

# Engineered *for* Growth



**ESCO Technologies, Inc.**  
2021 Annual Report



ESCO Technologies is a global provider of highly-engineered products and solutions to diverse end-markets that include the defense, aerospace, space, wireless, consumer electronics, healthcare, automotive, electric utility, and renewable energy industries. The company consists of three technology-driven business segments – Aerospace & Defense, Utility Solutions Group, and RF Shielding & Test.

## Aerospace & Defense

Aerospace & Defense (A&D) provides highly-engineered hydraulic filtration systems, fluid control valves, machined components and metal finishing for the aerospace, space and defense industries. In addition, A&D designs and manufactures complex shock and vibration dampening tiles and signature reduction solutions that enhance the stealth capabilities of U.S. Navy submarines and surface ships.

## Utility Solutions Group

Utility Solutions Group (USG) offers industry-leading diagnostic condition monitoring and protection testing equipment, consulting and laboratory testing services, and data analytics vital for ongoing grid reliability and renewable energy project development. Our USG segment offers a complete range of solutions that efficiently measure asset health and ensure the reliable, safe, and secure delivery of power.

## RF Shielding & Test

RF Shielding & Test (Test) is an innovative supplier of test and measurement systems and shielded enclosures. Our comprehensive solutions identify, measure and contain magnetic, electromagnetic and acoustic energy, creating an environment that isolates and controls unintended energy emissions to insure immunity, compatibility and compliance with regulatory and industry-defined standards.

# Engineered for Growth

The end-market diversity of our portfolio of highly-engineered products and services has continued to provide revenue and earnings stability throughout the evolving economic complexities of the pandemic.

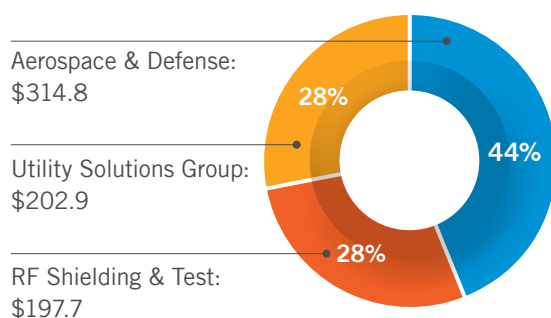
2021 presented global challenges related to supply chain management, material inflation, labor shortages, and a continuing delay in the return to normal travel patterns. We kept our focus on optimizing our cost structure, managing our balance sheet efficiently, and expanding our product portfolio to better serve our customers. These efforts leave us well-positioned to deliver profitable long-term growth as our end-markets continue to recover.

With a solid balance sheet and substantial liquidity, we continue to fund capital investments, new product development, and the pursuit of acquisitions. Our recent acquisitions of Altanova Group (Altanova) and Phenix Technologies (Phenix) broaden our USG product offerings and geographic footprint, providing additional opportunities in end-markets that have attractive long-term growth characteristics.

## 2021 Sales

DOLLARS IN MILLIONS

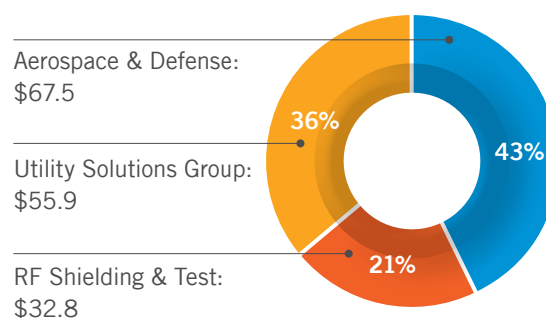
**\$715m**



## 2021 EBITDA – As Adjusted<sup>(1)</sup>

DOLLARS IN MILLIONS

**\$156m**



(1) Excludes \$25.2 million of Corporate costs and \$6.0 million of charges mainly consisting of one-time compensation and acquisition costs at Corporate, restructuring costs primarily within the USG segment, and purchase accounting adjustments related to the Phenix and Altanova acquisitions, partially offset by the final settlement from the sale of the Doble Watertown facility.

# Financial Highlights from Continuing Operations<sup>(1)</sup>

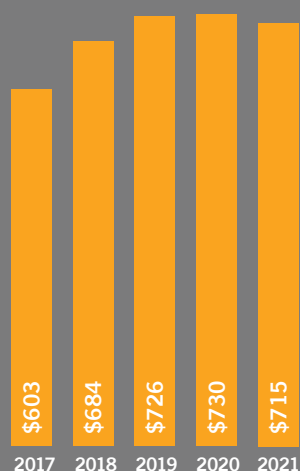
DOLLARS IN MILLIONS, EXCEPT PER SHARE AMOUNTS

	2021	2020	2019	2018	2017
Net Sales	\$ 715.4	\$ 730.5	\$ 726.0	\$ 683.7	\$ 602.8
Entered Orders	796.3	796.3	822.5	695.6	645.4
Earnings Per Share – GAAP	2.42	0.88	2.97	3.31	1.87
Earnings Per Share – As Adjusted <sup>(2)</sup>	2.59	2.67	2.95	2.54	2.02

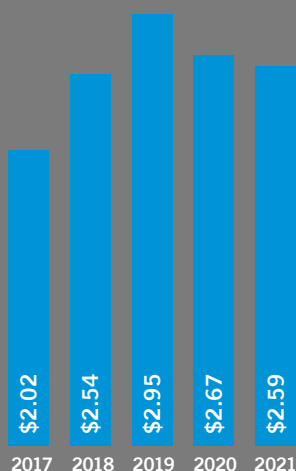
## Capital Performance (As of September 30)

Net Debt	\$ 98	\$ 10	\$ 223	\$ 190	\$ 229
Leverage Ratio	1.03	0.47	1.68	1.72	2.20
Cash Flow from Operating Activities	123	109	101	84	62

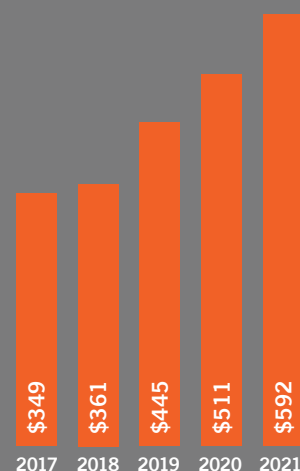
**Net Sales**  
IN MILLIONS



**Earnings Per Share  
– As Adjusted<sup>(2)</sup>**



**Ending Backlog**  
IN MILLIONS



(1) Financial Highlights exclude Discontinued Operations – Technical Packaging Segment sale was completed 12/31/19.

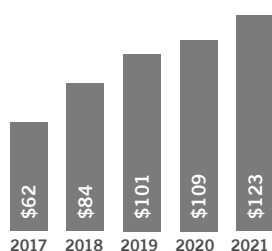
(2) EPS – As adjusted excludes \$0.17 per share mainly consisting of one-time compensation and acquisition costs at Corporate, restructuring costs primarily within the USG segment, and purchase accounting adjustments related to the Phenix and Altanova acquisitions, partially offset by the final settlement from the sale of the Doble Watertown facility in 2021, a \$1.55 per share charge related to the pension plan termination and \$0.24 per share of charges primarily within the USG segment related to facility consolidation, asset impairment, severance, and incremental costs associated with COVID-19 in 2020, \$0.02 per share of income primarily related to the gain on the sale of the Doble Watertown property, partially offset by restructuring charges at Doble, PTI and VACCO in 2019, \$0.017 per share of restructuring charges and (\$0.94) per share net tax benefit resulting from the implementation of U.S. Tax Reform in 2018, and \$0.15 per share of purchase accounting inventory step-up charges and acquisition costs in 2017.

# Letter to Shareholders

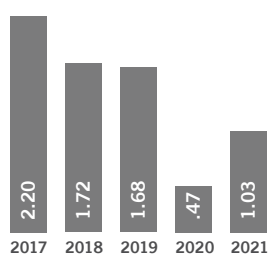
Our dedicated team worked diligently throughout 2021 to manage through the continuing impacts of the pandemic. Our focus on cost structure optimization, working capital improvement, cash flow generation, and program execution enabled us to deliver solid results across the company.

While the normally predictable commercial aerospace and electric utility markets continued to experience disruptions in 2021, our end-market diversity provided stability. In the second half of the year, we began to see the start of a longer-term recovery across these end-markets. With over \$460 million in entered orders in the back half of the year, we are entering 2022 with record backlog, expanded product offerings, and improved operational efficiency.

Cash Flow from Operating Activities  
IN MILLIONS



Leverage Ratio



## Financial Results

2021 was highlighted by revenue growth in USG and Test, a return to pre-pandemic margins in USG, strong cash flow generation, entered orders, and ending backlog.

Sales decreased slightly in 2021 to \$715 million, due to continued softness in commercial aerospace, offset by growth in Test and renewables revenues. Order strength grew each quarter throughout the year, resulting in almost \$800 million in entered orders, a book-to-bill of 1.11x and ending backlog of \$592 million.

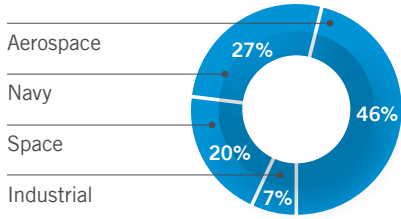
Adjusted EBITDA was \$131 million and Adjusted EPS was \$2.59 per share. Our Adjusted EBITDA margin of 18 percent was in line with the prior year, with softness in commercial aerospace being offset by a rebound in USG's margin to 28 percent.

We generated record cash flow from operations of \$123 million and ended the year with \$587 million of available liquidity and a leverage ratio of 1.03x, leaving us comfortably positioned to continue to fund future internal investments and M&A opportunities.

Our revenue, adjusted earnings, and entered orders increased each quarter throughout the year, giving us confidence that we are successfully navigating our way forward on the path to long-term growth.

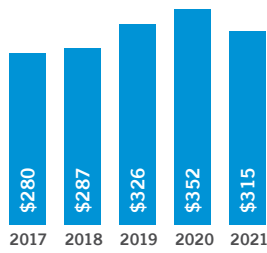
# AEROSPACE & DEFENSE

## Major End Markets



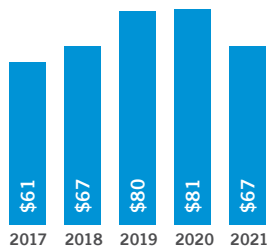
## Sales

IN MILLIONS



## EBITDA – As Adjusted\*

IN MILLIONS



\* Excludes \$0.5 million of ATM acquisition inventory step-up and restructuring charges in 2021, \$1.4 million primarily related to severance and incremental costs associated with COVID-19 in 2020, \$1.2 million in inventory step-up and restructuring charges in 2019, \$0.8 million in restructuring charges in 2018, and \$1.9 million in inventory step-up charges in 2017.



COURTESY NAVY.MIL



COURTESY NASA.GOV



COURTESY AF.MIL

## Aerospace & Defense

A&D sales decreased 11 percent to \$315 million due to lower commercial aerospace revenue, partially offset by strength in our Navy and industrial end-markets. Adjusted EBITDA declined to \$67 million (21 percent margin) related to lower revenues. Strong second-half orders resulted in a book-to-bill of 1.07x for the year and ending backlog of \$367 million.

As the U.S. Navy invests in the submarine fleet, including the Virginia Class and newly designed Columbia Class submarines, ESCO continues to be a key supplier of vital components that help ensure the stealth capabilities of submarines and also surface ships.

In 2021, VACCO Industries (VACCO), Globe Composite Solutions (Globe) and Westland Technologies (Westland) all received new design and development awards for specialty content supporting the Virginia Class submarine program. On the Columbia Class, VACCO was awarded a contract to qualify critical manifolds and completed qualification on multiple pieces of new hardware. Globe expanded its Columbia Class content and Westland received awards for a number of classified materials.

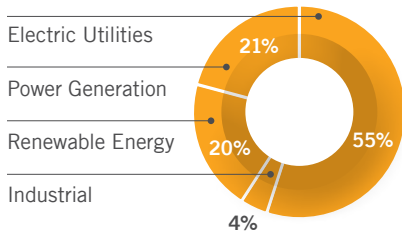
In space, VACCO hardware supported the successful completion of the NASA-Boeing Space Launch System (SLS) Green Run test. They also secured new platform content on the SLS Exploration

Upper Stage, delivered multiple flight sets of a new high-powered small satellite Integrated Propulsion System (IPS) using green mono-propellant technology, and delivered its first fully integrated micro-satellite hybrid propulsion system.

In defense aerospace, PTI Technologies (PTI) was awarded contacts for hydraulic manifolds and aerial refueling receptacles on new production F-15EX aircraft and for overhaul and production of systems on the U.S. Air Force Air Launch Cruise Missile. The U.S. Army implemented the required use of PTI's 421<sup>®</sup> metal fiber media for improved hydraulic filtration on all Apache and Blackhawk helicopters within the next four years. This maintenance action will support meaningful growth in filter production as the military retrofits over 6,000 aircraft worldwide.

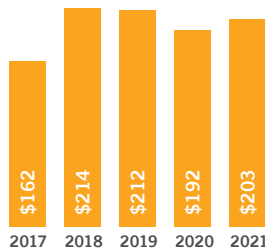
In commercial aerospace, we continued to see weak sales trends. Despite this environment, we were able to increase content on the Boeing 737, Airbus A321XLR, Gulfstream G700 and Dassault Falcon platforms. Additionally, ESCO added new MRO customers that perform overhauls on landing gear across the Boeing platforms. We are confident in the long-term viability of this market and remain well-positioned for a return to long-term organic growth as this sector continues to recover.

### Major End Markets



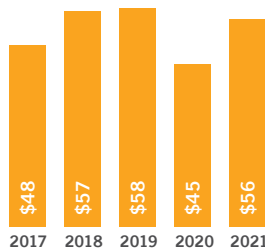
### Sales

IN MILLIONS



### EBITDA – As Adjusted\*

IN MILLIONS



\* Excludes \$1.5 million of facility consolidation, inventory step-up and restructuring charges, partially offset by the final settlement from the sale of the Doble Watertown facility in 2021, \$6.6 million of facility consolidation, asset impairment, severance, and incremental costs associated with COVID-19 in 2020, \$5.9 million gain related to the sale of Doble Watertown property, partially offset by restructuring charges in 2019, \$3.0 million in restructuring charges in 2018, and \$1.9 million in inventory step-up charges in 2017.







## Utility Solutions Group

USG's sales increased 6 percent to \$203 million on growth in renewables and the initial impact of recent acquisitions. Adjusted EBITDA increased 23 percent to \$56 million (28 percent margin) due to higher revenues and cost reduction efforts. Entered orders were \$215 million (excluding \$29 million of acquired backlog), with a book-to-bill of 1.06x. The \$14 million increase in orders over the prior year combined with the acquired backlog resulted in record ending backlog of \$92 million.

Doble Engineering (Doble) continued its ongoing technology development program, launching several new products targeted at utility trends towards digitalization and condition based maintenance. The F8000 is a new digital technology platform for testing protective relay systems. It is a modular and configurable power system simulator for both conventional and digital protection testing applications. The new Spark P3 partial discharge and electromagnetic interference analyzer enables utilities to perform in-service apparatus condition assessment without disconnecting power.

The 2021 acquisitions of Altanova and Phenix expand USG's geographic footprint and create a formidable global diagnostic instrumentation and services portfolio. Altanova adds a wide range of complementary diagnostic products

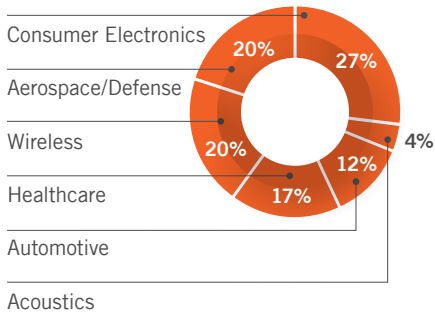
and monitoring systems that expand our partial discharge, cable, switch gear, and battery monitoring product offerings. Phenix broadens Doble's portfolio of high voltage test systems for utilities, OEMs and commercial and industrial power users.

On the renewables side, NRG Systems (NRG) released three important new product platforms for the wind and solar marketplaces. NRG Cloud is a cloud-based monitoring and management platform that simplifies data retrieval, streamlines storage workflows, and increases accessibility to wind and solar measurement systems for peak efficiency. The LOGR-S is an advanced data logging system purpose built for Solar Resource Monitoring (SRM) of operational utility scale photovoltaic solar plants. Lastly, the new LDR-1 direct detect Lidar platform offers a unique technology that significantly lowers the cost of Lidar solutions.

NRG saw significant revenue growth in both their wind and solar businesses in 2021, fueled by the presence of abundant low-cost capital to support new projects and the levelized cost of energy (LCOE) of renewable projects in most locations now being lower than that of traditional generation sources. We believe these factors will continue to support market growth and will reduce some of the cyclicality in this market that has historically been incentive driven.

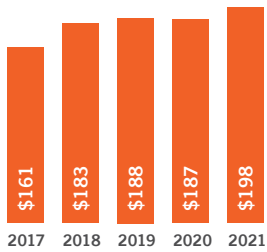
# RF SHIELDING & TEST

## Major End Markets



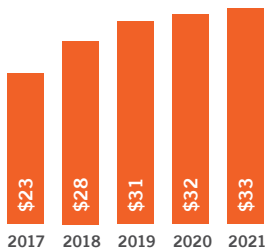
## Sales

IN MILLIONS



## EBITDA – As Adjusted\*

IN MILLIONS



\* Excludes \$0.1 million of incremental costs associated with COVID-19 in 2020.





## RF Shielding & Test

Test achieved record sales of \$198 million in 2021, an increase of 6 percent. EBITDA increased 2 percent to \$33 million (17 percent margin). With record entered orders of \$215 million and a book-to-bill of 1.09x, Test ended the year with \$133 million in backlog. This represents 23 percent order growth compared to 2020 and a \$17 million increase in ending backlog.

In 2021, Test did experience significant challenges related to supply chain performance, increasing material and freight costs, and labor shortages. In spite of these issues, the business was still able to deliver a solid year of profitable growth.

The highlight of 2021 for Test was their strong orders in the back half of the year. They capped off the year with record orders of \$74 million in the fourth quarter. Equally encouraging was that the growth came from across all end-markets and regions, including a significant increase in electromagnetic compatibility (EMC) test chamber sales in China and data center filter sales domestically.

With the continuing roll out of 5G, we are seeing sustained strength within the wireless market. Our employees remain active on standards committees and are working with leading manufacturers and

service providers to develop and deliver testing solutions that both meet their needs and industry defined standards.

The automotive market continues to present opportunities for growth. We are successfully providing testing solutions for the electric vehicle (EV) market, especially in China. In addition, our employees continue to work with international standards committees to develop standards for testing autonomous vehicles and the numerous communication technologies required for their future success. We expect continued growth as both of these technologies continue to gain worldwide acceptance.

On the shielding side of the Test business, the healthcare market rebounded nicely in 2021, as hospitals restarted projects to expand their MRI capabilities. We are also seeing a surge in data center construction driving increased filter sales and interest in our Red Edge™ shielding products which provide Electromagnetic Pulse (EMP) protection.

The Test business continues to be positioned well, with exposure to many growing end-markets that require our unique technologies. Test delivered record sales and orders in 2021, which is a testament to the continued strong outlook of the business.



**Vic Richey** (right)  
Chairman, Chief Executive  
Officer and President

**Chris Tucker** (center)  
Senior Vice President &  
Chief Financial Officer

**Dave Schatz** (left)  
Senior Vice President,  
Secretary & General Counsel

## Growing Forward

In 2021, while the commercial aerospace and electrical utility markets did not bounce back as quickly as anticipated, we are now seeing signs of the beginning of a longer-term recovery. Despite these end-market headwinds, and through diligent efforts to optimize our cost structure and execute on programs, we delivered solid profitability, cash flow generation, entered orders, and record ending backlog.

The acquisitions of Altanova and Phenix during the year add complimentary products and expand the geographic reach of our USG segment. With a leverage ratio of ~1.0x and \$587 million in liquidity, we remain well-positioned to continue to fund capital investments, new product development, and the pursuit of future acquisitions. We continue to evaluate a solid pipeline of M&A opportunities with the intent to opportunistically add to our diversified portfolio.

The fundamentals of our portfolio remain intact and give us confidence that our well-tested operating model, track record of effective cost management, and prudent investments in our business segments will continue to position us for sustainable long-term growth.

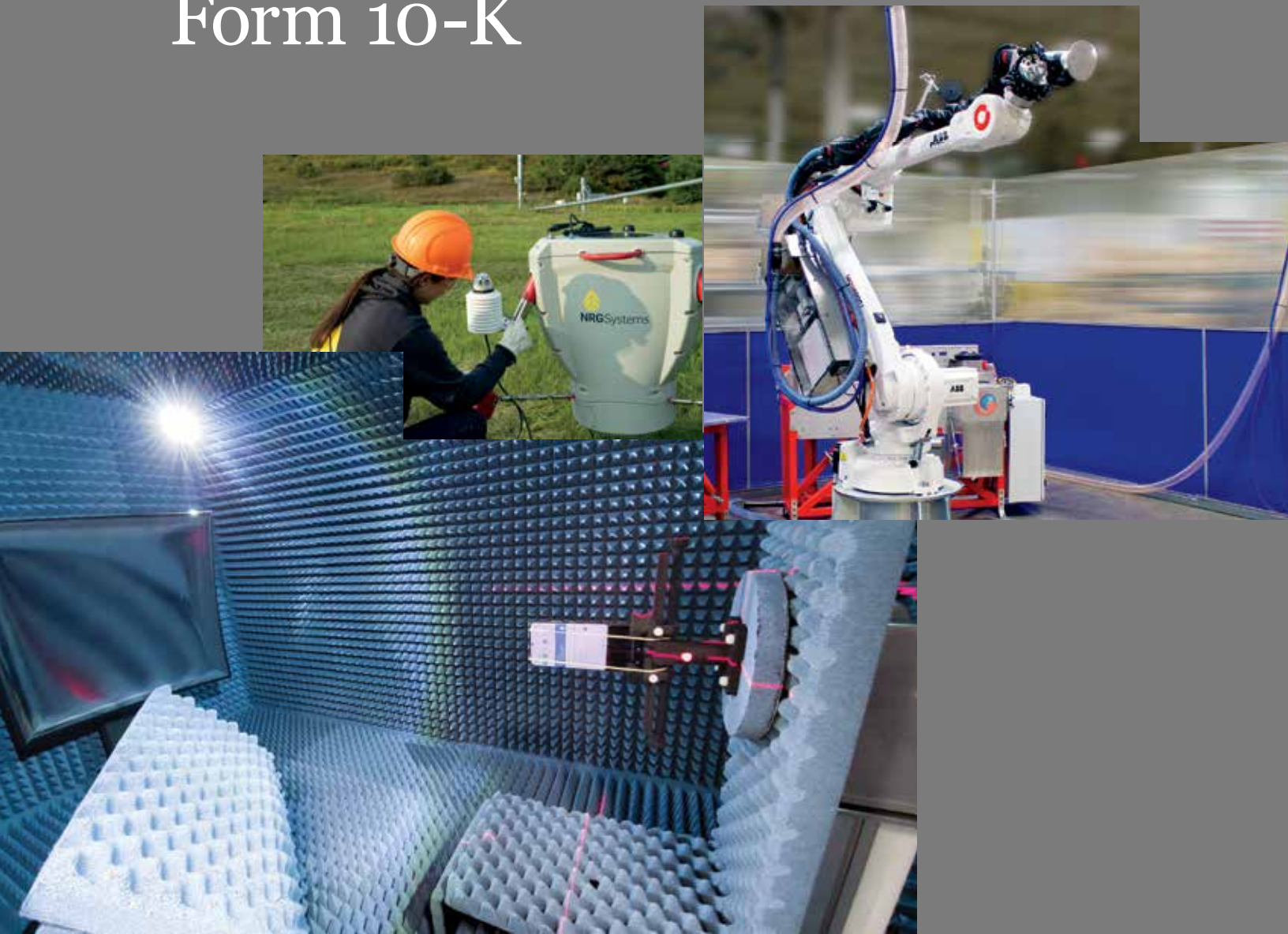
I want to thank our entire team for their continuing commitment as we have successfully managed through the challenges of the past two years. Despite significant headwinds, we delivered solid results in 2021 and positioned the company for future success. It was truly a team effort, and I am confident that our hard work has us prepared to deliver profitable growth as our end-markets return to more normal operating levels moving forward.

A handwritten signature in black ink, appearing to read 'Vic Richey'.

**Vic Richey**  
Chairman, Chief Executive Officer & President

November 29, 2021

# Form 10-K



**ESCO Technologies, Inc.**

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Fiscal Year 2021



## Shareholders' Summary

### Shareholders' Annual Meeting

The Annual Meeting of Shareholders of ESCO Technologies Inc. will be held at the offices of the Company's subsidiary VACCO Industries located at 10350 Vacco St., El Monte, CA 91733 at 10:00 a.m. Pacific Time on Thursday, February 3, 2022. You may access this Annual Report as well as the Notice of the meeting and the Proxy Statement on the Company's Annual Meeting website at [www.envisionreports.com/ese](http://www.envisionreports.com/ese).

### Certifications

Pursuant to New York Stock Exchange (NYSE) requirements, the Company submitted to the NYSE the annual certifications by the Company's chief executive officer dated February 9, 2021 and February 7, 2020, that he was not aware of any violations by the Company of NYSE's corporate governance listing standards. In addition, the Company filed with the Securities and Exchange Commission the certifications by the Company's chief executive officer and chief financial officer required under Section 302 of the Sarbanes-Oxley Act of 2002 as exhibits to the Company's Forms 10-K for its fiscal years ended September 30, 2021 and September 30, 2020.

### 10-K Report

The Company's 2021 Annual Report on Form 10-K as filed with the Securities and Exchange Commission is included in this Annual Report to Shareholders, except that certain of its Exhibits have been omitted. The complete Form 10-K is available on the Company's website at [www.escotechnologies.com](http://www.escotechnologies.com), or a copy will be provided to shareholders without charge upon written request to Kate Lowrey, Vice President of Investor Relations, ESCO Technologies Inc., 9900A Clayton Road, St. Louis, MO 63124.

### Investor Relations

Additional investor-related information may be obtained by contacting ESCO Investor Relations at (314) 213-7277 or toll free at (888) 622-3726. Information is also available through the Company's website at [www.escotechnologies.com](http://www.escotechnologies.com) or via e-mail to [klowrey@escotechnologies.com](mailto:klowrey@escotechnologies.com).

### Transfer Agent and Registrar

Shareholder inquiries concerning lost certificates, transfer of shares or address changes should be directed to: Computershare Shareholder Services  
P.O. Box 505000  
Louisville, KY 40233-5000  
(800) 368-5948  
[www.computershare.com/investor](http://www.computershare.com/investor)

### Capital Stock Information

ESCO Technologies Inc. common stock shares (symbol ESE) are listed on the New York Stock Exchange. There were approximately 1,835 holders of record of shares of common stock at November 1, 2021.

### Independent Registered Public Accounting Firm

KPMG LLP  
10 South Broadway, Suite 900  
St. Louis, MO 63102

## Management and Board of Directors

### Executive Officers

**Vic Richey**  
Chairman,  
Chief Executive Officer  
& President

**Chris Tucker**  
Senior Vice President  
& Chief Financial Officer

**Dave Schatz**  
Senior Vice President,  
Secretary &  
General Counsel

### Corporate Staff

**Deborah Boniske**  
Vice President  
Human Resources

**Mark Dunger**  
Vice President Planning  
& Development

**Kate Lowrey**  
Vice President  
Investor Relations

**Lara Crews**  
Vice President  
& Treasurer

**Richard Garretson**  
Vice President  
Tax

**Michele Marren**  
Vice President &  
Corporate Controller

**Charles Kretschmer**  
Vice President

### Operating Executives

**Mike Alfred**  
President  
Crissair, Inc.

**Rowland Ellis**  
President  
PTI Technologies Inc.

**May Scally**  
Chief Operating Officer  
Morgan Schaffer Ltd.

**Gino Amadi**  
President  
I.S.A. Altanova  
Group S.r.l.

**Joe McCadden**  
President  
Globe Composite  
Solutions, LLC

**Tom Shaw**  
President  
Mayday  
Manufacturing Co.

**Bruce Butler**  
President  
ETS-Lindgren Inc.

**Bryan Saylor**  
Utility Solutions Group  
President & President  
Doble Engineering  
Company

**Matt Stafford**  
President  
VACCO Industries

**Sam Chapetta**  
Aerospace & Defense  
Group President

**Evan Vogel**  
President  
NRG Systems, Inc.

### Board of Directors

**Patrick M. Dewar**<sup>2</sup>  
Chief Executive  
The Trenton Group, LLC

**Robert J. Phillippy**<sup>2,4</sup>  
Executive Advisor;  
Former President and  
Chief Executive Officer  
of Newport Corporation

**Larry W. Solley**<sup>3,4</sup>  
Retired Executive  
Vice President  
Emerson Electric Co.

**Vinod M. Khilnani**<sup>2,3</sup>  
Retired Executive  
Chairman  
CTS Corporation

**Victor L. Richey**<sup>1</sup>  
Chairman, Chief  
Executive Officer  
& President

**James M. Stolze**<sup>1,2,3</sup>  
Retired Vice President &  
Chief Financial Officer  
Stereotaxis, Inc.

**Leon J. Olivier**<sup>4</sup>  
Retired Executive  
Vice President  
Eversource Energy

**Gloria L. Valdez**<sup>4</sup>  
Retired Deputy  
Assistant Secretary  
of the Navy

1 Executive Committee

2 Audit and Finance Committee

3 Human Resources and Compensation Committee

4 Nominating and Corporate Governance Committee

This annual report is printed on recycled paper, made in the USA, with 10% post-consumer waste.



ESCO Technologies Inc.  
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[www.escotechnologies.com](http://www.escotechnologies.com)