Board.

2.21 **Earnings** means an adjustment to the value of an Account in accordance with Article VIII.

2.22 **Effective Date** means January 1, 2013, which is the date of this amended and restated Plan document. The Plan was originally effective as of January 1, 1995 and subsequently amended restated as of March 1, 2002 and again as of January 1, 2009.

2.23 **Eligible Employee** means an Employee of a Participating Employer that the Committee determines is eligible to participate in the Plan. Notwithstanding the foregoing or anything to the contrary herein, only Employees who are members of a select group of management or highly compensated employees, within the meaning of ERISA Sections 201(2), 301(a)(3), and 401(a)(1), may be designated as eligible to participate in this Plan. For purposes of this Section, the Committee shall have sole and absolute discretion to determine whether an Employee is an Eligible Employee and all such determinations shall be final and binding on all individuals.

2.24 **Employee** means a common-law employee of an Employer.

2.25 **Employer** means, with respect to Employees it employs, the Company and each Affiliate.

2.26 **ERISA** means the Employee Retirement Income Security Act of 1974, as amended from time to time.

2.27 **Fiscal Year Compensation** means Compensation earned during one or more consecutive fiscal years of a Participating Employer, all of which is paid after the last day of such fiscal year or years.

2.28 **Non-Employee Director** means a director of the Company who is not an employee of the Company or any of its Affiliates.

2.29 **Participant** means an Eligible Employee who has received notification of his or her eligibility to defer Compensation under the Plan under Section 3.1, a Non Employee Director and any other person with an Account Balance greater than zero, regardless of whether such individual continues to be an Eligible Employee or a Non Employee Director. A Participant's continued participation in the Plan shall be governed by Section 3.2 of the Plan.

2.30 **Participating Employer** means the Company and each Adopting Employer.

2.31 **Payment Schedule** means the date as of which payment of an Account under the Plan will commence and the form in which payment of such Account will be made.

2.32 **Performance-Based Compensation** means Compensation where the amount of, or entitlement to, the Compensation is contingent on the satisfaction of pre-established organizational or individual performance criteria relating to a performance period of at least twelve consecutive months. Organizational or individual performance criteria are considered pre-established if established in writing by not later than ninety (90) days after the commencement of the period of service to which the criteria relate, provided that the outcome is substantially uncertain at the time the criteria are established. The determination of whether Compensation qualifies as Performance-Based Compensation will be made in accordance with Treas. Reg. Section 1.409A-1(e) and subsequent guidance.

2.33 **Plan** means the "Roper Industries, Inc. Non-Qualified Retirement Plan" as amended and restated herein and as may be further amended from time to time hereafter. However, to the extent permitted or required under Code Section 409A, the term Plan may in the appropriate context also mean a portion of the Plan that is treated as a single plan under Treas. Reg. Section 1.409A-1(c), or the Plan or portion of the Plan and any other nonqualified Non-Qualified Retirement Plan or portion thereof that is treated as a single plan under such section.

2.34 **Plan Year** means the twelve (12) consecutive month period that begins on each January 1 and ends on each December 31.

2.35 **Retirement** means for Participants other than Non-Employee Directors, Retirement means Separation from Service after attainment of any age where the combination of the Participant's age and number of Years of Service equals or exceeds 65. For Participants who are Non-Employee Directors, Retirement means Separation from Service for any reason.

2.36 **Retirement Benefit** means the benefit payable to a Participant under the Plan following the Retirement of the Participant.

2.37 **Retirement / Termination Account** means an Account established by the Committee to record the amounts payable to a Participant that have not been allocated to a Specified Date Account. Unless the Participant has established a Specified Date Account, all Deferrals and Company Contributions shall be allocated to a Retirement / Termination Account on behalf of the Participant.

2.38 **Separation from Service** means a termination of employment with an Employer within the meaning provided in Treasury Regulation section 1.409A-1(h), provided, that the Participant will be deemed to have a Separation from Service if services provided to Employer is at a level that is 20% or less of the average level of service performed by the Participant in the 36-month period, or lesser period if applicable under Treasury Regulation section 1.409A-1(h), immediately preceding the Separation from Service.

Notwithstanding the foregoing, an Employee who is absent from work due to military leave, sick leave, or other bona fide leave of absence shall incur a Separation from Service on the first date immediately following the later of (a) the six-month anniversary of the commencement of the leave, or (b) the expiration of the Employee's right, if any, to reemployment under statute or contract. Notwithstanding the preceding, however, an Employee who is absent from work due to a physical or mental impairment that is expected to result in death or last for a continuous period of at least six months and that prevents the Employee from performing the duties of his position of employment or a similar position shall incur a Separation from Service on the first date immediately following the 29-month anniversary of the commencement of the leave.

For purposes of determining whether a Separation from Service has occurred, the Employer means the Employer as defined under this Article, except that for purposes of determining whether another organization is an Affiliate of the Company, common ownership of at least 50% shall be determinative.

A Non-Employee Director is deemed to have incurred a Separation from Service upon the ceasing of all services as a Director constituting a "separation from service" (as that term is defined at Treas. Reg. § 1.409A-1(h)) from the Company and any of its Affiliates.

The Committee specifically reserves the right to determine whether a sale or other disposition of substantial assets to an unrelated party constitutes a Separation from Service with respect to a Participant providing services to the seller immediately prior to the transaction and providing services to the buyer after the transaction. Such determination shall be made in accordance with the requirements of Code Section 409A.

2.39 **Specified Date Account** means an Account established pursuant to Section 4.3 that will be paid (or that will commence to be paid) at a future date as specified in the Participant's Compensation Deferral Agreement. Unless otherwise determined by the Committee, a Participant may maintain no more than five Specified Date Accounts. A Specified Date Account may be identified in enrollment materials as an in-service account.

2.40 **Specified Date Benefit** means the benefit payable to a Participant under the Plan in accordance with Section 6.1(c).

2.41 **Specified Employee** means the same as such term is defined under Code Section 409A,provided, however, that, as permitted in the final Section 409A regulations, the Company's Specified Employees and its application of the six-month delay rule of Code Section 409A(a)(2)(B)(i) shall be determined in accordance with rules adopted by the Board of Directors or a committee thereof, which shall be applied consistently with respect to all nonqualified deferred compensation arrangements of the Company, including this Plan.

2.42 **Substantial Risk of Forfeiture** shall have the meaning specified in Treas. Reg. Section 1.409A-1(d).

2.43 **Termination Benefit** means the benefit payable to a Participant under the Plan following the Participant's Separation from Service prior to Retirement. For the avoidance of doubt, Non-Employee Directors are not eligible for Termination Benefits under the Plan, because Retirement for Non-Employee Directors means Separation from Service for any reason.

2.44 **Unforeseeable Emergency** means a severe financial hardship to the Participant resulting from (a) an illness or accident of the Participant, the Participant's spouse, the Participant's dependent (as defined in Code section 152(a)), or a Beneficiary; (b) loss of the Participant's property due to casualty (including the need to rebuild a home following damage to a home not otherwise covered by insurance, for example, as a result of a natural disaster); or (c) other similar extraordinary and unforeseeable circumstances arising as a result of events beyond the control of the Participant. The types of events which may qualify as an Unforeseeable Emergency may be limited by the Committee.

2.45 **Valuation Date** means each Business Day.

2.46 **Year of Service** means each twelve (12) consecutive month period of continuous service with the Employer or each twelve (12) consecutive month period of continuous service as a NonEmployee Director of the Company.

ARTICLE III
ELIGIBILITY AND PARTICIPATION

3.1 Eligibility and Participation

(a) Eligible Employees. An Eligible Employee becomes a Participant upon the earlier to occur of (1) a credit of Company Contributions under Article V, or (2) notification of eligibility to participate.

(b) Non-Employee Directors. A Non-Employee Director becomes a Participant upon the earlier to occur of (1) a credit of Company Contributions under Article V, or (2) notification of eligibility to participate.

3.2 Duration

A Participant shall be eligible to defer Compensation and, where applicable, receive allocations of Company Contributions, subject to the terms of the Plan, for as long as such Participant remains an Eligible Employee or a Non-Employee Director. A Participant who is no longer an Eligible Employee or a Non-Employee Director may not defer Compensation under the Plan but may otherwise exercise all of the rights of a Participant under the Plan with respect to his or her Account(s). For as long as a Participant has an Account Balance, he or she shall remain a Participant and he or she may continue to make investment allocation elections as provided in Section 8.4. An individual shall cease being a Participant in the Plan when all benefits under the Plan to which he or she is entitled have been paid.

ARTICLE IV
DEFERRALS

4.1 Deferral Elections

(a) Deferral Agreement, Generally. A Participant may elect to defer Compensation by submitting a Compensation Deferral Agreement during the enrollment periods established by the Committee and in the manner specified by the Committee, but in any event, in accordance with Section 4.2. A Compensation Deferral Agreement that is not timely filed with respect to a service period or component of Compensation shall be considered void and shall have no effect with respect to such service period or Compensation. The Committee may modify any Compensation Deferral Agreement prior to the date the election becomes irrevocable under the rules of Section 4.2.

(b) Deferral Agreements, Amounts and Accounts. The Participant shall specify on his or her Compensation Deferral Agreement the amount of Deferrals and whether to allocate Deferrals and associated Company Contributions to a Retirement / Termination Account or to a Specified Date Account. If no designation is made or if a designation is invalid (for example, because it fails to defer Compensation for at least one year or, if longer, for the minimum deferral period specified by the Committee), Deferrals (or that portion of Deferrals allocated invalidly) shall be allocated to the Retirement / Termination Account. A Participant may also specify in his or her Compensation Deferral Agreement the Payment Schedule applicable to his or her Plan Accounts. If the Payment Schedule is not specified in a Compensation Deferral Agreement, the Payment Schedule shall be the Payment Schedule specified in Section 6.2.

4.2 Timing Requirements for Compensation Deferral Agreements

(a) First Year of Eligibility. In the case of the first year in which an Eligible Employee or a Non-Employee Director becomes eligible to participate in the Plan, he or she may submit a Compensation Deferral Agreement at the times set forth in Section 4.1(a). The determination of whether an Eligible Employee may file a Compensation Deferral Agreement under this subsection shall be determined in accordance with the rules of Code Section 409A, including the provisions of Treas. Reg. Section 1.409A-2(a)(7).

(b) Prior Year Election. Except as otherwise provided under this Section, Participants may defer Compensation by filing a Compensation Deferral Agreement no later than December 31 of the year prior to the year in which the Compensation to be deferred is earned. A Compensation Deferral Agreement described in this subsection shall become irrevocable with respect to such Compensation as of January 1 of the year in which such Compensation is earned.

(c) Performance-Based Compensation. Participants may file a Compensation Deferral Agreement with respect to Performance-Based Compensation no later than the date that is six months before the end of the performance period, provided that:

(1) the Participant performs services continuously from the later of the beginning of the performance period or the date the criteria are established through the date the Compensation Deferral Agreement is submitted; and

(2) the Compensation is not readily ascertainable as of the date the Compensation Deferral Agreement is filed.

A Compensation Deferral Agreement becomes irrevocable with respect to Performance-Based Compensation as of the day immediately following the latest date for filing such election. Any election to defer Performance-Based Compensation that is made in accordance with this subsection and that becomes payable as a result of the Participant's death or disability (as defined in Treas. Reg. Section 1.409A-1(e)) or upon a Change in Control (as defined in Treas. Reg. Section 1.409A-3(i)(5)) prior to the satisfaction of the performance criteria, will be void.

(d) Sales Commissions. Sales commissions (as defined in Treas. Reg. Section 1.409A-2(a)(12)(i)) are considered to be earned in the taxable year of the Participant in which the sale occurs. The Compensation Deferral Agreement must be filed before the last day of the year preceding the year in which the sales commissions are earned and becomes irrevocable after that date.

(e) Investment Commissions. Investment commissions (as defined in Treas. Reg. Section 1.409A-2(a)(12)(ii)) are considered to be earned in the 12-month period immediately preceding the date assets are valued for purposes of calculating the commission. Investment Commissions must be deferred under the timing rules set forth in this Section 4.2.

(f) Fiscal Year Compensation. A Participant may defer Fiscal Year Compensation by filing a Compensation Deferral Agreement prior to the first day of the fiscal year or years in which such Fiscal Year Compensation is earned. The Compensation Deferral Agreement described in this subsection becomes irrevocable on the first day of the fiscal year or years to which it applies.

(g) Short-Term Deferrals. Compensation that meets the definition of a "short-term deferral" described in Treas. Reg. Section 1.409A-1(b)(4) may be deferred in accordance with the rules of Article VII, applied as if the date the Substantial Risk of Forfeiture lapses is the date payments were originally scheduled to commence, provided, however, that the provisions of Section 7.3 shall not apply to payments attributable to a Change in Control (as defined in Treas. Reg. Section 1.409A-3(i)(5)).

(h) Certain Forfeitable Rights. With respect to a legally binding right to a payment in a subsequent year that is subject to a forfeiture condition requiring the Participant's continued services for a period of at least twelve months from the date the Participant obtains the legally binding right, an election to defer such Compensation may be made on or before the 30th day after the Participant obtains the legally binding right to the Compensation, provided that the election is made at least twelve months in advance of the earliest date at which the forfeiture condition could lapse. The Compensation Deferral Agreement described in this subsection becomes irrevocable after such 30th day. If the forfeiture condition applicable to the payment lapses before the end of the required service period as a result of the Participant's death or disability (as defined in Treas. Reg. Section 1.409A-3(i)(4)) or upon a Change in Control (as defined in Treas. Reg. Section

1.409A-3(i)(5)), the Compensation Deferral Agreement will be void unless it would be considered timely under another rule described in this Section.

(i) "Evergreen" Deferral Elections. The Committee, in its discretion, may provide in the Compensation Deferral Agreement that such Compensation Deferral Agreement will continue in effect for each subsequent year or performance period. Such "evergreen" Compensation Deferral Agreements will become effective with respect to an item of Compensation on the date such election becomes irrevocable under this Section 4.2. An evergreen Compensation Deferral Agreement may be terminated or modified prospectively with respect to Compensation for which such election remains revocable under this Section 4.2. A Participant whose Compensation Deferral Agreement is cancelled in accordance with Section 4.6 will be required to file a new Compensation Deferral Agreement under this Article IV in order to recommence Deferrals under the Plan.

4.3 Allocation of Deferrals and Company Contributions

A Compensation Deferral Agreement may allocate Deferrals and Company Contributions to one or more Specified Date Accounts and/or to the Retirement / Termination Account. Company Contributions that are made pursuant to Article V shall be allocated to Specified Date Accounts and/or to the Retirement / Termination Account in the same proportion as elected by the Participant with respect to base salary for the Plan Year during which the Company Contribution is made. The Committee may, in its discretion, establish a minimum deferral period for Specified Date Accounts (for example, the third Plan Year following the year Compensation subject to the Compensation Deferral Agreement is earned).

4.4 Deductions from Pay

The Committee has the authority to determine the payroll practices under which any component of Compensation subject to a Compensation Deferral Agreement will be deducted from a Participant's Compensation.

4.5 Vesting

Participant Deferrals shall be 100% vested at all times.

4.6 Cancellation of Deferrals

The Committee shall cancel a Participant's Deferrals (a) for the balance of the Plan Year in which an Unforeseeable Emergency payment is made, (b) if the Participant receives a hardship distribution under the Employer's qualified 401(k) plan, through the end of the Plan Year in which the six-month anniversary of the hardship distribution falls, and (c) during periods in which the Participant is unable to perform the duties of his or her position or any substantially similar position due to a mental or physical impairment that can be expected to result in death or last for a continuous period of at least six months.

ARTICLE V
COMPANY CONTRIBUTIONS

5.1 Nonqualified Matching Contributions

Each Participating Employer shall credit a Company Matching Contribution to the Account of a Participant in an amount equal to (a) minus (b), where (a) and (b) are as follows:

(a) the Participant's Compensation multiplied by the matching contribution rate and by similar contribution rates determined under the Applicable Savings Plan in which he or she is a participant; and

(b) the total matching contributions and similar contributions made by the Participating Employer to the Applicable Savings Plan on behalf of the Participant.

For purposes of this Plan, the matching contribution rate, as well as the similar contribution rates, referenced in subsection (a) of this Section means the maximum percentage of compensation that the Participating Employer may contribute as such a contribution under the Applicable Savings Plan.

5.2 Discretionary Company Contributions

The Participating Employer may, from time to time in its sole and absolute discretion, credit Company Contributions to any Participant in any amount determined by the Participating Employer. Such contributions will be credited to a Participant's Retirement / Termination Account.

5.3 Vesting

Company Contributions described in Section 5.1, and the Earnings thereon, shall be 100% vested. Company Contributions described in Section 5.2, above, (if any) and the Earnings thereon, shall vest in accordance with the vesting scheduled established by the Committee at the time that the Company Contribution is made. All Company Contributions shall become 100% vested upon the occurrence of the earliest of: (a) the death of the Participant while actively employed, (b) the Disability of the Participant while actively employed, (c) Retirement of the Participant, or (d) a Change in Control. The Participating Employer may, at any time, in its sole discretion, increase a Participant's vested interest in a Company Contribution. The portion of a Participant's Accounts that remains unvested upon his or her Separation from Service after the application of the terms of this Section shall be forfeited.

5.4 Non-Employee Directors Not Eligible

For the avoidance of doubt, Non-Employee Directors are not eligible for Company Contributions under the Plan.

5.5 Timing of Company Contributions

Notwithstanding anything herein to the contrary, each Participating Employer, in its sole discretion, may make any Company Contribution as of each payroll period or as of each other date as the Participating Employer may determine from time to time.

ARTICLE VI
BENEFITS

6.1 Benefits

(a) Retirement Benefit. A Participant shall be entitled to a Retirement Benefit upon his or her Retirement. The Retirement Benefit shall be equal to the vested portion of the Retirement / Termination Account, based on the value of that Account as of the end of the month in which his or her Retirement occurs. Subject to Section 6.4 hereof, the payment date for the Retirement Benefit will be the first day of the month following the month in which the Retirement occurs, provided, however, that with respect to a Participant who is a Specified Employee as of the date such Participant incurs a Separation from Service, the payment date will be the first day of the seventh month following the month in which such Separation from Service occurs. If the Retirement Benefit is to be paid in the form of installments, any subsequent installment payments to a Specified Employee will be paid on the anniversary of the date the first payment was made.

(b) Termination Benefit. Upon the Participant's Separation from Service for reasons other than death or Retirement, he or she shall be entitled to a Termination Benefit. The Termination Benefit shall be equal to the vested portion of the Retirement / Termination Account, based on the value of that Account as of the end of the month in which Separation from Service occurs. Subject to Section 6.4 hereof, the payment date for the Termination Benefit will be the first day of the month following the month in which Separation from Service occurs, provided, however, that with respect to a Participant who is a Specified Employee as of the date such Participant incurs a Separation from Service, payment will be made on the first day of the seventh month following the month in which such Separation from Service occurs. For the avoidance of doubt, Non-Employee Directors are not eligible for Termination Benefits under the Plan, because Retirement for NonEmployee Directors means Separation from Service for any reason.

(c) Specified Date Benefit. If the Participant has established one or more Specified Date Accounts, he or she shall be entitled to a Specified Date Benefit with respect to each such Specified Date Account. The Specified Date Benefit shall be equal to the vested portion of the Specified Date Account, based on the value of that Account as of the end of the month designated by the Participant at the time the Account was established, regardless of whether the Participant remains actively employed at the time of distribution of the Specified Date Benefit. Subject to Section 6.4 hereof, the payment date for the Specified Date Benefit will be the first day of the month following the designated month.

(d) Death Benefit. In the event of the Participant's death, his or her designated Beneficiary(ies) shall be entitled to a Death Benefit. The Death Benefit shall be equal to the vested portion of the Retirement / Termination Account and the vested portion of any unpaid balances in any Specified Date Accounts. The Death Benefit shall be based on the value of the Accounts as of the end of the month in which death occurred. Subject to Section 6.4 hereof, the payment date for the Death Benefit will be the first day of the month following the month in which death of the Participant occurred.

(e) Disability Benefit. Upon a determination by the Committee that a Participant is Disabled, he or she shall be entitled to a Disability Benefit. The Disability Benefit shall be equal to the vested portion of the Retirement / Termination Account and the vested portion of any unpaid balances in any Specified Date Accounts. The Disability Benefit shall be based on the value of the Accounts as of the last day of the month in which Disability occurs. Subject to Section 6.4 hereof, the payment date for the Disability Benefit will be the first day of the month following the month during which the Participant was judged by the Committee to have incurred a Disability. For the avoidance of doubt, NonEmployee Directors are not eligible for Disability Benefits under the Plan.

(f) Unforeseeable Emergency Payments. A Participant, other than a Non-Employee Director, who experiences an Unforeseeable Emergency may submit a written request to the Committee to receive payment of all or any portion of his or her vested Accounts. Whether a Participant or Beneficiary is faced with an Unforeseeable Emergency permitting an emergency payment shall be determined by the Committee based on the relevant facts and circumstances of each case, but, in any case, a distribution on account of Unforeseeable Emergency may not be made to the extent that such emergency is or may be reimbursed through insurance or otherwise, by liquidation of the Participant's assets, to the extent the liquidation of such assets would not cause severe financial hardship, or by cessation of Deferrals under this Plan. An approval of a payment due to an Unforeseeable Emergency is subject to the discretion of the Committee. If an emergency payment is approved by the Committee, the amount of the payment shall not exceed the amount reasonably necessary to satisfy the need, taking into account the additional compensation that is available to the Participant as the result of cancellation of deferrals to the Plan, including amounts necessary to pay any taxes or penalties that the Participant reasonably anticipates will result from the payment. The amount of the emergency payment shall be subtracted first from the vested portion of the Participant's Retirement / Termination Account until depleted and then from the vested Specified Date Accounts, beginning with the Specified Date Account with the latest payment commencement date. Emergency payments shall be paid in a single lump sum within the 90-day period following the date the payment is approved by the Committee.

6.2 Form of Payment

(a) Retirement Benefit. A Participant who is entitled to receive a Retirement Benefit shall receive payment of such benefit in a single lump sum, unless the Participant elects on his or her initial Compensation Deferral Agreement to have such benefit paid in one of the following alternative forms of payment (1) substantially equal annual installments over a period of two to ten years, as elected by the Participant, or (2) a lump sum payment of a percentage of the balance in the Retirement / Termination Account, with the balance paid in substantially equal annual installments over a period of two to ten years, as elected by the Participant.

(b) Termination Benefit. A Participant who is entitled to receive a Termination Benefit shall receive payment of such benefit in a single lump sum. For the avoidance of doubt, Non-Employee Directors are not eligible for Termination Benefits under the Plan.

(c) Specified Date Benefit. The Specified Date Benefit shall be paid in a single lump sum, unless the Participant elects on the Compensation Deferral Agreement with which the account was established to have the Specified Date Account paid in substantially equal annual installments over a period of two to five years, as elected by the Participant.

(d) Death Benefit. A designated Beneficiary who is entitled to receive a Death Benefit shall receive payment of such benefit in a single lump sum.

(e) Disability Benefit. A Participant who is entitled to receive a Disability Benefit shall receive payment of such benefit in a single lump sum, unless the Participant elects on his or her initial Compensation Deferral Agreement to have such benefit paid in accordance with the Payment Schedule for his or her Retirement Benefit.

(f) Small Account Balances. The Committee may, in its sole discretion which shall be evidenced in writing no later than the date of payment, elect to pay the value of the Participant's Accounts upon a Separation from Service in a single lump sum if the balance of such Accounts is not greater than the applicable dollar amount under Code Section 402(g)(1)(B), provided the payment represents the complete liquidation of the Participant's interest in the Plan.

(g) Rules Applicable to Installment Payments. If a Payment Schedule specifies installment payments, annual payments will be made beginning as of the payment commencement date for such installments and shall continue on each anniversary thereof until the number of installment payments specified in the Payment Schedule has been paid. The amount of each installment payment shall be determined by dividing (1) by (2), where (1) equals the Account Balance as of the Valuation Date and (2) equals the remaining number of installment payments. For purposes of Article VII, installment payments will be treated as a single form of payment. If a lump sum equal to less than 100% of the Retirement / Termination Account is paid, the payment commencement date for the installment form of payment will be the first anniversary of the payment of the lump sum.

6.3 Acceleration of or Delay in Payments

The Committee, in its sole and absolute discretion, may elect to accelerate the time or form of payment of a benefit owed to the Participant hereunder, provided such acceleration is permitted under Treas. Reg. Section 1.409A-3(j)(4). The Committee may also, in its sole and absolute discretion, delay the time for payment of a benefit owed to the Participant hereunder, to the extent permitted under Treas. Reg. Section 1.409A-2(b)(7). If the Plan receives a domestic relations order (within the meaning of Code Section 414(p)(1)(B)) directing that all or a portion of a Participant's Accounts be paid to an "alternate payee," any amounts to be paid to the alternate payee(s) shall be paid in a single lump sum.

6.4 Payments Treated as Made on the Designated Payment Date

Payments made on the payment date specified in the Plan, or on a later date within the same taxable year of the Participant or Beneficiary, or, if later, by the fifteenth (15th) day of the third calendar month following the payment date specified in the Plan shall be treated as having been made on the payment date; provided, however, that the Participant or Beneficiary is not permitted, directly or indirectly, to designate the taxable year of the payment. In addition, payments made no earlier than 30 days before the designated payment date will likewise be treated as having been made on the payment date so long as the Participant or Beneficiary is not permitted, directly or indirectly, to designate the taxable year of the payment. The foregoing shall be administered in compliance with the provisions of Regulation 1.409A-3(d), which Regulation may authorize other instances in which payments made after the payment date shall be treated as having been made on the payment date.

ARTICLE VII
MODIFICATIONS TO PAYMENT SCHEDULES

7.1 Participant's Right to Modify

A Participant may modify any or all of the alternative Payment Schedules with respect to an Account, consistent with the permissible Payment Schedules available under the Plan, provided such modification complies with the requirements of this Article VII.

7.2 Time of Election

The date on which a modification election is submitted to the Committee must be at least twelve months prior to the date on which payment is scheduled to commence under the Payment Schedule in effect prior to the modification.

7.3 Date of Payment under Modified Payment Schedule

Except with respect to modifications that relate to the payment of a Death Benefit or a Disability Benefit, the date payments are to commence under the modified Payment Schedule must be no earlier than five years after the date payment would have commenced under the original Payment Schedule. Under no circumstances may a modification election result in an acceleration of payments in violation of Code Section 409A.

7.4 Effective Date

A modification election submitted in accordance with this Article VII is irrevocable upon receipt by the Committee and becomes effective 12 months after such date.

7.5 Effect on Accounts

An election to modify a Payment Schedule is specific to the Account or payment event to which it applies, and shall not be construed to affect the Payment Schedules of any other Accounts.

ARTICLE I

ARTICLE VIII
VALUATION OF ACCOUNT BALANCES; INVESTMENTS

8.1 Valuation

Deferrals shall be credited to appropriate Accounts on the date such Compensation would have been paid to the Participant absent the Compensation Deferral Agreement. Company Contributions shall be credited to the Retirement / Termination Account at the times determined by the Committee. Valuation of Accounts shall be performed under procedures approved by the Committee.

8.2 Earnings Credit

Each Account will be credited with Earnings on each Business Day, based upon the Participant's investment allocation among a menu of investment options selected in advance by the Committee, in accordance with the provisions of this Article VIII.

8.3 Investment Options

Investment options will be determined by the Committee. The Committee, in its sole discretion, shall be permitted to add or remove investment options from the Plan menu from time to time, provided that any such additions or removals of investment options shall not be effective with respect to any period prior to the effective date of such change.

8.4 Investment Allocations

A Participant's investment allocation constitutes a deemed, not actual, investment among the investment options comprising the investment menu. At no time shall a Participant have any real or beneficial ownership in any investment option included in the investment menu, nor shall the Participating Employer or any trustee acting on its behalf have any obligation to purchase actual securities as a result of a Participant's investment allocation. A Participant's investment allocation shall be used solely for purposes of adjusting the value of a Participant's Account Balances.

A Participant shall specify an investment allocation for each of his Accounts in accordance with procedures established by the Committee. Except as otherwise provided by the Committee, the following provisions of this Section 8.4 shall apply to allocations under the Plan. Allocation among the investment options must be designated in increments of 1%. The Participant's investment allocation will become effective on the same Business Day or, in the case of investment allocations received after a time specified by the Committee, the next Business Day.

A Participant may change an investment allocation on any Business Day, both with respect to future credits to the Plan and with respect to existing Account Balances, in accordance with procedures adopted by the Committee. Changes shall become effective on the same Business Day or, in the case of investment allocations received after a time specified by the Committee, the next Business Day, and shall be applied prospectively.

8.5 Unallocated Deferrals and Accounts

If the Participant fails to make an investment allocation with respect to an Account, such Account shall be invested in an investment option, the primary objective of which is the preservation of capital, as determined by the Committee.

ARTICLE IX
ADMINISTRATION

9.1 Plan Administration

This Plan shall be administered by the Committee which shall have discretionary authority to make, amend, interpret and enforce all appropriate rules and regulations for the administration of this Plan and to utilize its discretion to decide or resolve any and all questions, including but not limited to eligibility for benefits and interpretations of this Plan and its terms, as may arise in connection with the Plan. Claims for benefits shall be filed with the Committee and resolved in accordance with the claims procedures in Article XII.

9.2 Administration Upon Change in Control

Upon a Change in Control of the Company (not of a Participating Employer), the Committee, as constituted immediately prior to such Change in Control, shall continue to act as the Committee. The individual who was the Chief Executive Officer of the Company (or if such person is unable or unwilling to act, the next highest ranking officer) prior to the Change in Control shall have the authority (but shall not be obligated) to appoint an independent third party to act as the Committee.

Upon such Change in Control, the Company may not remove the Committee, unless 2/3rds of the members of the Board of Directors of the Company and a majority of Participants and Beneficiaries with Account Balances consent to the removal and replacement Committee. Notwithstanding the foregoing, neither the Committee nor the officer described above shall have authority to direct investment of trust assets under any rabbi trust described in Section 11.2.

The Participating Employer shall, with respect to the Committee identified under this Section, (a) pay all reasonable expenses and fees of the Committee, (b) indemnify the Committee (including individuals serving as Committee) against any costs, expenses and liabilities including, without limitation, attorneys' fees and expenses arising in connection with the performance of the Committee hereunder, except with respect to matters resulting from the Committee's gross negligence or willful misconduct, and (c) supply full and timely information to the Committee on all matters related to the Plan, any rabbi trust, Participants, Beneficiaries and Accounts as the Committee may reasonably require.

9.3 Withholding

The Participating Employer shall have the right to withhold from any payment due under the Plan (or with respect to any amounts credited to the Plan) any taxes required by law to be withheld in respect of such payment (or credit). Withholdings with respect to amounts credited to the Plan shall be deducted from Compensation that has not been deferred to the Plan.

9.4 Indemnification

The Participating Employers shall indemnify and hold harmless each employee, officer, director, agent or organization, to whom or to which are delegated duties, responsibilities, and authority under the Plan or otherwise with respect to administration of the Plan, including, without limitation, the Committee and its agents, against all claims, liabilities, fines and penalties, and all expenses reasonably incurred by or imposed upon him or it (including but not limited to reasonable attorney fees) which arise as a result of his or its actions or failure to act in connection with the operation and administration of the Plan to the extent lawfully allowable and to the extent that such claim, liability, fine, penalty, or expense is not paid for by liability insurance purchased or paid for by the Participating Employer. Notwithstanding the foregoing, the Participating Employer shall not indemnify any person or organization if his or its actions or failure to act are due to gross negligence or willful misconduct or for any such amount incurred through any settlement or compromise of any action unless the Participating Employer consents in writing to such settlement or compromise.

9.5 Delegation of Authority

In the administration of this Plan, the Committee may, from time to time, employ agents and delegate to them such administrative duties as it sees fit, and may from time to time consult with legal counsel who shall be legal counsel to the Company.

9.6 Binding Decisions or Actions

The decision or action of the Committee in respect of any question arising out of or in connection with the administration, interpretation and application of the Plan and the rules and regulations thereunder shall be final and conclusive and binding upon all persons having any interest in the Plan.

ARTICLE X
AMENDMENT AND TERMINATION

10.1 Amendment and Termination

The Company may at any time and from time to time amend the Plan or may terminate the Plan as provided in this Article X. Each Participating Employer may also terminate its participation in the Plan.

10.2 Amendments

The Company, by action taken by its Board of Directors or the Compensation Committee of the Board of Directors, may amend the Plan at any time and for any reason, provided that any such amendment shall not reduce the vested Account Balances of any Participant accrued as of the date of any such amendment or restatement (as if the Participant had incurred a voluntary Separation from Service on such date) or reduce any rights of a Participant under the Plan or other Plan features with respect to Deferrals made prior to the date of any such amendment or restatement without the consent of the Participant. The Board of Directors of the Company or the Compensation Committee of the Board of Directors may delegate to the Committee the authority to amend the Plan without the consent of the Board of Directors for the purpose of (a) conforming the Plan to the requirements of law, (b) facilitating the administration of the Plan, (c) clarifying provisions based on the Committee's interpretation of the document, and (d) making such other amendments as the Board of Directors may authorize.

10.3 Termination

The Company, by action taken by its Board of Directors or the Compensation Committee of the Board of Directors may terminate the Plan and pay Participants and Beneficiaries their Account Balances in a single lump sum at any time, to the extent and in accordance with Treas. Reg. Section 1.409A-3(j)(4)(ix). If a Participating Employer terminates its participation in the Plan, the benefits of affected Employees shall be paid at the time provided in Article VI.

10.4 Application of Code Section 409A

The Plan is intended to constitute a plan of deferred compensation that meets the requirements for deferral of income taxation under Code Section 409A. The Committee, pursuant to its authority to interpret the Plan, is to interpret the Plan in a manner so as to comply with Section 409A.

ARTICLE I

ARTICLE XI
INFORMAL FUNDING

11.1 General Assets

Obligations established under the terms of the Plan may be satisfied from the general funds of the Participating Employers, or a trust described in this Article XI. No Participant, spouse or Beneficiary shall have any right, title or interest whatever in assets of the Participating Employers. Nothing contained in this Plan, and no action taken pursuant to its provisions, shall create or be construed to create a trust of any kind, or a fiduciary relationship, between the Participating Employers and any Employee, spouse, or Beneficiary. To the extent that any person acquires a right to receive payments hereunder, such rights are no greater than the right of an unsecured general creditor of the Participating Employer.

11.2 Rabbi Trust

A Participating Employer may, in its sole discretion, establish a grantor trust, commonly known as a rabbi trust, as a vehicle for accumulating assets to pay benefits under the Plan. Payments under the Plan may be paid from the general assets of the Participating Employer or from the assets of any such rabbi trust. Payment from any such source shall reduce the obligation owed to the Participant or Beneficiary under the Plan.

ARTICLE I

ARTICLE XII
CLAIMS

12.1 Filing a Claim

Any controversy or claim arising out of or relating to the Plan shall be filed in writing with the Committee which shall make all determinations concerning such claim. Any claim filed with the Committee and any decision by the Committee denying such claim shall be in writing and shall be delivered to the Participant or Beneficiary filing the claim (the "**Claimant**").

(a) In General. Notice of a denial of benefits (other than Disability benefits) will be provided within ninety (90) days of the Committee's receipt of the Claimant's claim for benefits. If the Committee determines that it needs additional time to review the claim, the Committee will provide the Claimant with a notice of the extension before the end of the initial ninety (90) day period. The extension will not be more than ninety (90) days from the end of the initial ninety (90) day period and the notice of extension will explain the special circumstances that require the extension and the date by which the Committee expects to make a decision.

(b) Disability Benefits. Notice of denial of Disability benefits will be provided within forty-five (45) days of the Committee's receipt of the Claimant's claim for Disability benefits. If the Committee determines that it needs additional time to review the Disability claim, the Committee will provide the Claimant with a notice of the extension before the end of the initial forty-five (45) day period. If the Committee determines that a decision cannot be made within the first extension period due to matters beyond the control of the Committee, the time period for making a determination may be further extended for an additional thirty (30) days. If such an additional extension is necessary, the Committee shall notify the Claimant prior to the expiration of the initial thirty (30) day extension. Any notice of extension shall indicate the circumstances necessitating the extension of time, the date by which the Committee expects to furnish a notice of decision, the specific standards on which such entitlement to a benefit is based, the unresolved issues that prevent a decision on the claim and any additional information needed to resolve those issues. A Claimant will be provided a minimum of forty-five (45) days to submit any necessary additional information to the Committee. In the event that a thirty (30) day extension is necessary due to a Claimant's failure to submit information necessary to decide a claim, the period for furnishing a notice of decision shall be tolled from the date on which the notice of the extension is sent to the Claimant until the earlier of the date the Claimant responds to the request for additional information or the response deadline.

(c) Contents of Notice. If a claim for benefits is completely or partially denied, notice of such denial shall be in writing and shall set forth the reasons for denial in plain language. The notice shall (1) cite the pertinent provisions of the Plan document and (2) explain, where appropriate, how the Claimant can perfect the claim, including a description of any additional material or information necessary to complete the claim and why such material or information is necessary. The claim denial also shall include an explanation of the claims review procedures and the time limits applicable to such procedures, including a statement of the Claimant's right to bring a civil action under Section 502(a) of ERISA following an adverse decision on review. In the case of a complete or partial denial of a Disability benefit claim, the notice shall provide a statement that the Committee will provide to the Claimant, upon request and free of charge, a copy of any internal rule, guideline, protocol, or other similar criterion that was relied upon in making the decision.

12.2 Appeal of Denied Claims

A Claimant whose claim has been completely or partially denied shall be entitled to appeal the claim denial by filing a written appeal with a committee designated to hear such appeals (the "**Appeals Committee**"). A Claimant who timely requests a review of the denied claim (or his or her authorized representative) may review, upon request and free of charge, copies of all documents, records and other information relevant to the denial and may submit written comments, documents, records and other information relevant to the claim to the Appeals Committee. All written comments, documents, records, and other information shall be considered relevant if the information (1) was relied upon in making a benefits determination, (2) was submitted, considered or generated in the course of making a benefits decision regardless of whether it was relied upon to make the decision, or (3) demonstrates compliance with administrative processes and safeguards established for making benefit decisions. The Appeals Committee may, in its sole discretion and if it deems appropriate or necessary, decide to hold a hearing with respect to the claim appeal.

(a) In General. Appeal of a denied benefits claim (other than a Disability benefits claim) must be filed in writing with the Appeals Committee no later than sixty (60) days after receipt of the written notification of such claim denial. The Appeals Committee shall make its decision regarding the merits of the denied claim within sixty (60) days following receipt of the appeal (or within one hundred and twenty (120) days after such receipt, in a case where there are special circumstances requiring extension of time for reviewing the appealed claim). If an extension of time for reviewing the appeal is required because of special circumstances, written notice of the extension shall be furnished to the Claimant prior to the commencement of the extension. The notice will indicate the special circumstances requiring the extension of time and the date by which the Appeals Committee expects to render the determination on review. The review will take into account comments, documents, records and other information submitted by the Claimant relating to the claim without regard to whether such information was submitted or considered in the initial benefit determination.

(b) Disability Benefits. Appeal of a denied Disability benefits claim must be filed in writing with the Appeals Committee no later than one hundred eighty (180) days after receipt of the written notification of such claim denial. The review shall be conducted by the Appeals Committee (exclusive of the person who made the initial adverse decision or such person's subordinate). In reviewing the appeal, the Appeals Committee shall (1) not afford deference to the initial denial of the claim, (2) consult a medical professional who has appropriate training and experience in the field of medicine relating to the Claimant's disability and who was neither consulted as part of the initial denial nor is the subordinate of such individual and (3) identify the medical or vocational experts whose advice was obtained with respect to the initial benefit denial, without regard to whether the advice was relied upon in making the decision. The Appeals Committee shall make its decision regarding the merits of the denied claim within forty-five (45) days following receipt of the appeal (or within ninety (90) days after such receipt, in a case where there are special circumstances requiring extension of time for reviewing the appealed claim). If an extension of time for reviewing the appeal is required because of special circumstances, written notice of the extension shall be furnished to the Claimant prior to the commencement of the extension. The notice will indicate the special circumstances requiring the extension of time and the date by which the Appeals Committee expects to render the determination on review. Following its review of any additional information submitted by the Claimant, the Appeals Committee shall render a decision on its review of the denied claim.

(c) Contents of Notice. If a benefits claim is completely or partially denied on review, notice of such denial shall be in writing and shall set forth the reasons for denial in plain language.

The decision on review shall set forth (1) the specific reason or reasons for the denial, (2) specific references to the pertinent Plan provisions on which the denial is based, (3) a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to and copies of all documents, records, or other information relevant (as defined above) to the Claimant's claim, and (4) a statement describing any voluntary appeal procedures offered by the plan and a statement of the Claimant's right to bring an action under Section 502(a) of ERISA.

(d) Contents of Disability Denial. For the denial of a Disability benefit, the notice will also include a statement that the Appeals Committee will provide, upon request and free of charge, (1) any internal rule, guideline, protocol or other similar criterion relied upon in making the decision, (2) any medical opinion relied upon to make the decision and (3) the required statement under Section 2560.503-1G)(5)(iii) of the Department of Labor regulations.

12.3 Legal Action – Attorneys' Fees and Deadlines

(a) Exhaustion / Plan-Based Statute of Limitations. A Claimant may not bring any legal action, including commencement of any arbitration, relating to a claim for benefits under the Plan unless and until the Claimant has followed the claims procedures under the Plan and exhausted his or her administrative remedies under such claims procedures. In addition, a Participant (or Claimant) will forever lose his or her right to (a) file a lawsuit or claim under the Plan or related to the Plan if he or she does not file an initial claim for benefits under Section 12.1 within twelve (12) months of the earlier of the date his or her application for benefits was denied or the date on which he or she knew or should have known of such claim or (b) file a lawsuit after a final denial on appeal Section 12.2 if he or she does not file such lawsuit within twelve (12) months of receiving such final denial.

(b) Attorneys' Fees. If a Participant or Beneficiary prevails in a legal proceeding brought under the Plan to enforce the rights of such Participant or any other similarly situated Participant or Beneficiary, in whole or in part, the Participating Employer shall reimburse such Participant or Beneficiary for all legal costs, expenses, attorneys' fees and such other liabilities incurred as a result of such proceedings. If the legal proceeding is brought in connection with a Change in Control, or a "change in control" as defined in a rabbi trust described in Section 11.2, the Participant or Beneficiary may file a claim directly with the trustee for reimbursement of such costs, expenses and fees. For purposes of the preceding sentence, the amount of the claim shall be treated as if it were an addition to the Participant's or Beneficiary's Account.

12.4 Discretion of Appeals Committee

All interpretations, determinations and decisions of the Appeals Committee with respect to any claim shall be made in its sole discretion, and shall be final and conclusive.

ARTICLE I

ARTICLE XIII
GENERAL PROVISIONS

13.1 Anti-assignment Rule

No interest of any Participant, spouse or Beneficiary under this Plan and no benefit payable hereunder shall be assigned as security for a loan, and any such purported assignment shall be null, void and of no effect, nor shall any such interest or any such benefit be subject in any manner, either voluntarily or involuntarily, to anticipation, sale, transfer, assignment or encumbrance by or through any Participant, spouse or Beneficiary. Notwithstanding anything to the contrary herein, however, the Committee has the discretion to make payments to an alternate payee in accordance with the terms of a domestic relations order (as defined in Code Section 414(p)(1)(B)).

The Company may assign any or all of its liabilities under this Plan in connection with any restructuring, recapitalization, sale of assets or other similar transactions affecting a Participating Employer without the consent of the Participant.

13.2 No Legal or Equitable Rights or Interest

No Participant or other person shall have any legal or equitable rights or interest in this Plan that are not expressly granted in this Plan. Participation in this Plan does not give any person any right to be retained in the service of the Participating Employer. The right and power of a Participating Employer to dismiss or discharge an Employee is expressly reserved. The Participating Employers make no representations or warranties as to the tax consequences to a Participant or a Participant's beneficiaries resulting from a deferral of income pursuant to the Plan.

13.3 No Employment Contract

Nothing contained herein shall be construed as constituting a contract or agreement between an Employee and a Participating Employer or a Non Employee Director and the Company to the effect that the Employee will be employed by the Employer or continue as a Director of the Company for any specific time..

13.4 Notice

Any notice or filing required or permitted to be delivered to the Committee under this Plan shall be delivered in writing, in person, or through such electronic means as is established by the Committee. Notice shall be deemed given as of the date of delivery or, if delivery is made by mail, as of the date shown on the postmark on the receipt for registration or certification. Written transmission shall be sent by certified mail to:

ROPER INDUSTRIES, INC.
ATTN: VICE PRESIDENT OF HUMAN RESOURCES
6901 PROFESSIONAL PARKWAY EAST, SUITE 200
SARASOTA, FLORIDA 34240

Any notice or filing required or permitted to be given to a Participant under this Plan shall be sufficient if in writing or hand-delivered, or sent by mail to the last known address of the Participant.

13.5 Headings

The headings of Sections are included solely for convenience of reference, and if there is any conflict between such headings and the text of this Plan, the text shall control.

13.6 Invalid or Unenforceable Provisions

If any provision of this Plan shall be held invalid or unenforceable, such invalidity or unenforceability shall not affect any other provisions hereof and the Committee may elect in its sole discretion to construe such invalid or unenforceable provisions in a manner that conforms to applicable law or as if such provisions, to the extent invalid or unenforceable, had not been included.

13.7 Lost Participants or Beneficiaries

Any Participant or Beneficiary who is entitled to a benefit from the Plan has the duty to keep the Committee advised of his or her current mailing address. If benefit payments are returned to the Plan or are not presented for payment after a reasonable amount of time, the Committee shall presume that the payee is missing. The Committee, after making such efforts as in its discretion it deems reasonable and appropriate to locate the payee, shall stop payment on any uncashed checks and may discontinue making future payments until contact with the payee is restored.

13.8 Facility of Payment to a Minor

If a distribution is to be made to a minor, or to a person who is otherwise incompetent, then the Committee may, in its discretion, make such distribution (i) to the legal guardian, or if none, to a parent of a minor payee with whom the payee maintains his or her residence, or (ii) to the conservator or committee or, if none, to the person having custody of an incompetent payee. Any such distribution shall fully discharge the Committee, the Company, and the Plan from further liability on account thereof.

13.9 Governing Law

To the extent not preempted by ERISA, the laws of the State of Delaware shall govern the construction and administration of the Plan.

(Signature Page Follows)

IN WITNESS WHEREOF, the undersigned executed this Plan as of the 18th day of November, 2013, to be effective as of the Effective Date.

Roper Industries, Inc.

By:_/s/ Paul J. Soni (Print Name) Paul J. Soni

Its:___________________________________ (Title)Vice President and Controller

First Amendment To The
Roper Industries, Inc. Non-Qualified Retirement Plan

WHEREAS, Roper Industries, now known as Roper Technologies, Inc. (the “Company”) established and maintains the Roper Industries, Inc. Non-Qualified Retirement Plan, as most recently amended and restated effective as of January 1, 2013 (the “Plan”); and

WHEREAS, the Compensation Committee of the Board of Directors of the Company (the “Committee”) is authorized to amend the Plan in Section 10.2 thereof; and

WHEREAS, the Committee desires to amend the Plan effective as of April 25, 2015, to reflect a change in the name of the Company.

NOW, THEREFORE, the Plan is hereby amended, effective as of April 25, 2015, to replace the words “Roper Industries, Inc.” with “Roper Technologies, Inc.” in each place it appears therein.

IN WITNESS WHEREOF, the undersigned executed this First Amendment as of the 5th day of May, 2015, to be effective as of the date specified above.

Roper Technologies, Inc.

By: Paul J. Soni

Its: Vice President and Controller

/s/ Paul J. Soni

Exhibit 21.1

Consolidated Subsidiaries of Roper Technologies, Inc. as of December 31, 2022

Name of Subsidiary	Jurisdiction of Incorporation/Organization
Accelify Solutions, LLC	Delaware
Aderant Canada Company	Canada
Aderant Holdings, Inc.	Delaware
Aderant Legal (UK) Limited	United Kingdom
Aderant Legal Holdings (AUS) Pty Ltd	Australia
Aderant Legal Holdings (NZ) ULC	New Zealand
Aderant Legal Holdings, LLC	Delaware
Aderant North America, Inc.	Florida
Aderant Parent Holdings, Inc.	Delaware
Alpine VI-A Holdings X, LLC	Delaware
American LegaNet India Private Limited	India
Amphire Solutions, Inc.	Delaware
ARCC FL Corp.	Delaware
Archisnapper BV	Belgium
Ascension Technology Corporation	Delaware
Assureweb Limited	United Kingdom
Atlantic Health Partners, Inc.	Delaware
C/S Solutions, Inc.	California
CBORD Holdings Corp.	Delaware
CCSI Holding Company, Inc.	Delaware
Civco Holding, Inc.	Delaware
Civco Medical Instruments Co., Inc.	Iowa
Clinisys (India) Private Limited	India
Clinisys Australia Pty Ltd	Australia
Clinisys Austria GesmbH	Austria
Clinisys Deutschland GmbH	Germany
Clinisys Diagnostic Solutions Ireland	Ireland
Clinisys Europe Limited	United Kingdom
Clinisys France Sarl	France
Clinisys Group Limited	United Kingdom
CliniSys, Inc.	Pennsylvania
Clinisys Information Systems (Europe) Limited	United Kingdom
Clinisys Information Systems (International) Limited	United Kingdom
Clinisys Nederland B.V.	Netherlands
Clinisys NV	Belgium
Clinisys Schweiz AG	Switzerland
Clinisys Scotland Limited	United Kingdom
Clinisys Software Iberica SL	Spain
Clinisys Solutions Limited	United Kingdom
Clinisys Spain S.L.	Spain
ConstructConnect Canada, Inc.	Canada
ConstructConnect, Inc.	Delaware

CRS Holding Company LLC	Delaware
Dash I, Inc.	Delaware
DAT Solutions, LLC	Delaware
Data Innovations Canada Ltd.	Canada
Data Innovations Cooperatief U.A.	Netherlands
Data Innovations Europe S.A.	Belgium
Data Innovations Latin America Ltda	Brazil
Data Innovations LLC	Delaware
DATSolutions Private Limited	India
Dawning Technologies, LLC	Delaware
DCMH Group Holdings, Inc.	Delaware
DCMH Group Holdings, LLC	Delaware
DCMH Holdings, Inc.	Delaware
Deltek Ajera Inc.	Oregon
Deltek Asia Pacific (HK) Limited	Hong Kong
Deltek Australia Pty Ltd.	Australia
Deltek Danmark A/S	Denmark
Deltek France SAS	France
Deltek GB Limited	United Kingdom
Deltek GmbH	Germany
Deltek Nederland B.V.	Netherlands
Deltek Netherlands B.V.	Netherlands
Deltek Norge AS	Norway
Deltek Sverige AB	Sweden
Deltek Systems (Canada), Inc.	Canada
Deltek Systems (Philippines) Ltd.	Virginia
Deltek, Inc.	Delaware
Deltek, TNSCore Holdings, LLC	Delaware
DI Dutch Holdings LLC	Delaware
DI Hong Kong Limited	Hong Kong
Digital Schools, LLC	Delaware
Dominion I, Inc.	Delaware
Dynamic Instruments LLC	California
Education Health, LLC	Delaware
Education Software Acquisition Corporation	Delaware
Education Software Intermediate, LLC	Delaware
Education Software Subholdings LLC	Delaware
Escape Technology, LLC	California
eSped.com Incorporated	Delaware
Excalibur Holdco LLC	Delaware
Excent Corporation	Georgia
Fluid Metering, Inc.	Delaware
FMS Purchasing & Services, Inc.	Florida
Foodlink Holdings, Inc.	California
Foodlink IT India Private Limited	India
Forecast 5 Analytics, LLC	Delaware
Forecast 5 Holdings, LLC	Delaware

Foundry Visionmongers (Ireland) Limited	Ireland
Frontine Parent Holding Company	Delaware
Frontline Technologies (Delaware) Blocker Corporation	Delaware
Frontline Technologies Blocker Buyer, Inc.	Delaware
Frontline Technologies Canada LLC	Delaware
Frontline Technologies Group Holding, LLC	Delaware
Frontline Technologies Group, LLC	Delaware
Frontline Technologies Holdings, LLC	Delaware
Frontline Technologies Intermediate Holdings, LLC	Delaware
Frontline Technologies Management Blocker, Inc.	Delaware
Frontline Technologies Parent, LLC	Delaware
GEM/CAP, LLC	Texas
GuideK12, LLC	Delaware
Handshake Software, Inc.	Georgia
Hansco Automatisering B.V.	Netherlands
Hardy Process Solutions LLC	California
Horizon Software International, LLC	Georgia
HRsmart Canada Inc.	Canada
HRsmart France SAS	France
HRsmart Germany GmbH	Germany
HRsmart International	Cayman Islands
HRsmart International Holdings LLC	Texas
HRsmart Mexico	Mexico
HRsmart SA (Pty) Ltd.	South Africa
HRsmart Talent Management Solutions Europe Limited	United Kingdom
HRsmart Ventures LLC	Texas
HRsmart, Inc.	Delaware
Industrial Products Investment Company	Delaware
Innovative Product Achievements, LLC	Delaware
Inovonics Corporation	Colorado
Insight (Delaware) FTG Blocker Corporation II	Delaware
Instill Corporation	Delaware
IntelliTrans Limited	United Kingdom
Intellitrans Sweden AB	Sweden
Intellitrans, LLC	Delaware
iPipeline (TCP) Limited	United Kingdom
iPipeline Canada Inc	Quebec
iPipeline Co., Ltd.	Japan
iPipeline Holdings, Inc	Delaware
iPipeline Limited	United Kingdom
iPipeline, Inc	Delaware
iSqFt Holdings, Inc.	Delaware
iSqFt Parent Corporation	Delaware
iSqFt Sub, Inc.	Delaware
iTradeNetwork, Inc.	Delaware
IVP FTG Blocker Corporation	Delaware
Link Logistics Holding LLC	Delaware

Loadlink Technologies Corporation	Canada
Managed Health Care Associates, Inc.	Delaware
MED Professional Services, LLC	Delaware
Medina Acquisition LLC	Delaware
MHA Long Term Care Network, Inc.	Delaware
MHA Long Term Care Services, Inc.	Delaware
Navigator Group Purchasing, Inc.	Tennessee
NDI Europe GmbH	Germany
Neptune Technology Group (Canada) Co.	Canada
Neptune Technology Group Inc.	Delaware
Neptune Technology Group Mexico S.de R.L. de C.V.	Mexico
Neptune Technology Group Services Inc.	Delaware
New RH LP	United Kingdom
Northern Digital Inc.	Canada
Omega Legal Systems, Inc.	Arizona
PB Bidco Limited	United Kingdom
PB Holdco Limited	United Kingdom
PB Midco Limited	United Kingdom
PB Topco Limited	United Kingdom
Perennial EdTech, LLC	Delaware
Petroleum Analyzer Company L.P.	Delaware
PGP UK Limited	Scotland
PowerPlan Canada ULC	Canada
PowerPlan Holdings Inc.	Delaware
PowerPlan Inc.	Delaware
PowerPlan Intermediate Holdings Inc.	Delaware
PowerPlan Operations ANZ Pty Ltd	Australia
PowerPlan Operations Ltd.	United Kingdom
Project Diamond Intermediate Holdings Corporation	Delaware
Project Franklin Merger Sub LLC	Delaware
Project Torque Intermediate Holdings Inc.	Delaware
Project Viking Holdings, Inc.	Delaware
Project Viking Intermediate, LLC	Delaware
Project Vision Merger Sub II Inc.	Delaware
Prologic Technology Systems, LLC	Delaware
QSC 1208 Limited	United Kingdom
QSC 1209 Limited	United Kingdom
Rebate Tracking Group, LLC	Florida
RF IDeas, Inc.	Delaware
RIPIC Holdco Inc.	Delaware
RMT, Inc.	Arizona
Roper Acquisitions Holdings Inc.	Delaware
Roper Asia Pte Ltd.	Singapore
Roper Industries, Inc.	Delaware
Roper International Holding, Inc.	Delaware
Roper LLC	Russian Federation
Roper NL1 UK Limited	United Kingdom

Roper NL2 UK Limited	United Kingdom
Roper Operations Company I, LLC	Delaware
Roper Operations Company II, LLC	Delaware
Roper RC Limited	United Kingdom
Roper Scot LP	United Kingdom
Roper Swiss Finance GmbH	Switzerland
Roper T1 LLC	Delaware
Roper T1000 Corp.	Delaware
Roper T2 LP	Delaware
Roper Tech. Middle East Ltd. FZCO	Dubai (FZCO)
Roper Technologies (Ireland) Limited	Ireland
Roper UK 2 Limited	United Kingdom
Roper UK, Ltd.	United Kingdom
Roper-Mex, L.P.	Delaware
Ropintassco Holdings, L.P.	Delaware
RT Merger Sub, Inc.	Delaware
SE Frontline Holdings LLC	Delaware
SHP Group Holdings, Inc.	Delaware
Societe de Distribution de Logiciels Medicaux	France
Software Answers, LLC	Ohio
Softwriters Holdings, Inc.	Delaware
SoftWriters, Inc.	Delaware
Sohnar Pty Ltd	Australia
Star Purchasing Services, LLC	Wisconsin
Strata Acquisition Subsidiary, Inc.	Delaware
Strata Decision Technology India Private Limited	India
Strata Decision Technology LLC	Illinios
Strata Parallel II Inc.	Delaware
Strategic Healthcare Programs Blocker 2, Inc.	Delaware
Strategic Healthcare Programs Blocker LLC	Delaware
Strategic Healthcare Programs Holdings, LLC	Delaware
Strategic Healthcare Programs, L.L.C.	Delaware
TB XII-A Frontline Blocker, L.L.C.	Delaware
The CBORD Group, Inc.	Delaware
The Foundry USCo, Inc.	Delaware
The Foundry Visionmongers Ltd.	United Kingdom
The Tidewater Healthcare Shared Services Group, Inc.	Pennsylvania
Torque Acquisition Holdco Inc.	Delaware
Transcore CNUS, Inc.	Delaware
Transcore Holdings, Inc.	Delaware
UHF Purchasing Services, LLC	Delaware
Union Square Software (International) Limited	United Kingdom
Union Square Software Inc.	Canada
Union Square Software Limited	United Kingdom
Union Square Software Pty	Australia
Verathon Canada Holdings, Inc.	Delaware
Verathon Inc.	Washington

Verathon Medical (Australia) Pty Limited	Australia
Verathon Medical (Canada) ULC	Canada
Verathon Medical (Europe) B.V.	Netherlands
Verathon Medical (France) SARL	France
Verathon Medical (Hong Kong) Limited	Hong Kong
Verathon Medical (Japan) K.K.	Japan
Verathon Medical (UK) Ltd.	United Kingdom
Verathon Medical Germany GmbH	Germany
Vertafore Canada, Inc.	Canada
Vertafore India Private Limited	India
Vertafore, Inc.	Delaware
WorkBook APAC Ltd.	Vietnam
Workbook Software A/S	Denmark
Zetec (Shanghai) Co., Ltd.	China

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-260556) and Form S-8 (Nos. 333-211671, 333-135700, 333-35666, 333-35672, 333-36897, 333-105920, 333-182779, 333-257062) of Roper Technologies, Inc. of our report dated February 27, 2023 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Tampa, Florida
February 27, 2023

Exhibit 31.1

I, L. Neil Hunn, certify that:

1. I have reviewed this Annual Report on Form 10-K of Roper Technologies, 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.

Date: February 27, 2023

/s/ L. Neil Hunn

L. Neil Hunn
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

I, Jason P. Conley, certify that:

1. I have reviewed this Annual Report on Form 10-K of Roper Technologies, 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.

Date: February 27, 2023

/s/ Jason P. Conley

Jason P. Conley
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

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

In connection with the Annual Report of Roper Technologies, Inc. (the "Company") on Form 10-K for the year ended December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), L. Neil Hunn, Chief Executive Officer of the Company, and Jason P. Conley, Chief Financial Officer of the Company, each hereby certifies, pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of his knowledge that:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 27, 2023

/s/ L. Neil Hunn

L. Neil Hunn
President and Chief Executive Officer
(Principal Executive Officer)

/s/ Jason P. Conley

Jason P. Conley
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

This certification accompanies the Annual Report on Form 10-K pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not be deemed filed for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section. This certification shall not be deemed to be incorporated by reference into any filing under the Securities Act or the Exchange Act, except to the extent that Roper Technologies, Inc. specifically incorporates it by reference.