HII

'21

DELIVERING TO AN ALL-DOMAIN FORCE.

2021 ANNUAL REPORT

Richard M. McCool (LPD 29) is being built by HII's Ingalls Shipbuilding division. It will be the 13th amphibious transport dock in the *San Antonio* class.

PROVEN PERFORMANCE

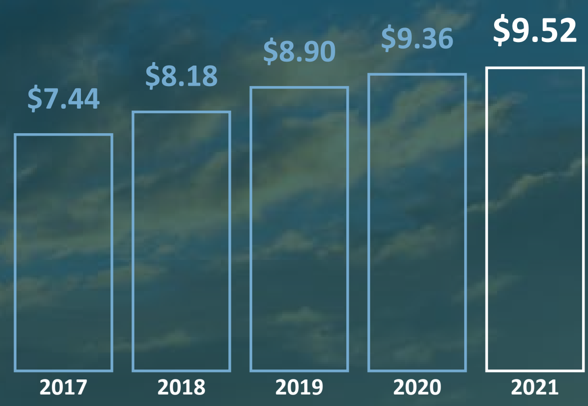
$48.5 BILLION

CURRENT BACKLOG

$100 MILLION

ANNUAL SPENDING ON WORKFORCE DEVELOPMENT

Consolidated Revenue
($ in billions)



OPERATING RESULTS

($ in millions, except per share amounts)	**2021**	2020	2019	2018	2017
Sales and Service Revenues	**$ 9,524**	$ 9,361	$ 8,899	$ 8,176	$ 7,441
Operating Income	**513**	799	736	951	881
Operating Margin	**5.4 %**	8.5 %	8.3 %	11.6 %	11.8 %
Adjusted Segment Operating Income [(1)]	**683**	555	660	663	688
Adjusted Segment Operating Margin [(1)]	**7.2 %**	5.9 %	7.4 %	8.1 %	9.2 %
Diluted EPS	**13.50**	17.14	13.26	19.09	10.46
Adjusted Diluted EPS [(2)]	**13.03**	10.67	11.43	12.51	9.45
Net Cash Provided by Operating Activities	**760**	1,093	896	914	814

[(1)] Adjusted Segment Operating Income and Adjusted Segment Operating Margin are non-GAAP financial measures that exclude operating FAS/CAS adjustment, non-current state income taxes and goodwill impairment charges. Please see the page that precedes the back cover of this report for information on excluded items and a reconciliation of these measures to GAAP.

[(2)] Adjusted Diluted EPS is a non-GAAP financial measure that excludes the tax effected FAS/CAS adjustment, goodwill impairment charges, long-lived asset impairment charges and losses on early extinguishment of debt. It also excludes the tax expense related to the 2017 Tax Act and discretionary pension contributions. Please see the page that precedes the back cover of this report for information on excluded items and a reconciliation of these measures to GAAP.

ADVANCING OUR TRANSFORMATION

To our shareholders, employees, customers, suppliers and communities:

HII is proud to have recognized its 10th anniversary on March 31, 2021 as an independent, publicly traded company. It was a milepost for this company and one we should all be proud to celebrate. The moment also allowed us to take stock of our efforts to position HII for the upcoming decade and beyond.

While our 44,000 strong workforce continues to deliver the most powerful and resilient maritime platforms ever built to our defense customers, HII also leads in advanced technologies that address emerging national security threats. We are now positioned as a top provider of unmanned maritime solutions and government cybersecurity and training simulators.

One of the principal examples of our efforts to continuously evolve with the demands of our national defense customers is the acquisition of Alion Science & Technology. This segment is poised for continued strong growth with a new business qualified pipeline that is very robust at over $20 billion, and accelerating still.

As we set ourselves up for future success, we must also address the challenges we are presented with today. HII's employees continue to demonstrate an uncompromising commitment to safety, quality, cost and schedule, despite the challenges created by COVID-19 and its variants. We will continue to follow our contractual direction when it comes to vaccines in order to create the safest workplace environment possible.

Despite a difficult operating environment in 2021, HII was still able to execute and deliver strong financial results. In 2021, HII produced $9.5 billion in revenues, a 1.7% increase over the prior year, and the company's total backlog still remains at a historically high level of $48.5 billion, as of December 31, 2021.

In 2021, HII delivered guided missile destroyer *Frank E. Petersen Jr.* (DDG 121) to our U.S. Navy customer. We also christened guided missile destroyer *Lenah Sutcliffe Higbee* (DDG 123), amphibious transport dock *Fort Lauderdale* (LPD 28) and *Virginia*-class attack submarine *New Jersey* (SSN 796).

HII'S EFFORTS DURING 2021 HAVE CONTINUED POSITIONING THE COMPANY TO GENERATE VALUE IN THE YEARS AND DECADES TO COME.

Adm. Kirkland H. Donald *(left)*
Mike Petters

We celebrated the first cut of steel on *Ford*-class aircraft carrier *Doris Miller* (CVN 81), and we continue to make great progress on the first-in-class ballistic missile submarine *Columbia* (SSBN 826).

While we proudly celebrate these milestones, we are excited about the contracts awarded in 2021 that grow HII's historic backlog and position us for future success.

Newport News Shipbuilding was awarded a $2.9 billion contract for the refueling and complex overhaul of the nuclear-powered aircraft carrier USS *John C. Stennis* (CVN 74). Newport News was also awarded a contract modification for the 10th *Virginia*-class submarine in Block V, bringing the total contract value to $9.8 billion.

Ingalls Shipbuilding received a $113.6 million award to enable long-lead-time material and advance procurement activities for amphibious assault ship LHA 9, bringing the total advance funding for the ship to $651 million. Ingalls was also awarded a $724 million contract for planning yard services in support of in-service amphibious ships.

Technical Solutions received a contract to provide services for U.S. Africa Command and partner nations that has a total potential value of $346 million. The division was also awarded a five-year contract with a total value of $273 million to support the U.S. Navy's carrier engineering maintenance assist team, surface engineering maintenance assist team for west coast surface ships, and other maintenance and material readiness programs.

As we review our success in 2021 in generating value and growth for HII, we also look ahead with great anticipation and excitement to a new chapter for HII under Chris Kastner's leadership as president and CEO.

Thank you for your interest and investment in HII and for supporting our commitments to our employees, communities, suppliers, shareholders and customers.

Kirkland H. Donald

Adm. Kirkland H. Donald
U.S. Navy (Ret.)
Chairman of the Board

Mike Petters

Mike Petters
President and CEO

PEOPLE

HII's most valuable asset is the 44,000-plus employees who provide engineering and defense technologies solutions to our government and commercial customers across the globe. The challenges of 2021 reinforced that employees and their families count on HII for health care and a safe work environment, and in turn, HII counts on a healthy workforce to continue to meet the critical national security needs of our customers.

Our workforce spans skills, backgrounds and demographics, including more than 7,500 veterans as well as 7,300 engineers and designers. HII's diverse team is grounded in a culture centered on fundamental company values: integrity, safety, respect, engagement, responsibility and performance. While offering best-in-class benefits to its employees, HII also invests in nurturing its talent pipeline, spending $100 million each year on workforce development, including the shipbuilding apprentice schools in Virginia and Mississippi, and our tuition reimbursement program that promotes continued education among existing employees.

With the long-term health and welfare of the defense industrial base in mind, HII President and CEO Mike Petters believes early childhood education is vital. Under his leadership the company supports the HII Scholarship Fund, Maritime Training Academy, middle school STEM mentorship and other education-related initiatives in support of the future workforce.

HII also invests in the communities where our employees live and work. In 2021, the company contributed more than $6 million in charitable giving to the United Way, American Red Cross and American Heart Association, among other nonprofit and charitable organizations.

7,500+ Veterans

7,300+ Engineers and Designers

44,000+ Employees

1: Jimmy Beitia, Ingalls Shipbuilding; **2:** Brandon McElrone, Technical Solutions; **3:** Gary Latson, Technical Solutions; **4:** Janet Wang, Technical Solutions; **5:** Joieree Dawkins, Newport News Shipbuilding; **6:** Dianna Genton, Ingalls Shipbuilding

(Top) Keaton Amthor, HII Corporate;
(Bottom) Gina Shaw, Technical Solutions
Carolyn Martin, Technical Solutions

CORPORATE RESPONSIBILITY

HII takes seriously its responsibility to the communities where our employees live and work, and to the broader environmental and social factors and implications of our business.

HII's motto of "Hard Stuff Done Right" speaks to the complex challenges we address daily in the myriad environments in which we operate across the globe. These words also convey our unwavering commitment to doing the right thing in an ethical manner. That includes being a responsible corporation focused on operating in a manner that is consistent with our values and considers all of our stakeholders.

We are committed to delivering products of exceptional quality to our customers within cost and schedule requirements, and to the safety, health, welfare and development of our employees. We are also committed to maintaining and strengthening **a diverse and inclusive workforce** and culture that provides a mutually beneficial relationship with our suppliers. It is a culture that **drives** continuous improvement and transformation of our communities while meeting the expectations of our shareholders. **In 2021 we published our first corporate responsibility report, demonstrating our commitment to transparency in our sustainability efforts and our continued focus on responsibility as an enabler of growth, resiliency and shareholder value.**

Demetrius Deflanders, Ingalls Shipbuilding

ENTERPRISE DIGITAL TRANSFORMATION

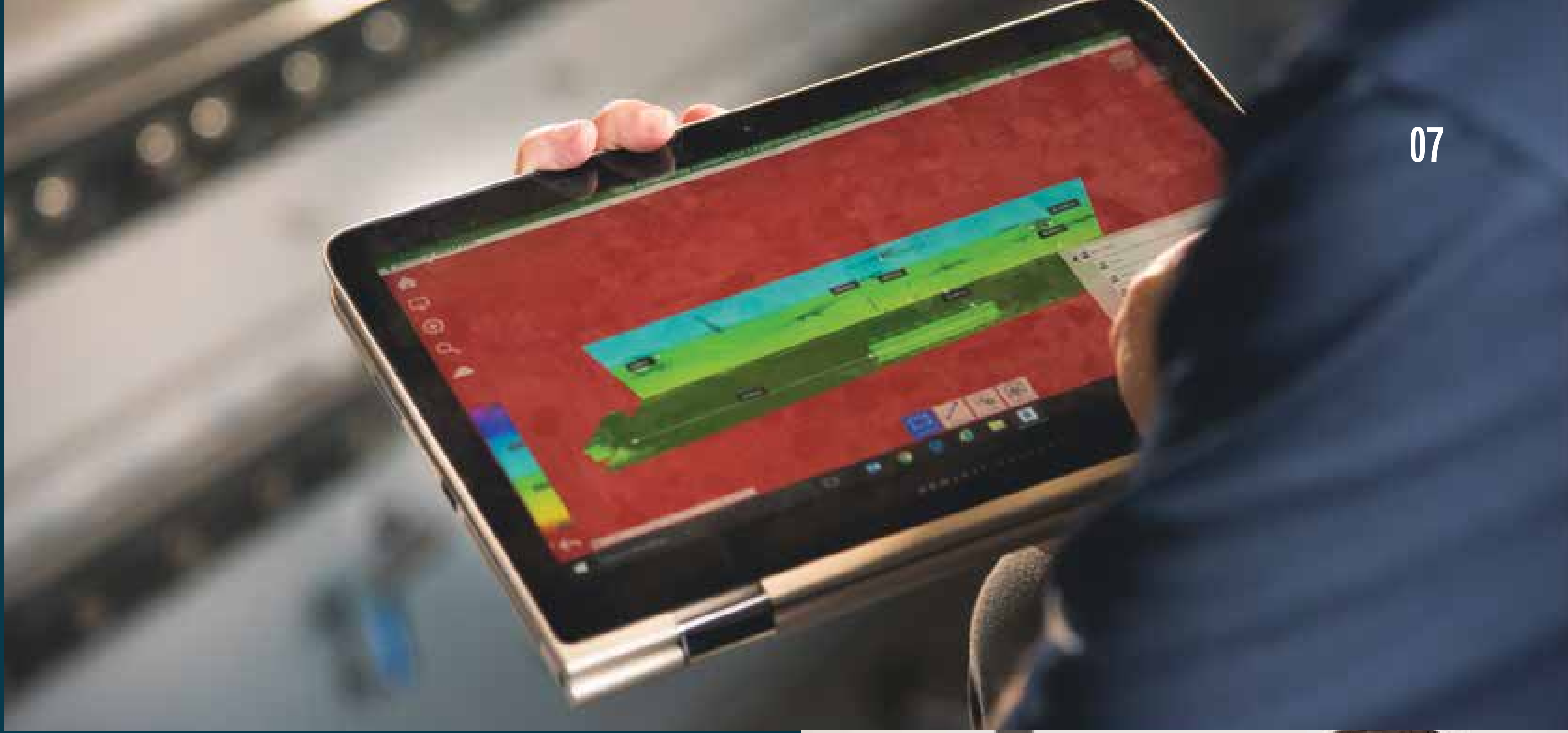
HII continues to transform the ways it does business by integrating digital technologies throughout the enterprise, creating scalable opportunities and efficiencies that drive toward cost savings to our customers.

Affecting the full breadth of our workforce – from our skilled craft employees, engineers, designers, accountants, cybersecurity experts and more – HII's digital transformation efforts reach all areas of business.

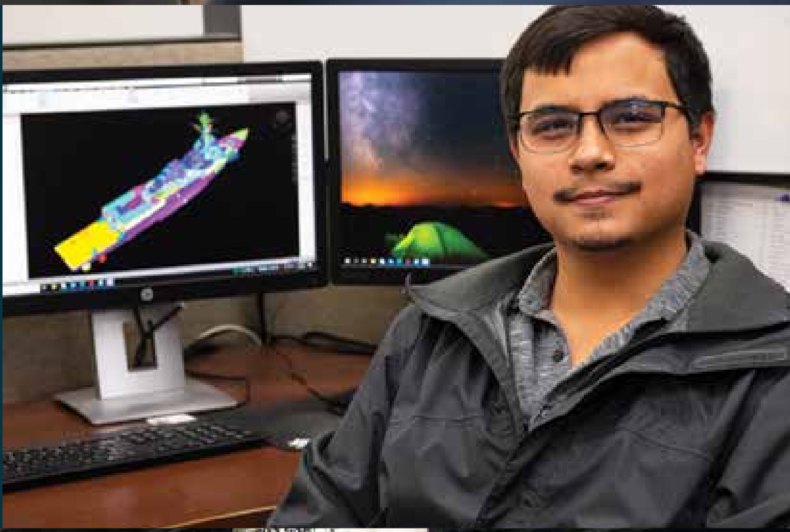
On the production line, Integrated Digital Shipbuilding (iDS) leverages cutting-edge digital tools to implement model-based systems engineering. The processes create digital efficiencies for deckplate employees in assembling the world's most complex ships.

As the enterprise shifts toward increasingly digital business processes, security of its data is a company imperative. HII's Digital Defense Modernization (DDM) initiative prioritizes expanded, secure access to a streamlined set of technology tools, in compliance with Cybersecurity Maturity Model Certification (CMMC).

The scalability of HII's enterprise digital transformation initiatives began with the launch of the company's Cloud Center of Excellence in 2019. This effort delivered integrated best-in-class enterprise tools within human resources, as well as comprehensive enterprise risk management (ERM) systems within our finance and accounting departments.



TOUCHING OUR SKILLED CRAFT EMPLOYEES, ENGINEERS, DESIGNERS, ACCOUNTANTS, CYBERSECURITY EXPERTS AND MORE, HII'S DIGITAL TRANSFORMATION EFFORTS AFFECT ALL AREAS OF BUSINESS.



(Top) Integrated Digital Shipbuilding allows shipbuilders to be constantly connected to a digital ecosystem of real-time accurate information, driving greater levels of performance.

(Middle), Zachary Saucier, Ingalls Shipbuilding

(Bottom), from left to right) Newport News Shipbuilders: Haley Mitchell, Bryan Staha, Mariana Cintron Garcia

HII CONSTRUCTS THE MOST POWERFUL AND SURVIVABLE NAVAL SHIPS EVER BUILT

For more than a century, HII's Newport News and Ingalls shipbuilding divisions in Virginia and Mississippi have built more ships in more ship classes than any other U.S. naval shipbuilder. Our current hot production lines strengthen the nation's supplier base to build warships with unsurpassed capability and the capacity to deliver the fleet our nation needs today and for the future.

For 40 years, the U.S. Navy has also entrusted HII to maintain and modernize the vast majority of its fleet. From small watercraft to submarines, combatants and aircraft carriers, our systems and maintenance experts facilitate for the Navy a high state of readiness.

USS *JOHN C. STENNIS* (CVN 74)
Newport News Shipbuilding is completing the refueling and complex overhaul of aircraft carrier USS *John C. Stennis* (CVN 74).

DORIS MILLER (CVN 81)
Newport News Shipbuilding celebrated the first cut of steel on *Ford*-class aircraft carrier *Doris Miller* (CVN 81).

FORT LAUDERDALE (LPD 28)
Ingalls Shipbuilding completed builder's sea trials for *San Antonio*-class amphibious transport dock *Fort Lauderdale* (LPD 28).

NEW JERSEY (SSN 796)

Newport News Shipbuilding christened *Virginia*-class attack submarine *New Jersey* (SSN 796).

JACK H. LUCAS (DDG 125)

Ingalls Shipbuilding launched Flight III *Arleigh Burke*-class guided missile destroyer *Jack H. Lucas* (DDG 125). The Aegis light-off milestone was also achieved.

HII's 2021 achievements include:

Delivered guided missile destroyer *Frank E. Petersen Jr.* (DDG 121) to our U.S. Navy customer.

Celebrated the first cut of steel on *Ford*-class aircraft carrier *Doris Miller* (CVN 81).

Christened guided missile destroyer *Lenah Sutcliffe Higbee* (DDG 123), amphibious transport dock *Fort Lauderdale* (LPD 28) and *Virginia*-class attack submarine *New Jersey* (SSN 796).

Awarded a $2.9 billion contract for the refueling and complex overhaul of *Nimitz*-class aircraft carrier *USS John C. Stennis* (CVN 74).

Awarded a contract modification for the 10th *Virginia*-class submarine in Block V, bringing the total contract value to $9.8 billion.

Received a $113.6 million award to enable long-lead-time material and advance procurement activities for amphibious assault ship LHA 9, bringing the total advance funding for the ship to $651 million.

Awarded a $724 million contract for planning yard services in support of in-service amphibious ships.

Received a contract to provide services for U.S. Africa Command and partner nations that has a total potential value of $346 million.

Awarded a five-year contract with a total value of $273 million to support the U.S. Navy's carrier engineering maintenance assist team.

MISSION TECHNOLOGIES

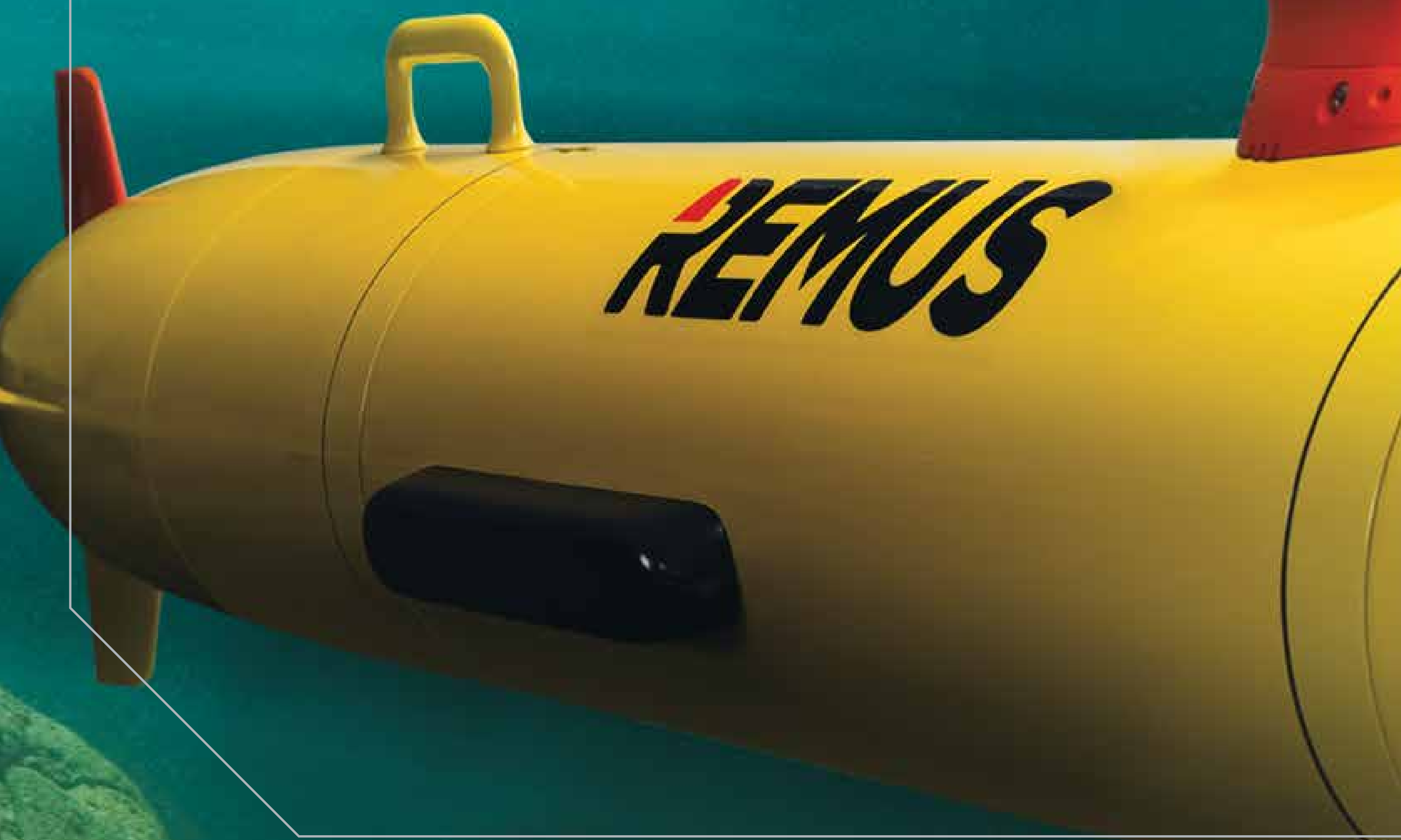
HII continues to anticipate the evolving needs of our defense customers and shape solutions in parallel. That means acquiring the technology and people that allow us to excel in emerging unmanned capabilities. HII provides design, autonomy, manufacturing, testing, operations and sustainment of unmanned systems, including unmanned underwater vehicles and unmanned surface vessels for customers in more than 30 countries.

HII also strives to deliver technologies and solutions that support and enable an all-domain force of warfighters who coordinate across domains faster and with greater effect than their adversaries.

To that end, we design, develop, integrate and manage the sensors, systems and other assets necessary to support integrated intelligence, surveillance and reconnaissance operations, exploitation and analysis for the intelligence community, the military services, geographic and functional combatant commands and Defense Department agencies.

Key M&A activity — including the acquisition of Alion Science & Technology in 2021 — has aligned HII to become a significant provider of advanced engineering and research and development services in the areas of intelligence, surveillance and reconnaissance; military training and simulation; cyber and artificial intelligence; machine learning data analytics; and other next-generation technology-based solutions.

Our all-domain cyber ranges in the cloud and cost-effective capabilities meet mission requirements without the need for additional hardware purchases.

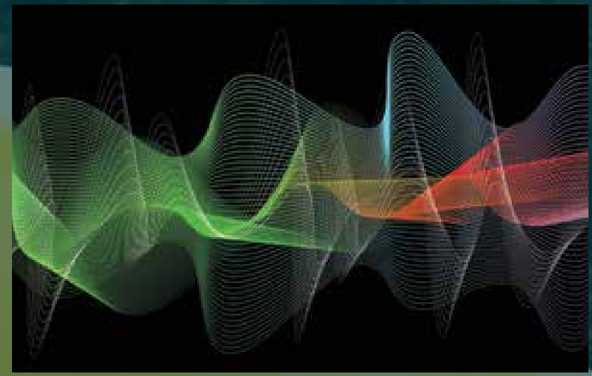


REMUS 100, a low logistics unmanned underwater vehicle, is one of the most field-proven UUVs in the world.

HII ALSO STRIVES TO DELIVER TECHNOLOGIES AND SOLUTIONS THAT SUPPORT AND ENABLE AN ALL-DOMAIN FORCE OF WARFIGHTERS WHO COORDINATE ACROSS DOMAINS FASTER AND WITH GREATER EFFECT THAN THEIR ADVERSARIES

INTELLIGENCE SURVEILLANCE AND RECONNAISSANCE

TRAINING/VIRTUAL REALITY



CYBER AND ELECTRONIC WARFARE

ARTIFICIAL INTELLIGENCE

HII

HARD STUFF.
DONE RIGHT.

FORM 10-K ’21

HII

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, 2021
OR

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

Commission file number 001-34910

HUNTINGTON INGALLS INDUSTRIES, INC.

(Exact name of registrant as specified in its charter)

Delaware	**90-0607005**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

4101 Washington Avenue, Newport News, Virginia 23607
(Address of principal executive offices and zip code)

(757) 380-2000
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which
Common Stock	HII	New York Stock Exchange

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

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

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

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

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

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

Large Accelerated Filer	☒	Accelerated filer	☐
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 issued its audit report. ☒

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

As of June 30, 2021, the aggregate market value (based upon the closing price of the stock on the New York Stock Exchange) of the registrant's common stock held by non-affiliates was approximately $8,465 million.

As of February 4, 2022, 39,989,022 shares of the registrant's common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement to be filed with the Securities and Exchange Commission pursuant to Rule 14A for the registrant's 2022 Annual Meeting of Stockholders are incorporated by reference in Part III of this Form 10-K.

TABLE OF CONTENTS

PART I

ITEM 1. BUSINESS

History and Organization

Huntington Ingalls Industries, Inc. ("HII", the "Company", "we", "us", or "our") is America's largest military shipbuilding company and a provider of professional services to partners in government and industry. For more than a century, our Ingalls Shipbuilding segment ("Ingalls") in Mississippi and Newport News Shipbuilding segment ("Newport News") in Virginia have built more ships in more ship classes than any other U.S. naval shipbuilder. Our Technical Solutions segment provides a range of services to government and commercial customers.

We conduct most of our business with the U.S. Government, primarily the Department of Defense ("DoD"). As prime contractor, principal subcontractor, team member, or partner, we participate in many high-priority U.S. defense programs. Ingalls includes our non-nuclear ship design, construction, repair, and maintenance businesses. Newport News includes all of our nuclear ship design, construction, overhaul, refueling, and repair and maintenance businesses. We also provide a wide range of professional services, including defense and federal solutions ("DFS"), nuclear and environmental services, and unmanned systems, through our Technical Solutions segment. Headquartered in Newport News, Virginia, we employ approximately 44,000 people domestically and internationally.

Ingalls

Through our Ingalls segment, we design and construct non-nuclear ships for the U.S. Navy and U.S. Coast Guard, including amphibious assault ships, expeditionary warfare ships, surface combatants, and national security cutters ("NSC"). We are the sole builder of amphibious assault ships and one of two builders of surface combatants for the U.S. Navy. We are the sole builder of large multi-mission NSCs for the U.S. Coast Guard. Our Ingalls segment is located in Pascagoula, Mississippi on 800 acres along the Pascagoula River. This shipyard offers a collection of manufacturing capabilities that includes a 660-ton gantry crane and a Land Based Test Facility.

Amphibious Assault Ships

We construct amphibious assault ships and expeditionary warfare ships for the U.S. Navy, which include U.S. Navy large deck amphibious assault ships ("LHA") and amphibious transport dock ships ("LPD"), respectively. The LHA is a key component of the Department of the Navy's requirement for Expeditionary Strike Groups/Amphibious Readiness Groups, and design, construction, and modernization of LHAs are core to our Ingalls operations. In 2007, we were awarded the construction contract for USS *America* (LHA 6), the first in a class of enhanced amphibious assault ships designed from the keel up to be an aviation optimized Marine assault platform. We delivered USS *Tripoli* (LHA 7) in 2020 and are currently constructing *Bougainville* (LHA 8). In 2020, we were awarded a long-lead-time material and construction contract for LHA 9 (unnamed).

The LPD program is a long-running production program of expeditionary warfare ships in which we have generated efficiencies through ship-over-ship learning. We delivered USS *Portland* (LPD 27) in 2017 and USS *John P. Murtha* (LPD 26) in 2016, and we are currently constructing *Fort Lauderdale* (LPD 28), *Richard M. McCool Jr.* (LPD 29), and *Harrisburg* (LPD 30). In 2020, we were awarded a contract to construct *Pittsburgh* (LPD 31).

Surface Combatants

We are a design agent for, and one of only two companies that constructs, *Arleigh Burke* class (DDG 51) guided missile destroyers, a class of surface combatant. We have delivered 33 *Arleigh Burke* class (DDG 51) destroyers to the U.S. Navy, including *Frank E. Petersen Jr.* (DDG 121) in 2021, USS *Delbert D. Black* (DDG 119) in 2020, and USS *Paul Ignatius* (DDG 117) in 2019. In 2013, we were awarded a multi-year contract totaling $3.3 billion for construction of five *Arleigh Burke* class (DDG 51) destroyers, of which three have been delivered. We are currently constructing the remaining two ships: *Lenah H. Sutcliffe Higbee* (DDG 123) and *Jack H. Lucas* (DDG 125). In 2018, we were awarded a multi-year contract totaling $5.1 billion for construction of six additional *Arleigh Burke* class (DDG 51) destroyers. In 2020, we were awarded a contract to construct an additional *Arleigh Burke* class (DDG 51) destroyer.

National Security Cutters

The U.S. Coast Guard's recapitalization program is designed to replace aging and operationally expansive ships and aircraft used to conduct missions in excess of 50 miles from the shoreline. The flagship of this program is the *Legend* class NSC, a multi-mission platform we designed and continue to build. We delivered USCGC *Kimball* (NSC 7), USCGC *Midgett* (NSC 8), and USCGC *Stone* (NSC 9) to the U.S. Coast Guard in 2018, 2019, and 2020, respectively. In 2018, we were awarded long-lead-time material and construction contracts for *Calhoun* (NSC 10) and *Friedman* (NSC 11), which are currently under construction.

Newport News

The core business of our Newport News segment is designing and constructing nuclear-powered aircraft carriers and submarines, and the refueling and overhaul and the inactivation of nuclear-powered aircraft carriers. Our Newport News shipyard is located on approximately 550 acres near the mouth of the James River, which adjoins the Chesapeake Bay. The shipyard has two miles of waterfront property and heavy industrial facilities, which include seven graving docks, a floating dry dock, two outfitting berths, five outfitting piers, module outfitting facilities, and various other workshops. Our Newport News shipyard also has a 2,170-foot dry dock serviced by a 1,050-ton gantry crane capable of supporting two aircraft carriers at one time.

Design, Construction, Refueling and Complex Overhaul, and Inactivation of Aircraft Carriers

Engineering, design, and construction of U.S. Navy nuclear aircraft carriers ("CVN") are core to Newport News operations. Aircraft carriers are the largest ships in the U.S. Navy's fleet, with a displacement of over 90,000 tons. Newport News has designed and built more than 31 aircraft carriers for the U.S. Navy since 1933, including all ten *Nimitz* class (CVN 68) aircraft carriers currently in active service, as well as the first ship of the next generation *Gerald R. Ford* class (CVN 78) aircraft carriers.

Beginning in 2009, we received contract awards totaling $7.8 billion for construction preparation, detail design, and construction of the second *Gerald R. Ford* class (CVN 78) aircraft carrier, *John F. Kennedy* (CVN 79). In addition, we have received awards valued at $15.3 billion for detail design and construction of the *Gerald R. Ford* class (CVN 78) aircraft carriers *Enterprise* (CVN 80) and *Doris Miller* (CVN 81).

We continue to be the exclusive prime contractor for nuclear aircraft carrier refueling and complex overhaul ("RCOH"). Each RCOH takes nearly four years to complete, with the work accounting for approximately 35% of all maintenance and modernization during an aircraft carrier's 50 year service life. RCOH services include propulsion work (refueling of reactors; propulsion plant modernization; and propulsion plant repairs), restoration of service life (dry docking, tank, and void maintenance; hull, shafting, propellers, and rudders; launch and recovery system; piping repairs; and component refurbishment), and modernization (electrical systems; aviation support systems; warfare; interoperability; and environmental compliance). We provide ongoing maintenance services for the U.S. Navy aircraft carrier fleet through both RCOH and fleet support across the globe.

We are currently performing the RCOH of USS *George Washington* (CVN 73) and USS *John C. Stennis* (CVN 74). We believe our position as the exclusive designer and builder of nuclear-powered aircraft carriers, our RCOH performance on the first seven *Nimitz* class (CVN 68) carriers, our highly trained workforce, the capital-intensive nature of RCOH work, and high barriers to entry due to its nuclear component strongly position us for RCOH contract awards on the remaining *Nimitz* class (CVN 68) carriers, as well as future RCOH work on *Gerald R. Ford* class (CVN 78) aircraft carriers.

We received a contract in 2013 to inactivate the decommissioned *Enterprise* (CVN 65), the world's first nuclear-powered aircraft carrier, which was built by us and commissioned in 1961. The decommissioned *Enterprise* (CVN 65) inactivation was completed in the second quarter of 2018. Aircraft carriers have a lifespan of approximately 50 years, and we believe the ten *Nimitz* class (CVN 68) carriers we delivered that are currently in active service, as well as *Gerald R. Ford* class (CVN 78) aircraft carriers, present significant opportunities for inactivation contracts as they reach the end of their lifespans. We believe we are well positioned as the U.S. Navy's shipyard of choice for these contract awards.

Design and Construction of Nuclear-Powered Submarines

We are one of only two companies in the United States capable of designing and building nuclear-powered submarines for the U.S. Navy. Newport News has delivered 62 submarines to the U.S. Navy since 1960, comprised of 48 fast attack and 14 ballistic missile submarines. Of the 52 nuclear-powered fast attack submarines currently in active service, 25 were delivered by Newport News. Our nuclear submarine program, located at our Newport News shipyard, includes construction, engineering, design, research, and integrated planning.

Virginia *Class (SSN 774) Submarines*

We have a teaming agreement with Electric Boat Corporation ("Electric Boat"), a division of General Dynamics Corporation ("General Dynamics"), to build *Virginia* class (SSN 774) fast attack nuclear submarines. Under the teaming arrangement, we build the stern, habitability and machinery spaces, torpedo room, sail, and bow, while Electric Boat builds the engine room, control room, and pressure hull structure. Work on the reactor plant and the final assembly, test, outfit, and delivery of the submarines to the U.S. Navy alternates between Electric Boat and us.

The four submarines of the first block and six submarines of the second block of *Virginia* class (SSN 774) submarines have been delivered. In December 2008, the U.S. Navy signed a contract for eight Block III *Virginia* class (SSN 774) submarines. The contract required delivery of one *Virginia* class (SSN 774) submarine per year for the first two years, and increased production to two submarines per year for the remaining six Block III boats. The first submarine under this contract was delivered in 2014, and the last submarine of Block III was delivered in 2019. In 2014, the team was awarded a construction contract for the fourth block of ten *Virginia* class (SSN 774) submarines. The first submarine of the Block IV contract was delivered in 2020, and the remaining boats are in the module outfitting, final assembly, and test phases of construction. In 2019, the team was awarded a construction contract for the fifth block of nine *Virginia* class (SSN 774) submarines, and, in 2021, an option for a 10th submarine was exercised, continuing the two submarines per year production rate that began on the third block. The fiscal year 2021 appropriations act included funding for the 10th submarine in Block V, and the fiscal year 2022 National Defense Authorization Act recommends continued procurement of two *Virginia* class (SSN 774) submarines per fiscal year. All ten boats of the Block V contract are in the early manufacturing and advance procurement phases.

Columbia *Class (SSBN 826) Submarines*

Newport News is participating in design and construction of the *Columbia* class (SSBN 826) submarine as a replacement for the current aging *Ohio* class nuclear ballistic missile submarines ("SSBN"), which were first introduced into service in 1981. The *Ohio* class SSBN includes 14 nuclear ballistic missile submarines and four nuclear cruise missile submarines ("SSGN"). The *Columbia* class (SSBN 826) program currently anticipates 12 new ballistic missile submarines. We perform design work as a subcontractor to Electric Boat, and we have entered into a teaming agreement with Electric Boat to build modules for the entire *Columbia* class (SSBN 826) submarine program that leverages our *Virginia* class (SSN 774) experience. We were previously awarded contracts from Electric Boat to begin integrated product and process development and provide long–lead-time material and advance construction for the *Columbia* class (SSBN 826) program. Contract award for the first two *Columbia* class submarines (SSBN 826 and SSBN 827) and construction start of the first *Columbia* class (SSBN 826) submarine occurred in late 2020.

Naval Nuclear Support Services

Newport News provides additional services to and in support of the U.S. Navy, ranging from services supporting the Navy's carrier and submarine fleets to maintenance services at U.S. Navy training facilities. Fleet support services include design, construction, maintenance, and disposal activities for in-service U.S. Navy nuclear ships worldwide through mobile and in-house capabilities. We also provide maintenance services on nuclear reactor prototypes, such as those at the Kenneth A. Kesselring Site, a research and development facility in New York that supports the U.S. Navy.

Technical Solutions

The Technical Solutions segment includes businesses that are focused on life-cycle sustainment services to the U.S. Navy fleet and other maritime customers; high-end information technology ("IT") and mission-based solutions for DoD, intelligence, and federal civilian customers; and nuclear management and operations and environmental management services for the Department of Energy ("DoE"), DoD, state and local governments, and private sector companies. This segment was established to unify multiple strategic acquisitions, including the acquisition of Alion Science and Technology in August 2021. The Technical Solutions segment is comprised of three business units as follows:

Defense and Federal Solutions ("DFS")

DFS is focused on solving national security challenges for the DoD, the intelligence community, and federal civilian agencies around the globe. The group's expertise includes maritime fleet sustainment; intelligence, surveillance, and reconnaissance; cyber operations; secure enterprise information technology engineering and operations; advanced modeling, simulation, and training; and logistics management.

Nuclear and Environmental Services

Our nuclear and environmental services focus on nuclear management and operations. We provide site management, nuclear and industrial facilities operations and maintenance, decontamination and decommissioning, and radiological and hazardous waste management services to DoE, DoD, state and local governments, and private sector companies. As part of our nuclear and environmental services, we participate in joint ventures, including Newport News Nuclear BWXT Los Alamos, LLC ("N3B"), Mission Support and Test Services, LLC ("MSTS"), and Savannah River Nuclear Solutions, LLC ("SRNS"). We have a 51% ownership interest in N3B, which, in 2017, was awarded the Los Alamos Legacy Cleanup Contract at the DoE/National Nuclear Security Administration's Los Alamos National Laboratory located northwest of Santa Fe, New Mexico. We have a 23% ownership interest in MSTS, which, in 2017, was awarded a contract for site management and operations at the Nevada National Security Site located northwest of Las Vegas, Nevada. We have a 34% ownership interest in SRNS, which provides site management and operations at the DoE's Savannah River Site near Aiken, South Carolina.

Unmanned Systems

Our unmanned systems products and services create advanced unmanned maritime solutions for defense, marine research, and commercial applications. Serving customers in more than 30 countries, unmanned systems provides design, autonomy, manufacturing, testing, operations, and sustainment of unmanned systems, including unmanned underwater vehicles and unmanned surface vessels.

Customers

Our revenues are primarily derived from the U.S. Government, including the U.S. Navy, the U.S. Coast Guard, the DoD, the DoE, and other federal agencies. In 2021, 2020, and 2019, approximately 90%, 88%, and 87%, respectively, of our revenues were generated from the U.S. Navy.

Intellectual Property

We develop new technologies that are incorporated into the products we produce for our customers. We also develop new manufacturing processes and systems-integration technologies and processes that we use to produce our products and to provide services to our customers. In addition to owning intellectual property, we license intellectual property rights to and from other parties. The U.S. Government generally receives non-exclusive licenses to certain intellectual property we develop in the performance of U.S. Government contracts and unlimited license rights in technical data developed under our U.S. Government contracts when such data is developed entirely at government expense. The U.S. Government may use or authorize other parties to use the intellectual property we license to the government. While our intellectual property rights are important to our operations, we do not believe that any existing patent, license, or other intellectual property right is of such importance that its loss or termination would have a material impact on our business.

Seasonality

No material portion of our business is seasonal. The timing of our revenue recognition is based on several factors, including the timing of contract awards, the incurrence of contract costs, contract cost estimation, and unit deliveries. See Note 2: Summary of Significant Accounting Policies in Item 8.

Backlog

As of December 31, 2021 and 2020, our total backlog was approximately $48.5 billion and $46.0 billion, respectively. We expect approximately 19% of backlog at December 31, 2021, to be converted into sales in 2022.

Raw Materials

The most significant material we use is steel. Other materials we use in large quantities include paint, aluminum, pipe, electrical cable, and fittings. All of these materials are currently available in adequate supply. In connection with our U.S. Government contracts, we are required to procure certain materials and component parts from supply sources approved by the U.S. Government. For long-term contracts, we generally solicit price quotations for many of our material requirements from multiple suppliers to ensure competitive pricing. While we have not generally been dependent upon any one supply source, we currently have only one supplier for certain component parts as a result of consolidation in the defense industry. We believe these single source suppliers, as well as our overall supplier base, are adequate to meet our foreseeable needs. We have mitigated some supply risk by negotiating long-term agreements with certain raw material suppliers. In addition, we have mitigated price risk related to raw material purchases through certain contractual arrangements with customers.

Regulatory Matters

We operate in heavily regulated markets and must comply with a variety of laws and regulations, including those relating to the award, administration, and performance of U.S. Government contracts, as well as legal and regulatory requirements relating to cyber security, environmental protection, and our nuclear operations. Government contracting requirements increase our contract performance costs and compliance costs and risks. See Risk Factors in Item 1A.

Government Contracting

We are overseen and audited by the U.S. Government and its agencies, including the U.S. Navy's Supervisor of Shipbuilding, the Defense Contract Audit Agency ("DCAA"), and the Defense Contract Management Agency ("DCMA"). These agencies evaluate our contract performance, cost structures, and compliance with applicable laws, regulations, and standards, as well as the adequacy of our business systems and processes relative to U.S. Government requirements. If an audit uncovers improper or illegal activities, we may be subject to administrative, civil, or criminal proceedings, which could result in fines, penalties, repayments, or compensatory, treble, or other damages. Certain U.S. Government findings against a contractor can also lead to suspension or debarment from future U.S. Government contracts or the loss of export privileges.

Our business systems subject to audit or review include our accounting systems, purchasing systems, government property management systems, estimating systems, earned value management systems, and material management accounting systems. The U.S. Government has the ability to decrease or withhold contract payments if it determines significant deficiencies exist in one or more of our business systems. The U.S. Government has, in certain instances, withheld contract payments upon its assessment that deficiencies exist with one or more of our business systems. Although this has not materially impacted the timing of our cash receipts in the past, any such action by the U.S. Government in the future could have a material impact on the timing of our cash receipts.

The U.S. Government generally has the ability to terminate contracts, in whole or in part, with little or no prior notice, for convenience or for default based upon performance. In the event of termination of a contract for convenience, a contractor is normally able to recover costs already incurred on the contract and profit on incurred costs up to the amount authorized under the contract, but not the profit that would have been earned had the contract been completed. Such a termination could also result in the cancellation of future work on the related program. A termination resulting from our default could expose us to various liabilities, including excess re-procurement costs, and could have a material effect on our ability to compete for future contracts.

Our contracts with the U.S. Government sometimes result in Requests for Equitable Adjustments ("REAs"), which represent requests for the U.S. Government to make appropriate adjustments to contract terms, including pricing, delivery schedule, technical requirements, or other affected terms, due to changes in the original contract requirements and resulting delays and disruption in contract performance for which the U.S. Government is responsible. We submit and negotiate REAs in the ordinary course of business, and large REAs are not uncommon at the conclusion of both new construction and RCOH activities. REAs can result in claims under the Contract Disputes Act of 1978, in cases in which we cannot reach agreement with the U.S. Government.

U.S. Government regulations determine contractor costs that are allowable and therefore recoverable from the government, and certain costs are not allowable and therefore not recoverable. The U.S. Government also regulates the methods by which allowable costs, including overhead, are allocated to government contracts. Costs we incur that are not allowable under the Federal Acquisition Regulation (the “FAR”) or U.S. Cost Accounting Standards (“CAS”) or that are otherwise determined to be unallowable or improperly allocated to a specific contract will not be recovered or must be refunded if already reimbursed.

Our business, including contracts with U.S. Government agencies and subcontracts with other prime contractors, are subject to a variety of laws and regulations, including the FAR, the Defense Federal Acquisition Regulation Supplement ("DFARS"), the Truth in Negotiations Act, the Procurement Integrity Act, the False Claims Act, CAS, the International Traffic in Arms Regulations promulgated under the Arms Export Control Act, the Close the Contractor Fraud Loophole Act, and the Foreign Corrupt Practices Act. A noncompliance determination by a government agency may result in reductions in contract values, contract modifications or terminations, penalties, fines, repayments, compensatory, treble, or other damages, or suspension or debarment. We are also subject to evolving cyber security and data privacy and protection laws and regulations, which increase our costs and compliance risks and may affect our competitiveness, cause reputational harm, and expose us to damage claims, substantial fines, and other penalties.

Nuclear

Our nuclear operations are subject to various safety related requirements imposed by the U.S. Navy, the DoE, and the U.S. Nuclear Regulatory Commission. In the event of noncompliance, these agencies may increase regulatory oversight, impose fines, or shut down our operations, depending on their assessment of the severity of the noncompliance. In addition, new or revised security and safety requirements imposed by the U.S. Navy, the DoE, and the Nuclear Regulatory Commission could necessitate substantial capital and other expenditures.

Subject to certain requirements and limitations, our contracts with the U.S. Navy and the DoE generally provide for indemnity by the U.S. Government for losses resulting from our nuclear operations. For our commercial nuclear operations, we rely primarily on insurance carried by nuclear facility operators for risk mitigation, and we maintain limited insurance coverage for losses in excess of the coverage of facility operators.

Environmental

Our operations are subject to federal, state, and local laws and regulations relating to the protection of the environment. Substantial fines, penalties, and criminal sanctions may be imposed for noncompliance, and certain environmental laws impose joint and several "strict liability" for remediation of spills and releases of oil and hazardous substances. Such laws and regulations impose liability upon a party for environmental cleanup and remediation costs and damage without regard to negligence or fault on the part of such party and could expose us to liability for the conduct of or conditions caused by third parties.

We accrue estimated costs to perform environmental remediation when we determine it is probable we will incur expenses in the future, in amounts we can reasonably estimate, to address environmental conditions at currently or formerly owned or leased operating facilities, or at sites where we are named a Potentially Responsible Party ("PRP") by the U.S. Environmental Protection Agency ("EPA") or similarly designated by another environmental agency. Uncertainties regarding the extent of required remediation, determination of legally responsible parties, and the status of laws and regulations and their interpretations make future environmental remediation costs difficult to estimate and can cause our estimated remediation costs to change.

We believe we are in material compliance with environmental laws and regulations, and historical environmental compliance costs have not been material to our business. We could be affected by new environmental laws or regulations, including any laws and regulations enacted in response to concerns over climate change, other aspects of the environment, or natural resources. We have made investments we believe are necessary to comply with environmental legal requirements, but we expect to incur future capital and operating costs to comply with current and future environmental laws and regulations. We do not currently believe such costs will have a material effect on our financial position, results of operations, or cash flows.

Competitive Environment

In our business of designing, building, overhauling, and repairing military ships, we primarily compete with General Dynamics and, in the case of certain non-nuclear shipbuilding programs, smaller shipyards. The smaller shipyards sometimes team with large defense contractors. Intense competition related to programs, resources, funding, and long operating cycles are key characteristics of both our shipbuilding business and the shipbuilding defense industry in general. It is common industry practice to share work on major programs among a number of companies. A company competing to be a prime contractor may, upon ultimate award of the contract to another party, become a subcontractor for the prime contracting party. It is not uncommon to compete for a contract award with a peer company and, simultaneously, serve as a supplier to or a customer of such competitor on other contracts. The nature of major defense programs, conducted under binding long-term contracts, allows companies that perform well to benefit from a level of program continuity not common in many industries.

We believe we are well-positioned in our shipbuilding markets. Because we are the only company currently capable of building, refueling, and inactivating the U.S. Navy's nuclear-powered aircraft carriers, we believe we are in a strong competitive position to be awarded each contract to perform such activities. Even so, the government periodically revisits whether refueling of nuclear-powered aircraft carriers should be performed in private or public facilities. If a U.S. Government owned shipyard were to become capable and engaged in the refueling of nuclear-powered aircraft carriers, our market position could be significantly and adversely affected.

While we have competed with another large defense contractor to build large deck amphibious ships, we are currently the only builder of large deck amphibious assault ships and expeditionary warfare ships for the U.S. Navy, including LHAs and LPDs. We are also the sole builder of NSCs for the U.S. Coast Guard. We are one of only two companies currently capable of designing and building nuclear-powered submarines for the U.S. Navy, and we are party to long-term teaming agreements with the other company for the production of both *Virginia* class (SSN 774) fast attack nuclear submarines and *Columbia* class (SSBN 826) ballistic missile submarines. We are one of only two companies that builds the U.S. Navy's current fleet of *Arleigh Burke* class (DDG 51) destroyers and are strongly positioned to be awarded future contracts for surface combatant ships as well.

Our Technical Solutions segment delivers technology-based products and solutions to government and commercial services markets, in which we compete with a wide range of companies supporting the U.S. government and its allies worldwide.

Our success depends upon our ability to develop, market, and produce our products and services at costs consistent with our customers' expectations, as well as our ability to provide the workforce, technologies, facilities, equipment, and financial capacity needed to deliver those products and services with maximum efficiency.

Human Capital Resources

We recognize that our employees are our most important assets and serve as the foundation for our ability to achieve financial and strategic objectives. Our employees are critical to driving operational execution, meeting customer expectations, providing strong financial performance, advancing innovation, and maintaining a strong quality and compliance program. Our leaders believe each employee contributes to our success.

We have approximately 44,000 employees. We are the largest industrial employer in Virginia and the largest private employer in Mississippi. We employ individuals specializing in 19 crafts and trades, with approximately 7,300 engineers and designers and approximately 3,600 employees with advanced degrees. Our workforce contains many third-, fourth-, and fifth-generation employees, and approximately 1,500 employees with more than 40 years of continuous service. Employees in our shipbuilding segments with more than 40 years of continuous service achieve the honor of “Master Shipbuilder.” As of December 31, 2021, we had 1,190 Master Shipbuilders at Newport News and 284 at Ingalls. We also employ more than 7,500 veterans across the enterprise.

In addition, over 900 apprentices are enrolled in more than 27 crafts and advanced programs at our two shipbuilding divisions. From nuclear pipe welders to senior executives, we employ approximately 4,500 apprentice school alumni, comprised of 3,061 at Newport News and 1,487 at Ingalls.

Approximately 45% of our employees are covered by a total of nine collective bargaining agreements and one site stabilization agreement. Newport News has two collective bargaining agreements covering represented employees, which expire in December 2022 and April 2024, and one that expired in November 2021, which covers approximately 50% of Newport News employees. Newport News craft workers employed at the Kesselring Site near Saratoga Springs, New York are represented under an indefinite DoE site agreement. Ingalls has five collective bargaining agreements covering represented employees, all of which expire in March 2026. Approximately 15 Technical Solutions employees in Klamath Falls, Oregon are covered by a collective bargaining agreement that expires in June 2025.

We reached a tentative agreement with representatives of United Steelworkers ("USW") Local 8888 (Newport News) members on a new labor agreement in November 2021, but the members of the bargaining unit declined to ratify the contract. The Newport News and USW negotiation teams continued negotiations and reached a tentative agreement on another labor agreement in January 2022. We expect the members of the bargaining unit to vote on the new agreement in the near future. The USW Local 8888 members are continuing to work under the terms and conditions of the expired collective bargaining agreement, but the members may call for a strike, or we may declare a lock-out, upon 48 hours notice. We cannot give any assurances that the tentative labor agreement will be ratified by the local bargaining unit or that a strike or lock-out will not occur.

We have not experienced a work stoppage in more than 22 years at Newport News and more than 14 years at Ingalls. We are committed to working effectively with our existing unions and believe our relationship with our represented employees is satisfactory.

The success and growth of our business depends in large part on our ability to attract, retain, and develop a skilled and diverse workforce of talented and high-performing employees at all levels of our organization. To succeed in the markets in which we compete for labor, we have developed key workforce development, recruitment, and retention strategies and objectives that we focus on as part of the overall management of our business. These strategies and objectives form the pillars of our human capital management framework and are advanced through the following programs, policies, and initiatives:

Competitive Pay and Benefits **-** Our compensation programs are designed to ensure we have the ability to attract, retain, and motivate employees to achieve our objectives.

- We provide employee base wages and salaries that are competitive and consistent with employee positions, skill levels, experience, knowledge, and geographic location.
- We utilize nationally recognized surveys and outside compensation and benefits consulting firms to independently evaluate the effectiveness of our employee and executive compensation and benefit programs and to provide benchmarking against our peers within the industry.
- The structure of our executive compensation programs balances incentive earnings for both short-term and long-term performance, and we align our executive long-term equity compensation metrics with long-term shareholder interests.
- Employees are eligible for health insurance, paid and unpaid leaves, 401(k) plans, and life and disability/accident insurance coverage. We also offer a variety of benefits that allow employees to select the options that meet their needs, including: annual leave/paid time off; paid holidays, flexible work arrangements/schedules; telemedicine; parental leave; transgender medical coverage; and a wellness program that includes physical, mental, and financial wellness components. We also fund the operation of Family Health Centers near our two shipyards, which provide a full range of medical, lab, pharmacy, dental, physical therapy, and vision services.

Recruitment, Training, and Workforce Development **-** Our three segments hire thousands of employees each year. In 2021, we hired nearly 6,000 new employees. To help us meet this large demand for talent, we have worked to create, develop, and maintain multiple talent pipelines. One of the key components of our approach to workforce development is to "grow our own." We operate two apprentice schools, one at Ingalls and one at Newport News. The Newport News Apprentice School was founded in 1919, and the Ingalls Apprentice School was founded in 1952.

The two apprentice schools combined have graduated over 14,000 graduates since their inceptions. The schools are nationally renowned and are critical to training both our craft/trades and technical workforces, as well as developing the future leaders of our company. The Ingalls Apprentice School has partnered with the Mississippi Gulf Coast Community College to permit their apprentices to earn credits toward an associate's degree. The Newport News Apprentice School has partnered with two community colleges, as well as Old Dominion University, to enable apprentices to earn a bachelor's degree in Mechanical Engineering, Electrical Engineering, or Modeling & Simulation.

In addition to operating our own apprentice schools, we have developed and nurtured multiple partnerships with state and local governments, pre-K education providers, primary/secondary school districts, community colleges, and four-year colleges and universities, as well as post-graduate institutions. We also make significant investments through monetary contributions, leadership time, and employee volunteer hours to support these critical partnerships.

We maintain effective partnerships with colleges and universities, military bases for transitioning veterans, and regional community colleges to enable us to recruit and hire engineering, IT, and other technical talent. Working closely with state and local government leaders, we have successfully facilitated local, regional, and state-wide workforce development and education initiatives that include pre-K programs, high school trades programs/talent development labs, pre-hire trades/technical community college programs, interns/co-ops with colleges and universities, adult trades programs, veterans and military spouses training programs, and unemployed/ underemployed training programs.

We view our workforce development process as a “leadership factory” and have developed a robust and effective succession planning process that ensures continuity in our leadership ranks. Since our founding in 2011, we have followed our succession plans 80% of the time when replacing a vacancy in an existing vice president position, and we have filled 77% of newly created vice president positions with internal hires.

Environmental, Health & Safety (“EH&S”) - The health, safety, and well-being of our employees, together with protection of the environment in the communities in which we operate, is one of our core values and rooted in our culture across the enterprise. We prioritize, manage, and carefully track safety performance and integrate sound environmental, safety, and health practices to make a meaningful difference in every facet of our operations, particularly at our shipbuilding segments and at DoE sites on which Technical Solutions segment employees work.

Safety goals are included in operational metrics for purposes of the Newport News and Ingalls compensation programs. We also use a wide variety of training courses, pre-job “Take Five” crew talks, medical surveillance programs, and employee involvement efforts to keep our workforce focused on EH&S. At Newport News and Ingalls, a key component of our EH&S program is the utilization of health and safety teams, which are comprised of production and maintenance employees and front-line managers whose goal is to educate, engage, and empower our workforce toward a culture that strives to reduce injury, illness, and environmental impacts. We employ programs focused on identifying, reporting, and abating near misses and other programs that aim to recognize, evaluate, and control hazards.

We track several metrics related to occupational injuries as one of several methods to monitor our safety performance. One of the key metrics is Total Case Rate (“TCR”), which is the number of Occupational Safety and Health Administration ("OSHA") recordable injuries per 100 equivalent employees. The TCR for Newport News was 5.64 in 2021, 4.77 in 2020, and 4.67 in 2019, and the TCR at Ingalls was 6.26 in 2021, 6.35 in 2020, and 6.59 in 2019. Newport News also tracks Days Away, Restricted or Transferred (“DART”), which is the number of OSHA recordable cases in which the employee is unable to work, cannot work due to a restriction, or can work with a restriction as a result of an injury per 100 equivalent employees. DART at Newport News was 4.45 in 2021, 3.41 in 2020, and 3.01 in 2019. Ingalls tracks two other safety metrics: Lost Time Case Rate (“LTCR”), which is the number of employees that lost work time per 100 employees, and Lost Work Day Rate (“LWDR”), which is the number of lost workdays per 100 full-time employees. The LTCR and LWDR at Ingalls were 2.75 and 76.32, respectively, in 2021, 2.53 and 56.37, respectively, in 2020, and 2.39 and 56.82, respectively, in 2019.

In connection with the outbreak of COVID-19, the DoD designated Newport News and Ingalls as critical infrastructure industry. Our production and support workforce therefore continued in-person work at our facilities to provide vital products and services to our government customers, while many of our employees in support and administrative functions effectively worked remotely from mid-March 2020 until our employees generally returned to our facilities in May 2021. Prior to the COVID-19 pandemic, less than 400 of our employees regularly worked remotely, and at our peak, more than 11,300 employees were working remotely.

In response to the COVID-19 pandemic, we have implemented mitigation measures to protect our employees and customers and support appropriate health and safety protocols. For example, we perform on-site COVID-19 testing, provide on-site vaccinations for employees, perform extensive cleaning and sanitation services for our shops, ships, and offices, re-engineered how some work was performed in order to support social distancing requirements, and implemented broad work-from-home initiatives for employees in our support and administrative functions.

Corporate Values **-** We operate on a set of values that are shared with all employees: Integrity, Safety, Respect, Engagement, Responsibility, and Performance. "Always doing the right thing" is an essential belief at HII. That tone starts at the top and permeates through the culture of the company. It is a set of core values, standards, and behaviors that guide employee commitment to the highest ethical standards and serves as the underlying framework for all of our human capital strategies.

Advancing and Celebrating Diversity and Inclusion ("D&I") - We believe we gain a key competitive advantage by building a workforce community that values contributions and perspectives from a variety of backgrounds, skills, and experiences regardless of race, ethnicity, color, religion, sex, disability, nationality, or other differentiation, and our leaders leverage the differences within their teams. We also believe D&I is vital to our ability to grow and innovate in an ever-changing, fast-paced environment. Our diverse and inclusive workplace encourages different perspectives and ideas, which we believe enables better business decisions. The following are highlights of our D&I program:

- Employee Resource Groups ("ERGs") are a key component of our corporate culture and an important part of our diversity and inclusion strategy. We currently sponsor 15 ERGs, which are employee-led and open to all employees, including: African American Shipbuilders Association, Asian & Pacific Islander Shipbuilding Association, Generational Integration Focus Team, Hispanic Outreach & Leadership Alliance, Women in Shipbuilding Enterprise, Ingalls Shipbuilders Equality Alliance, Shipbuilders Together Realizing Inclusion, Diversity and Equality, and the Veterans Employee Resource Group.
- We have established D&I Councils at our Corporate Office and at each of our three segments, which provide strategic direction, guidance, and advocacy for our D&I initiatives and advancements. These councils are led by senior executives and include high-performing employees and leaders from across our enterprise.
- We have a long history of participation in a number of annual national diversity conferences, including Black Engineer of the Year Awards, Society of Hispanic Engineers and Professionals, Society of Asian Scientists and Engineers, Society of Women Engineers, Great Minds in STEM, Hispanic Engineers National Achievement Award Conference, Women of Color STEM Conference, and the National Society of Black Engineers Convention. These events provide recruitment, recognition, and development opportunities for our diverse workforce.

Employee Engagement - Since 2006, we have conducted an annual anonymous engagement survey of our workforce, both non-represented and represented. Administered and analyzed by an independent third party, the survey results are reviewed by our executive team and other senior leaders at our three segments. The results of this engagement survey are also shared with individual managers and employees, who are then tasked with discussing the results with their teams and working together to set goals and implement actions to improve employee engagement and performance. Approximately 72% of our workforce participated in the 2021 engagement survey. We believe that, at the individual employee level, engagement is about taking ownership of your work and work processes. At the enterprise level, engagement is about creating an inclusive and highly collaborative culture where we all care about and encourage each other's success, and supporting the opportunity to create more value and transform our business for the future.

Available Information

We maintain a website at the following address: www.huntingtoningalls.com. References to our website in this report are provided as a convenience and do not constitute, and should not be viewed as, incorporation by reference of the information contained on, or available through, the website. Accordingly, such information should not be considered part of this report. We make available on or through our website certain reports and amendments to those reports that we file with or furnish to the Securities and Exchange Commission ("SEC") in accordance with the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These include our Annual Reports on Form 10–K, our Quarterly Reports on Form 10–Q, and our Current Reports on Form 8-K. We make this information available on our website free of charge as soon as reasonably practicable after we electronically file the information with, or furnish it to, the SEC.

In addition, we routinely post on the "Investors" page of our website news releases, announcements, and other statements about our business and results of operations, some of which may contain information that may be deemed material to investors. Therefore, we encourage investors to monitor the "Investors" page of our website and review the information we post on that page.

The SEC also maintains a website at www.sec.gov that contains reports, proxy statements, and other information about SEC registrants, including us.

Cautionary Statement Regarding Forward-Looking Statements

Statements in this Annual Report on Form 10-K and in our other filings with the SEC, as well as other statements we may make from time to time, other than statements of historical fact, constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. In some cases, you can identify forward-looking statements by words such as "may," "will," "should," "expects," "intends," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "continue," and similar words or phrases or the negative of these words or phrases. These statements relate to future events or our future financial performance and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or achievements to be materially different from any future results, levels of activity, performance, or achievements expressed or implied by these forward-looking statements. Although we believe the expectations reflected in the forward-looking statements are reasonable when made, we cannot guarantee future results, levels of activity, performance, or achievements. There are a number of important factors that could cause our actual results to differ materially from the results anticipated by our forward-looking statements, which include, but are not limited to:

- Changes in government and customer priorities and requirements (including government budgetary constraints, shifts in defense spending, and changes in customer short-range and long-range plans);
- Our ability to estimate our future contract costs and perform our contracts effectively;
- Changes in procurement processes and government regulations and our ability to comply with such requirements;
- Our ability to deliver our products and services at an affordable life cycle cost and compete within our markets;
- Natural and environmental disasters and political instability;
- Our ability to execute our strategic plan, including with respect to share repurchases, dividends, capital expenditures, and strategic acquisitions;
- Adverse economic conditions in the United States and globally;
- Health epidemics, pandemics and similar outbreaks, including the COVID-19 pandemic, and the impacts of vaccination mandates on our workforce;
- Our ability to effectively integrate the operations of Alion into our business;
- Changes in key estimates and assumptions regarding our pension and retiree health care costs;
- Security threats, including cyber security threats, and related disruptions; and
- Other risk factors discussed herein and in our other filings with the SEC.

There may be other risks and uncertainties that we are unable to predict at this time or that we currently do not expect to have a material adverse effect on our business, and we undertake no obligation to update or revise any forward-looking statements. You should not place undue reliance on any forward-looking statements that we may make.

Item 1A. Risk Factors

An investment in our common stock or debt securities involves risks and uncertainties. We seek to identify, manage, and mitigate risks to our business, but risk and uncertainty cannot be eliminated or necessarily predicted. You should consider the following factors carefully, in addition to the other information contained in this Annual Report on Form 10-K, before deciding to purchase our securities.

Industry and Economic Risk Factors

We depend on the U.S. Government for substantially all of our business, and risks that arise from conducting business with the U.S. Government could have a material adverse effect on our financial position, results of operations, or cash flows.

A substantial majority of our business consists of the design, construction, repair, and maintenance of nuclear-powered ships and non-nuclear ships for the U.S. Navy and coastal defense surface ships for the U.S. Coast Guard, as well as the refueling and overhaul and inactivation of nuclear-powered ships for the U.S. Navy. We also provide fleet sustainment services to the U.S. Navy, IT and mission-based solutions for the DoD and intelligence and federal civilian customers, and nuclear management and operations and environmental management services for the DoE and DoD. Substantially all of our revenues in 2021 were derived from products and services sold to the U.S. Government, and we expect this to continue in the foreseeable future. In addition, substantially all of our backlog as of December 31, 2021, was U.S. Government related. Our U.S. Government contracts are subject to various risks, including customer political and budgetary constraints and processes, changes in customer short-term and long-term strategic plans, the timing of contract awards, significant changes in contract scheduling, intense contract award and funding competition, difficulty forecasting costs and schedules for bids on developmental and sophisticated technical work, and contractor suspension or debarment in the event of certain legal or regulatory violations. Any of these factors could affect our business with the U.S. Government, which would have a material adverse effect on our financial position, results of operations, or cash flows.

Significant delays or reductions in appropriations for our programs, changes in customer priorities, and potential contract terminations could have a material adverse effect on our financial position, results of operations, or cash flows.

We are directly dependent upon Congressional funding of U.S. Navy, U.S. Coast Guard, and other government agency programs. Under the normal legislative process, Congress completes 12 annual appropriation bills each fiscal year to fund the activities of federal agencies. When Congress is unable to pass these appropriation bills before the beginning of a fiscal year, a continuing resolution can be enacted to provide stopgap funding for a specified period of time at a specified rate, often the prior year’s appropriation level. When the U.S. Government operates under a continuing resolution, limitations can be placed on production increases, multi-year procurements, and new program starts, which may result in delays or cancellation of new contract awards. When the U.S. Government fails to enact annual appropriations or a continuing resolution, a full or partial federal government shutdown may occur. A federal government shutdown could, in turn, result in the delay or cancellation of key programs, or the delay of contract payments, which could have a negative effect on our cash flows and adversely affect our future results of operations.

For certain programs, Congress appropriates funds on an annual fiscal year basis even though the program performance period may extend over several years. Such programs are funded initially on a partial basis, and additional funds are committed only as Congress makes further appropriations. If we incur costs in excess of existing funding on a contract, we may not recover those costs unless and until additional funds are appropriated. We cannot predict the extent to which total funding or funding for individual programs will be included, increased, or reduced as part of the annual budget process or through continuing resolutions or individual supplemental appropriations.

The impact of Congressional actions to reduce the federal debt and resulting pressures on federal spending could adversely affect the total funding of individual contracts or funding for individual programs and delay purchasing or payment decisions by our customers. Long-term uncertainty exists with respect to overall levels of defense spending across the future years' defense plan. It is likely that U.S. Government discretionary spending levels, including defense spending, will continue to be subject to significant pressure. For additional information relating to the U.S. defense budget, see the Business Environment section under Management’s Discussion and Analysis of Financial Condition and Results of Operations in Item 7.

Demand for our products and services can also be affected by shifts in customer priorities resulting from changes in military strategy and planning. In response to the need for less expensive alternatives and the increasing proliferation of advanced weapons, future strategy reassessments by the DoD may result in decreased demand for our shipbuilding programs, including our aircraft carrier programs. For the year ended December 31, 2021, our aircraft carrier programs accounted for approximately 32% of our consolidated revenue. We cannot predict the impact of changes to customer priorities on existing, follow-on, replacement, or future programs. A shift of priorities to programs in which we do not participate and related reductions in funding for or the termination of programs in which we do participate could have a material adverse effect on our financial position, results of operations, or cash flows.

As of December 31, 2021, our total backlog was $48.5 billion, including $22.7 billion in funded backlog. The U.S. Government generally has the ability to terminate contracts, in whole or in part, with little or no prior notice, for convenience or for default based upon performance. In the event of termination of a contract for the U.S. Government's convenience, a contractor is normally able to recover costs already incurred on the contract and profit on incurred costs up to the amount authorized under the contract, but not the profit that would have been earned had the contract been completed. Our unfunded backlog, in particular, contains management's estimate of amounts expected to be realized on unfunded contracts that may never be realized as revenues. Any termination could also result in the cancellation of future work on the related program. A termination resulting from our default can expose us to various liabilities, including excess re-procurement costs, and could negatively affect our ability to compete for future contracts. Any contract termination could have a material adverse effect on our financial condition, results of operations, or cash flows.

Changes to Department of Defense business practices could have a material effect on DoD's procurement process and adversely impact our current programs and potential new awards.

Our industry has experienced, and we expect will continue to experience, significant changes to business practices resulting from greater focus on affordability, efficiencies, business systems, recovery of costs, and a reprioritization of defense funds to key areas for future defense spending. These initiatives and changes to procurement practices may change the way U.S. Government contracts are solicited, negotiated, and managed, and may impact whether and how we pursue opportunities to provide our products and services to the U.S. Government, including the terms and conditions under which we do so, which may have an adverse impact on our business, financial condition, results of operations, and cash flows. Changes in procurement practices favoring incentive-based fee arrangements, different award fee criteria, non-traditional contract provisions, and government contract negotiation offers that mandate our costs may affect our profitability and the predictability of our profit rates. The U.S. Government is also pursuing alternatives to shift additional responsibility and performance risks to contractors.

For example, the DoD is increasingly pursuing accelerated development and acquisition of new technologies through rapid acquisition pathways and procedures, including through other transaction authority agreements ("OTAs"). In recent years, the DoD has increased the frequency of use and size of OTAs, and we expect this trend to continue in the future. OTAs are exempt from many traditional procurement laws, including the FAR, and may be used, subject to certain conditions, for research, prototype development, and follow-on production for a successful prototype. The conditions for OTA awards include, in certain instances, that a significant portion of the work under the OTA be performed by a non-traditional defense contractor or that a portion of the cost of the protoype project be funded by non-governmental sources. If we cannot successfully adapt to the DoD's accelerated acquisition processes or if the DoD significantly increases the use of OTAs with non-traditional defense contractors or increases cost sharing mandates, then we may lose new strategic business opportunities in high-growth areas and our future performance and results of operations could be adversely affected.

In addition to the DoD's business practice initiatives, the DCMA and DCAA have implemented cost recovery/cost savings initiatives to prioritize cost recovery/savings. As a result of certain of these initiatives, we have experienced and may continue to experience a higher number of audits and/or lengthened periods of time required to close open audits. Moreover, the thresholds for certain allowable costs, including compensation costs, have been significantly reduced, and the allowability of other types of costs are being challenged, debated, and, in certain cases, modified. Significant changes to the thresholds for allowable costs or the allowability of certain costs could adversely affect our financial position, results of operations, or cash flows.

Competition within our markets or an increase in bid protests may reduce our revenues and market share.

U.S. defense spending levels are uncertain and difficult to predict. A longer term reduction in shipbuilding activity by the U.S. Navy, evidenced by the reduction in fleet size from 566 ships in 1989 to 295 ships as of December 31, 2021, has resulted in workforce reductions but limited infrastructure consolidation. The general result has been fewer contracts awarded to the same fixed number of shipyards. Five major private United States shipyards, two of which we own, plus many other smaller private shipyards compete for contracts to construct, overhaul, repair, and convert naval vessels. Additionally, our products, such as aircraft carriers, submarines, amphibious assault ships, surface combatants, and other ships, compete for funding with each other, as well as with other defense products and services. We expect competition for future shipbuilding programs to be intense.

We compete with another large defense contractor for contracts to build surface combatants, submarines, and large deck amphibious ships, and smaller shipyards have entered the market for surface combatants. We may compete in the future with the same contractor and other shipyards to build new and different classes of ships, as well as ships for which we are currently the sole source, including expeditionary warfare and amphibious assault ships. Moreover, reductions in U.S. defense spending that reduce the demand for the types of ships we build and services we provide increase our risk exposure to market competition. If we are unable to continue to compete successfully against our current or future competitors, we may experience lower revenues and market share, which could negatively impact our financial condition, results of operations, or cash flows.

Although we are the only company currently capable of refueling nuclear-powered aircraft carriers, two existing U.S. Government-owned shipyards may be able to refuel nuclear-powered aircraft carriers if substantial investments in facilities, personnel, and training were made. U.S. Government-owned shipyards currently engage in the refueling, overhaul, and inactivation of *Los Angeles* class (SSN 688) submarines and are capable of repairing and overhauling non-nuclear ships. If a U.S. Government-owned shipyard became capable and engaged in the refueling of nuclear-powered aircraft carriers, our financial position, results of operations, or cash flows could be adversely affected.

We also compete in the shipbuilding engineering, planning, and design market with companies that provide engineering support services. Such competition increases the risk we may not be the successful bidder on future U.S. Navy engineering proposals, including aircraft carrier research and development, submarine design, and surface combatant and amphibious assault ship program contracts.

Our competitive environment is also affected by bid protests from unsuccessful bidders on new program awards. As the competitive environment intensifies, the number of bid protests may increase. Bid protests can result in an award decision being overturned, requiring a re-bid of the contract. Even when a bid protest does not result in a re-bid, resolution of the matter typically extends the time until contract performance can begin, which can reduce our earnings in the period in which the contract would otherwise be performed.

Changes in estimates used in contract accounting could affect our profitability and our overall financial position.

Contract accounting requires judgments relative to assessing risks, estimating contract revenues and costs, and making assumptions regarding schedule and technical issues. The size and nature of many of our contracts make the estimation of total revenues and costs at completion complicated and subject to many variables. For new shipbuilding programs, we estimate, negotiate, and contract for construction of ships that are not completely designed, which subjects our risk assessments, revenue and cost estimates, and assumptions regarding schedule and technical issues to the variability of the final ship design and evolving scope of work. Our judgment, estimation, and assumption processes are significant to our contract accounting, and materially different amounts can result if different assumptions are used or if actual events differ from our assumptions. Future changes in assumptions, circumstances, or estimates may have a material adverse effect on our future financial position, results of operations, or cash flows. See the Contracts section under Management's Discussion and Analysis of Financial Condition and Results of Operations in Item 7.

Our debt exposes us to certain risks.

As of December 31, 2021, we had $2.6 billion of debt under our senior notes, $625 million of term loan debt, $105 million of revenue bonds, $1.5 billion of additional borrowing capacity under our revolving credit facility (the "Revolving Credit Facility"), and $1 billion of borrowing capacity under our commercial paper program. Our

Revolving Credit Facility also allows us to solicit lenders to provide incremental financing capacity in an aggregate amount not to exceed $1 billion, and the indentures governing our senior notes do not limit our incurrence of debt.

Our ability to make payments on and to refinance our current or future indebtedness will depend on our ability to generate cash from operations, financings, or asset sales, which may be subject to general economic, financial, competitive, legislative, regulatory, and other factors that are beyond our control. If we are not able to repay or refinance our debt as it becomes due, we may be forced to sell assets or take other unfavorable actions, including reducing financing for working capital, capital expenditures, and general corporate purposes; reducing our cash dividend rate and/or share repurchases; or dedicating an unsustainable level of our cash flow from operations to the payment of principal and interest on our indebtedness. In addition, our ability to withstand competitive pressures and to react to changes in the defense industry could be impaired. In the event of a default on any of our indebtedness, the lenders who hold such debt could accelerate amounts due, which could potentially trigger a default or acceleration of any of our other debt.

The interest rates on variable rate indebtedness under our Revolving Credit Facility and Term Loan are based upon the London Interbank Offered Rate (“LIBOR”). LIBOR has been the subject of national, international, and other regulatory guidance and proposals for reform. In March 2021, LIBOR’s regulator, the U.K. Financial Conduct Authority, announced that the publication of rates for one-week and two-month U.S. Dollar LIBOR maturities and all non-U.S. LIBOR maturities would cease immediately after December 31, 2021, with all other tenors ceasing immediately after June 30, 2023. In the U.S., the Alternative Reference Rate Committee has identified the Secured Overnight Financing Rate (“SOFR”) as its preferred alternative upon termination of LIBOR, although other alternatives, including Bloomberg’s Short-Term Bank Yield, are available. We cannot predict the consequences of the benchmark transition from LIBOR to SOFR or another benchmark, but the transition may potentially increase the cost of our variable rate indebtedness.

Business and Operational Risk Factors

Cost growth on flexibly priced contracts that does not result in higher contract value due from customers reduces our profit and exposes us to the potential loss of future business.

Our operating income is adversely affected when we incur certain contract costs or certain increases in contract costs that cannot be billed to customers. Cost growth can occur if expenses to complete a contract increase due to technical challenges, manufacturing difficulties, delays, workforce-related issues, or inaccurate initial contract cost estimates. Reasons may include labor unavailability or reduced productivity, the nature and complexity of the work performed, the timeliness and availability of materials, major subcontractor performance or product quality issues, performance delays, availability and timing of funding from the customer, and natural disasters. The process of estimating contract costs requires significant judgment and expertise. A significant increase in contract costs from our original cost estimates on one or more contracts could have a material adverse effect on our financial position, results of operations, or cash flows.

Our ability to recover costs and realize profits on contracts with our U.S. Government customers depends upon the type of contract under which we are performing. Our U.S. Government business is currently performed under firm fixed-price, fixed-price incentive, cost-type, and time and material contracts. Under firm fixed-price contracts, we agree to perform the specified work for a pre-determined price. To the extent our actual costs vary from the estimates upon which the price was negotiated, we will generate more or less profit or could incur a loss. Some firm fixed-price contracts have a performance-based component under which we may earn incentive payments or incur financial penalties based upon our performance. Fixed-price incentive contracts provide for reimbursement of the contractor’s allowable costs incurred in performance of the contract, subject to a cost-share limit that impacts the profit on the contract. Cost-type contracts provide for the payment of allowable costs incurred during performance of the contract plus a fee up to a ceiling based on the amount that has been funded. Under time and material contracts, we are paid for direct labor hours incurred at specified hourly rates plus material costs. See the Contracts section under Management's Discussion and Analysis of Financial Condition and Results of Operations in Item 7 for descriptions of the types of contracts that comprise our business.

Approximately 55% of our revenues in 2021 were generated under fixed-price incentive contracts, approximately 39% were generated under cost-type contracts, approximately 3% were generated under time and material contracts, and approximately 3% were generated under firm fixed-price contracts. Our failure to perform to customer expectations and contract requirements may result in reduced fees or losses and affect our financial performance.

Under each type of contract, if we are unable to control costs, our operating results could be adversely affected, particularly if we are unable to negotiate an increase in contract value to our customers. From time to time, we may begin performance under an undefinitized contract action with a not-to-exceed price prior to completing contract negotiations in order to support U.S. government priorities. Uncertainties in final contract price, specifications and terms, or loss of negotiating leverage associated with particularly long delays in contract definitization may negatively affect our profitability. Cost overruns or the failure to perform on existing programs also may adversely affect our ability to retain existing programs and win future contract awards. To the extent our mix of contract types changes in the future, our ability to recover our costs and realize profits on our contracts could be negatively affected.

Our earnings and profitability depend upon our ability to perform our contracts.

When agreeing to contract terms, we make assumptions and projections about future conditions and events, many of which extend over long periods. Our assumptions and projections are based upon our assessments of the productivity and availability of labor, the complexity of the work to be performed, the cost and availability of materials, the impact of delayed performance, the timing of product deliveries, and other matters. We may experience significant variances from our assumptions and projections, contract performance schedule delays, and variances in the timing of our product deliveries. If our actual experience differs significantly from our assumptions or projections or we incur unanticipated contract costs, the profitability of the related contracts may be adversely affected.

Our earnings and profitability depend, in part, upon subcontractor performance and raw material and component availability and pricing.

We rely on third parties to provide raw materials, major components and sub-systems, hardware elements, and sub-assemblies for our products and perform certain services we provide to our customers, and to do so in compliance with applicable laws and regulations, including various DoD cybersecurity requirements. Disruptions and performance problems caused by our suppliers and subcontractors, or misalignments between our contractual obligations to our customers and our agreements with our subcontractors and suppliers, could have an adverse effect on our ability to meet our commitments to customers. Our ability to satisfy our obligations on a timely basis could be adversely affected if one or more of our suppliers or subcontractors are unable to provide agreed-upon products or materials or perform agreed-upon services in a timely, compliant, and cost-effective manner or they otherwise fail to satisfy contractual requirements. The inability of our suppliers or subcontractors to meet expectations could also result in the need for us to transition to alternate parties, which could result in significant incremental cost and delay, or the need for us to provide other supplemental support to our existing suppliers and subcontractors.

Our costs to manufacture our products can increase over the terms of our contracts, including as a result of increases in material costs. Although we may be protected from increases in material costs through cost escalation provisions, the difference in basis between our actual material costs and industry indices may expose us to cost recovery risk. Significant increases in inflation, particularly those related to wages and increases in the cost of raw materials, may increase our cost recovery risk. In addition, significant delays in deliveries of key raw materials, which may occur as a result of availability or pricing, could have a material adverse effect on our financial position, results of operations, or cash flows.

In some cases, only one supplier may exist for certain components and parts required to manufacture our products. The inability of a sole source supplier to provide a necessary component or part on a timely, compliant, and cost-effective basis could increase our contract cost and affect our ability to perform our contract.

Our procurement practices are intended to provide quality materials and services to support our programs and to reduce the likelihood of our procurement of unauthorized, non-compliant, or deficient materials and services. We rely on our subcontractors and suppliers to comply with applicable laws, regulations, and the expectations set forth in the HII Supplier Code of Conduct. In some circumstances, we rely on representations and certifications from our subcontractors and suppliers regarding their compliance. We also conduct technical assessments, inspections, and audits, as necessary, with subcontractors and suppliers. Notwithstanding the actions we take to mitigate the risk of receiving materials and services that fail to meet specifications or requirements, subcontractors and suppliers sometimes provide us with unauthorized, non-compliant, or deficient materials and services.

Our inability to procure, or a significant delay in acquiring, necessary raw materials, components, or parts, the failure of our subcontractors or suppliers to comply with applicable laws and regulations, or noncompliant materials, components, or parts from our subcontractors and suppliers could have a material adverse effect on our financial position, results of operations, or cash flows.

Our future success depends, in part, on our ability to deliver our products and services at an affordable life cycle cost, requiring us to develop and maintain technologies, facilities, equipment, and a qualified workforce to meet the needs of current and future customers.

Shipbuilding is a long cycle business, and our success depends on quality, cost, and schedule performance on our contracts. In turn, our performance depends upon our ability to develop and maintain the workforce, technologies, facilities, equipment, and financial capacity to deliver our products and services at an affordable life cycle cost. If we fail to maintain our competitive position in these areas, we could lose future contracts to our competitors, which could have a material adverse effect on our financial position, results of operations, or cash flows.

Our operating results are heavily dependent upon our ability to attract and retain at competitive costs a sufficient number of engineers and other employees with the necessary skills and security clearances. At the same time, future revenues and costs impact our ability to maintain a qualified workforce. Development and maintenance of the necessary nuclear related and other specialized skills and the challenges of hiring and training a qualified workforce can be a limitation on our business. Shortages of qualified personnel can increase our recruiting, training, and overall labor costs, and a failure to attract and retain qualified personnel can impact our contract performance and ability to compete for new contracts.

Many of our contracts include performance obligations that incorporate innovative designs and state-of-the-art manufacturing expertise, include new technologies, or are dependent upon factors not wholly within our control, and failure to meet performance expectations could adversely affect our profitability and future prospects.

We design, develop, and manufacture products and provide services that often involve innovative designs, new technologies, and complex manufacturing processes. Problems and delays with product development, technology implementation, manufacturing, or subcontractor components or services as a result of issues with design, technology, licensing and intellectual property rights, labor, learning curve assumptions, or materials and parts could prevent us from satisfying contractual requirements.

First-in-class ships, also known as lead ships, usually include new technologies supplied by the U.S. Navy or other contractors or developed by us. Problems developing or implementing these new technologies or design changes in the construction process can lead to delays in the design and construction schedule. The risks associated with new technologies or design changes during construction can both increase the cost of a ship and delay delivery. Delays in receipt of necessary customer information can also cause inefficiencies in the construction process, increase costs, and put the delivery schedule at risk, which can adversely affect our profitability and future prospects.

Our products cannot always be tested and proven and are otherwise subject to unforeseen problems, including premature failure of elements that cannot be accessed for repair or replacement, substandard quality or workmanship, and unexpected degradation of product performance. These failures could result in loss of life or property and could negatively affect our results of operations by causing unanticipated expenses not covered by insurance or customer indemnification, diversion of management attention, loss of follow-on work, and, in the case of certain contracts, reimbursement to the customer of contract costs and fee payments previously received.

We periodically experience quality issues with respect to products and services that we sell to our U.S. Government customers. These issues can and have required significant resources to determine the source of the deficiencies and implement corrective actions. We may discover quality issues in the future related to our products and services that require analysis and corrective action. Such issues and our responses and corrective actions could have a material adverse effect on our financial position, results of operations, or cash flows.

Changes in key estimates and assumptions associated with postretirement benefit plans, such as discount rates and assumed long-term returns on assets, actual investment returns on our pension plan assets, and legislative and regulatory actions could significantly affect our financial position, results of operations, and cash flows.

Our pension and retiree health care costs are dependent upon various estimates and assumptions, particularly with respect to the discount rate and expected long-term rates of return on plan assets, which to a large extent are reflective of the financial markets and economic conditions. Changes to these estimates and assumptions and differences between expected and actual returns on plan assets could significantly impact our retirement related expense, the funded status of benefit plans, and contributions to our defined benefit pension and other postretirement benefit plans, which could have material adverse effects on our financial position, results of operations, or cash flows.

Additionally, pension cost recoveries under CAS for our U.S. Government contracts occur in different periods from those in which pension expense is recognized under accounting principles generally accepted in the United States ("GAAP") or the periods in which we make contributions to our benefit plans, and changes to estimates and assumptions and differences between expected and actual returns could adversely affect the timing of those pension cost recoveries.

Our business is subject to disruption caused by natural disasters, environmental disasters, and other events that could have a material adverse effect on our financial position, results of operations, or cash flows.

We have significant operations located in regions of the United States that have been and may in the future be exposed to damaging storms, such as hurricanes and floods, the intensity and frequency of which are being exacerbated by climate change, other impacts of climate change, including rising sea waters, and environmental disasters, such as oil spills. Natural disasters can disrupt our workforce, electrical and other power distribution networks, computer and internet operations and accessibility, and critical industrial infrastructure needed for normal business operations, which can adversely affect our contract performance and, as a result, our financial results. Environmental disasters, particularly oil spills in waterways and bodies of water we use for transporting and testing our ships, can cause schedule delays under our contracts with the U.S. Navy and the U.S. Coast Guard.

Damage and disruption resulting from natural and environmental disasters may be significant. Should insurance or other risk transfer mechanisms be unavailable or insufficient to recover material costs associated with natural or environmental disasters or other events, we could experience a material adverse effect on our financial position, results of operations, or cash flows. See *Our insurance coverage may be inadequate to cover all of our significant risks or our insurers may deny coverage of material losses we incur, which could adversely affect our profitability and financial position.*

Our suppliers and subcontractors are also subject to natural and environmental disasters that could affect their ability to deliver products or services or otherwise perform their contracts. Performance failures by our subcontractors due to natural or environmental disasters may adversely affect our ability to perform our contracts, which could reduce our profitability in the event damages or other costs are not recoverable from the subcontractor, the customer, or insurers. Such events could also result in a termination of the prime contract and have an adverse effect on our ability to compete for future contracts.

We face risks related to health epidemics, pandemics, and similar outbreaks, and our business has been and will continue to be adversely affected by the COVID-19 pandemic.

We face various risks related to health epidemics, pandemics and similar outbreaks, including the global outbreak of COVID-19. Such risks include disruptions or restrictions on our employees' ability to work or work effectively, temporary closures of our facilities or the facilities of our customers or suppliers, and delays in supplier deliveries. We have experienced higher employee absentee rates as a result of COVID-19, which has impacted our operations and financial results. Higher absentee rates attributable to COVID-19, including because of illness, quarantines, government actions, facility closures, or other restrictions resulting from COVID-19, have impacted and may continue to impact performance on our contracts and have increased and may continue to increase our costs. These impacts may continue, and the cost increases may not be fully recoverable under our contracts or adequately covered by insurance, which could impact our profitability.

COVID-19 has also caused disruption in our supply chain, caused delays in, and limited the ability of, the U.S. Government and other customers to perform, which have included delays in contract award decisions, and caused other unpredictable events. Some or all of these impacts might continue into the future.

In September 2021, President Biden issued an executive order requiring certain employers with U.S. Government contracts to ensure that their U.S.-based employees, contractors, and subcontractors that work on or in support of U.S. Government contracts are fully vaccinated in accordance with the guidelines of the Safer Federal Workforce Task Force. In November 2021, OSHA issued an Emergency Temporary Standard ("ETS") requiring that all employers with 100 or more employees mandate vaccines for covered employees or, in the alternative, weekly testing and masks. The U.S. federal contractor mandate was preliminarily enjoined by several U.S. federal district courts, the U.S. Supreme Court preliminarily stayed the OSHA ETS in January 2022, and OSHA subsequently withdrew the ETS.

While we are not currently subject to any vaccine mandate, it continues to be our policy to encourage each of our employees to be fully vaccinated against COVID-19. To the extent we become subject to a vaccine mandate in the future, our implementation of the mandate could result in employee attrition, including attrition of critical skilled labor, and difficulty meeting future labor requirements. If attrition is significant, our operations and ability to execute our contracts could be materially impacted. In addition, our subcontractors and suppliers who become subject to a vaccine mandate could be impacted by an inability to comply or loss of personnel, which could disrupt subcontractor or supplier performance or deliveries, and negatively impact our business.

COVID-19 has already impacted our business and results of operations, and the ultimate impact of COVID-19 on our operations and financial performance in future periods, including our ability to execute our programs on the expected schedule, remains uncertain and will depend on future COVID-19 related developments, including the duration of the pandemic, potential subsequent waves of COVID-19 infection or potential new variants, the effectiveness of COVID-19 vaccines and the impacts of implementation of vaccine mandates, and related government actions to prevent and manage disease spread, all of which continue to be uncertain and cannot be predicted. As a result, we cannot predict the full impact of COVID-19, but it could materially affect our business, financial position, results of operations, and/or cash flows in the future.

Our business could suffer if we are unsuccessful in negotiating new collective bargaining agreements.

Approximately 45% of our employees are covered by a total of nine collective bargaining agreements and one site stabilization agreement. Newport News has two collective bargaining agreements covering represented employees, which expire in December 2022 and April 2024, and one that expired in November 2021, which covers approximately 50% of Newport News employees. Newport News craft workers employed at the Kesselring Site near Saratoga Springs, New York are represented under an indefinite DoE site agreement. Ingalls has five collective bargaining agreements covering represented employees, all of which expire in March 2026. Approximately 15 Technical Solutions employees in Klamath Falls, Oregon are covered by a collective bargaining agreement that expires in June 2025.

We reached a tentative agreement with representatives of United Steelworkers ("USW") Local 8888 (Newport News) members on a new labor agreement in November 2021, but the members of the bargaining unit declined to ratify the contract. The Newport News and USW negotiation teams continued negotiations and reached a tentative agreement on another labor agreement in January 2022. We expect the members of the bargaining unit to vote on the new agreement in the near future. The USW Local 8888 members are continuing to work under the terms and conditions of the expired collective bargaining agreement, but the members may call for a strike, or we may declare a lock-out, upon 48 hours notice. We cannot give any assurances that the tentative labor agreement will be ratified by the local bargaining unit or that a strike or lock-out will not occur.

Collective bargaining agreements generally expire after three to five years and are subject to renegotiation at that time. While we believe we maintain good relationships with our represented workers, it is possible we may experience difficulties renegotiating expiring collective bargaining agreements. We have experienced in the past work stoppages, strikes, and other labor disruptions associated with the collective bargaining of new labor agreements. If we experience such events in the future, we could incur additional expenses or work delays that could adversely affect programs served by employees who are covered by collective bargaining agreements.

We could be negatively impacted by security threats, including cyber security threats, and related disruptions.

As a defense contractor, we rely on our information technology infrastructure to process, transmit, and store electronic information, including classified and other sensitive information of the U.S. Government. While we maintain stringent information security policies and protocols and implement security controls and complementary cyber security technologies in compliance with industry requirements, we face substantial cyber security threats to our information technology infrastructure, including threats to our and the U.S. Government's proprietary and classified information from advanced nation state threat actors, sophisticated cybercrime syndicates, hacktivists, and insiders. While we implement countermeasures to address the risks posed by these threats, external and internal threat actors continuously seek to evade our cyber security countermeasures to gain unauthorized and unlawful access to our information technology infrastructure, assets, and data.

Our information technology infrastructure is critical to the efficient operation of our business and essential to our ability to perform day-to-day operations. Breaches of our information technology or physical facilities could cause us to incur significant recovery and restoration expenses, degrade performance on existing contracts, and expose us to reputational damage, potential liability, or the loss of current or future contracts, including work on sensitive or classified systems for the U.S. Government, any of which could have a material adverse effect on our operations, financial position, results of operations, or cash flows.

Our suppliers, subcontractors, and other business partners also face cyber security and other security threats. Although we undertake cooperative efforts with our customers, suppliers, subcontractors, and other business partners to facilitate their understanding of cyber security threats they face and potential cyber security countermeasures to mitigate potential cyber-attacks, other security threats, and business disruptions, we rely substantially on the safeguards implemented by these organizations, which may affect the security of our information. These organizations have varying levels of cyber security expertise and safeguards, and their relationships with U.S. Government contractors may increase the likelihood that they are targeted by the same cyber security threats we face.

In addition to cyber threats, operation of our facilities may be disrupted by civil unrest, acts of sabotage or terrorism, and other local security issues. Such events may require us to incur greater costs for security or to shut down operations for a period of time.

Changes in future business conditions could cause business investments, recorded goodwill, and/or purchased intangible assets to become impaired, resulting in losses and write-downs that would reduce our operating income.

As part of our business strategy, we acquire non-controlling and controlling interests in businesses. We make acquisitions and investments following careful analysis and due diligence to achieve a desired return or strategic objective. Business acquisitions involve estimates, assumptions, and judgments to arrive at acquisition prices, which are allocated among acquired assets, including goodwill, based upon fair market values. Notwithstanding our acquisition and business integration efforts, actual operating results of acquired businesses may vary significantly from expectations. In such events, we may be required to write down our carrying value of the related goodwill and/or purchased intangible assets. In addition, declines in the trading price of our common stock or the market as a whole can result in goodwill and/or purchased intangible asset impairment charges associated with our existing businesses.

As of December 31, 2021, goodwill and purchased intangible assets from prior business acquisitions accounted for approximately 25% and 11%, respectively, of our total assets. We evaluate goodwill values for impairment annually, or when evidence of potential impairment exists. We also evaluate the values of purchased intangible assets when evidence of potential impairment exists. The impairment tests are based on several factors requiring judgments. As a general matter, a significant decrease in expected cash flows or unfavorable changes in market conditions may indicate potential impairment of recorded goodwill or purchased intangible assets.

Legal and Regulatory Risk Factors

As a U.S. Government contractor, we are heavily regulated and could be adversely affected by changes in regulations or negative findings from a U.S. Government audit or investigation.

As a U.S. Government contractor, we must comply with significant regulatory requirements, including those relating to award, administration, and performance of U.S. Government contracts, as well as legal and regulatory requirements relating to cyber security, environmental protection and our nuclear operations. Government contracting requirements increase our contract performance costs and compliance costs and risks, and change on a routine basis. In addition, our nuclear operations are subject to an enhanced regulatory environment, which results in further performance and compliance requirements and higher costs. New laws, regulations, or procurement requirements, or changes to existing ones (including, for example, regulations related to recovery of compensation costs, cyber security, counterfeit parts, specialty metals, and conflict minerals), can increase our performance costs and compliance costs and risks, and reduce our profitability.

We are overseen and audited by the U.S. Government and its various agencies, including the U.S. Navy's Supervisor of Shipbuilding, the DCAA, and the DCMA. These agencies evaluate our contract performance, cost structures, and compliance with applicable laws, regulations, and standards, as well as the adequacy of our business systems and processes relative to U.S. Government requirements. If an audit uncovers improper or illegal activities, we may be subject to administrative, civil, or criminal proceedings, which could result in fines, penalties, repayments, or compensatory, treble, or other damages. Certain U.S. Government findings against a contractor can also lead to suspension or debarment from future U.S. Government contracts or the loss of export privileges. Allegations of impropriety can also cause significant reputational damage.

The U.S. Government also has the ability to decrease or withhold contract payments if it determines significant deficiencies exist in one or more of our business systems. The U.S. Government has, in certain instances, withheld contract payments upon its assessment that deficiencies exist with one or more of our business systems, which can have a material impact on the timing of our cash receipts. For example, in January 2022, the Navy Contracting Officer issued a written determination that the Ingalls Shipbuilding Material Management and Accounting System has three significant deficiencies, resulting in a 5% withhold of payments on certain invoices issued under one contract. Ingalls Shipbuilding will submit a corrective action plan, and the withhold will be reduced to 2% if the Contracting Officer determines the corrective action plan has been implemented and is effective. The withhold will terminate and withheld funds returned to the Company when the Contracting Officer determines that the significant deficiencies have been corrected.

The U.S. Government has, from time to time, recommended that certain of our contract prices be reduced, or that certain costs allocated to our contracts be disallowed, which sometimes involve substantial dollar amounts. In response to U.S. Government audits, investigations, and inquiries, we have also in the past made adjustments to our contract prices and costs allocated to our government contracts. Such audits, investigations, and inquiries may result in future reductions of our contract prices. Costs we incur that are determined to be unallowable or improperly allocated to a specific contract will not be recovered or must be refunded if previously reimbursed.

We must comply with a variety of federal laws and regulations, including the FAR, the DFARS, the Truth in Negotiations Act, the False Claims Act, the Procurement Integrity Act, the International Traffic in Arms Regulations promulgated under the Arms Export Control Act, the Close the Contractor Fraud Loophole Act, the Foreign Corrupt Practices Act, and CAS. If a determination is made that we engaged in illegal activities or that we are not presently responsible, as defined under the FAR, we may be subject to reductions in contract values, contract modifications or terminations, penalties, fines, repayments, compensatory, treble, or other damages, or suspension or debarment, any of which could have a material adverse effect on our financial position, results of operations, or cash flows. In addition, cyber security and data privacy and protection laws and regulations are evolving and present increasing compliance challenges, which increase our costs and may affect our competitiveness, cause reputational harm, and expose us to damages claims, substantial fines, or other penalties.

Environmental costs could have a material adverse effect on our financial position, results of operations, or cash flows.

Our operations are subject to and affected by federal, state, and local environmental laws and regulations relating to the discharge, storage, treatment, handling, disposal, and remediation of certain materials, substances, and wastes used in our operations. In addition, we could be affected by future environmental laws or regulations. Increased public awareness and concern regarding global climate change may result in more federal, regional, and/or international requirements to reduce or mitigate global warming, and legislation, international protocols or treaties, or regulation could mandate stricter limits on greenhouse gas emissions. Environmental laws and regulations may require the installation of costly pollution control equipment or operational changes to limit emissions or discharges and/or to decrease the likelihood of accidental hazardous material releases. We expect to incur future capital and operating costs to comply with current and future laws and regulations for environmental protection and remediation, and such costs could be substantial, depending on the future proliferation of environmental requirements and the extent to which we discover currently unknown environmental conditions.

Shipbuilding operations require the use of hazardous materials. Our shipyards also generate significant quantities of wastewater, which we treat before discharging in accordance with applicable permits. To manage these materials, our shipyards have an extensive network of above ground and underground storage tanks, some of which have leaked and required remediation in the past. In addition, our handling of hazardous materials has sometimes resulted in spills in our shipyards and occasionally in adjacent rivers and waterways in which we operate.

Various federal, state, and local environmental laws and regulations impose restrictions on the discharge of pollutants into the environment and establish standards for the transportation, storage, and disposal of toxic and hazardous wastes. Substantial fines, penalties, and criminal sanctions may be imposed for noncompliance, and certain environmental laws impose joint and several "strict liability" for remediation of spills and releases of oil and hazardous substances. Such laws and regulations impose liability upon a party for environmental cleanup and remediation costs and damage without regard to the negligence or fault of such party and could expose us to liability for the conduct of or conditions caused by third parties. Moreover, if we violate the Clean Air Act or the Clean Water Act, the facility or facilities involved in the violation could be placed by the EPA on the "Excluded Parties List" maintained by the General Services Administration, which would continue until the EPA concluded the cause of the violation was cured. Facilities on the "Excluded Parties List" are prohibited from working on any U.S. Government contract.

The adoption of new environmental or climate change laws and regulations, stricter enforcement of existing laws and regulations, imposition of new cleanup requirements, discovery of previously unknown or more extensive contamination, litigation involving environmental matters, our inability to recover related costs under our government contracts, or the financial insolvency of other responsible parties could cause us to incur costs that could have a material adverse effect on our financial position, results of operations, or cash flows.

Our reputation and our ability to conduct business may be impacted by the improper conduct of employees, agents, or business partners.

Our compliance program includes detailed compliance plans and related compliance controls, policies, procedures, and training designed to prevent and detect misconduct by employees, agents, business partners, and others working on our behalf, including suppliers and subcontractors, that would violate the laws of the jurisdictions in which we operate, including laws governing payments to government officials, the protection of export controlled or classified information, cost accounting and billing, competition, and data privacy. We have been impacted in the past by the misconduct of employees and business partners, and we may not prevent all such misconduct in the future by our employees, agents, business partners, and others working on our behalf, including suppliers and subcontractors. Moreover, the risk of improper conduct may be expected to increase as we expand our operations into foreign jurisdictions. Any improper actions by our employees, agents, business partners, and others working on our behalf, including suppliers and subcontractors, could subject us to administrative, civil, or criminal investigations and monetary and non-monetary penalties, including suspension or debarment, which could have a material adverse effect on our financial position, results of operations, or cash flows. Any such improper actions could also cause us significant reputational damage.

Our nuclear operations subject us to environmental, regulatory, financial, and other risks.

The design, construction, refueling and overhaul, repair, and inactivation of nuclear-powered aircraft carriers and nuclear-powered submarines, our nuclear facilities used to support such activities, our nuclear operations at DoE sites, and our activities in the commercial nuclear market subject us to various risks, including:

- Potential liabilities relating to harmful effects on the environment and human health resulting from nuclear operations and the storage, handling, and disposal of radioactive materials, including nuclear assemblies and their components;
- Unplanned expenditures relating to maintenance, operations, security, and repairs, including repairs required by the U.S. Navy, the Nuclear Regulatory Commission, or the DoE;
- Reputational damage;
- Potential liabilities arising out of a nuclear incident whether or not it is within our control; and
- Regulatory noncompliance and loss of authorizations or indemnifications necessary for our operations.

Failure to properly store, handle, and dispose of nuclear materials could pose a health risk to humans and wildlife and could cause personal injury and property damage, including environmental contamination. If a nuclear accident were to occur, its severity could be significantly affected by the volume of the materials and the speed of remedial actions taken by us and emergency response personnel, as well as other factors beyond our control, such as weather and wind conditions. Actions we might take in response to an accident could result in significant costs.

Our nuclear operations are subject to various safety related requirements imposed by the U.S. Navy, the DoE, and the Nuclear Regulatory Commission. In the event of noncompliance, these agencies may increase regulatory oversight, impose fines, or shut down our operations, depending on their assessment of the severity of the noncompliance. In addition, new or revised security and safety requirements imposed by the U.S. Navy, DoE, and Nuclear Regulatory Commission could require substantial capital and other expenditures.

Subject to certain requirements and limitations, our contracts with the U.S. Navy and DoE generally provide for indemnity by the U.S. Government for costs arising out of or resulting from our nuclear operations. We may not, however, be indemnified for all liabilities we may incur in connection with our nuclear operations. To mitigate risks related to our commercial nuclear operations, we rely primarily on insurance carried by nuclear facility operators and our own limited insurance for losses in excess of the coverage of facility operators. Such insurance, however, may not be sufficient to cover our costs in the event of an accident or business interruption relating to our commercial nuclear operations, which could have a material adverse effect on our financial position, results of operations, or cash flows.

Changes in tax laws and regulations or exposure to additional tax liabilities could adversely affect our financial results.

Changes in U.S. (federal or state) or foreign tax laws and regulations, or their interpretation and application, including those with retroactive effect, could result in increases in our tax expense and affect profitability and cash flows. For example, beginning in 2022, the Tax Cuts and Jobs Act of 2017 eliminates the option to deduct research and development expenditures immediately in the year incurred and requires taxpayers to capitalize and amortize such expenditures over five years. If these provisions are not deferred, modified, or repealed by Congress with retroactive effect to January 1, 2022, they will decrease our cash from operations beginning in 2022. We currently estimate an approximately $100 million impact to 2022 cash from operations based on the provisions currently in effect. The actual impact on 2022 cash from operations will depend on whether and when these provisions are deferred, modified, or repealed by Congress, including any retroactive application, and the amount of research and development expenses paid or incurred in 2022, among other factors. In addition, recent proposals to increase the U.S. corporate income tax rate would require us to increase our net deferred tax liabilities upon enactment of new tax legislation, with a corresponding material, one-time, noncash increase in deferred income tax expense. Our current income tax expense and payments would likely materially increase in periods subsequent to the income tax rate change.

In addition to future changes in tax laws, the amount of net deferred tax liabilities will change periodically as a result of a number of factors, including the measurement of our defined benefit pension plans, actual cash contributions to our defined benefit pension plans, changes in the timing of contract taxable income, and changes in the amount and timing of depreciation deductions. We are also regularly under audit or examination by taxing authorities, including foreign tax authorities. The final determination of tax liabilities and any related litigation could similarly result in unanticipated increases in our tax expense and affect profitability and cash flows.

We are subject to claims and litigation that could ultimately be resolved against us, requiring future material cash payments and/or future material charges against our operating income, materially impairing our financial position or cash flows.

The size, nature, and complexity of our business make it highly susceptible to claims and litigation. We are subject to various administrative, civil, and criminal litigation, environmental claims, income tax proceedings, compliance proceedings, customer claims, and audits and investigations, which can divert financial and management resources and result in fines, penalties, compensatory, treble or other damages, or nonmonetary sanctions. Government regulations also provide that certain allegations against a contractor may lead to suspension or debarment from government contracts or suspension of export privileges. Suspension or debarment could have a material adverse effect on us because of our reliance on government contracts and authorizations. Litigation, claims, or investigations, if ultimately resolved against us, could have a material adverse effect on our financial position, results of operations, or cash flows. Any litigation, claim, audit, or investigation, even if fully indemnified or insured, could negatively impact our reputation among our customers and the public and make it more difficult for us to compete effectively or acquire adequate insurance in the future. See Note 14: Investigations, Claims, and Litigation in Item 8.

We may be unable to adequately protect our intellectual property rights, which could affect our ability to compete.

We own patents, trademarks, copyrights, and other forms of intellectual property related to our business, and we license intellectual property rights to and from third parties. The U.S. Government generally receives non-exclusive licenses to certain intellectual property we develop in the performance of U.S. Government contracts, and the U.S. Government may use or authorize others to use such intellectual property. The U.S. Government is taking increasingly aggressive positions both as to the intellectual property to which they believe government use rights apply and to the acquisition of broad license rights. If the U.S. Government is successful in these efforts, our intellectual property on which we depend and our access to and use of certain supplier intellectual property could be negatively affected.

We also rely upon proprietary technology, information, processes, and know-how that are not protected by patents. We seek to protect this information through trade secret or confidentiality agreements with our employees, consultants, subcontractors, and other parties, as well as through other measures. These agreements and other measures may not, however, adequately protect the trade secrets on which we depend.

Our intellectual property is also subject to challenge, invalidation, misappropriation, or circumvention by third parties. In the event of infringement of our intellectual property rights, breach of a confidentiality agreement, or unauthorized disclosure of proprietary information, we may not have adequate legal remedies to protect our intellectual property. Litigation to determine the scope of our rights, even if successful, could be costly and a diversion of management's attention. In addition, trade secrets may otherwise become known or be independently developed by competitors. If we are unable adequately to protect our intellectual property rights, our business could be adversely affected.

We also use certain intellectual property licensed to us by third parties. In the case of such licensed intellectual property, we may be unable in the future to secure the necessary licenses to use such intellectual property, or to secure the licenses on commercially reasonable terms.

Anti-takeover provisions in our organizational documents and Delaware law, as well as regulatory requirements, could delay or prevent a change in control.

Certain provisions of our Restated Certificate of Incorporation and Restated Bylaws may delay or prevent a merger or acquisition that stockholders may consider favorable. For example, our Restated Certificate of Incorporation and Restated Bylaws currently require advance notice for stockholder proposals and director nominations, and authorize our board of directors to issue one or more series of preferred stock. These provisions may discourage acquisition proposals or delay or prevent a change in control, which could reduce our stock price. Delaware law also imposes restrictions on mergers and other business combinations between any holder of 15% or more of our outstanding common stock and us.

Our nuclear shipbuilding operations are considered vitally important to the U.S. Navy. As a result, our Navy contracts include notice and approval rights for the Navy and conditions regarding the Navy's obligations to indemnify us for losses relating to our naval nuclear operations, in the event of a change of control of our nuclear shipbuilding operations. Such provisions require us to provide the U.S. Navy with notice of any potential change of control of our nuclear shipbuilding operations and receive the Navy's consent for transferring certain related licenses to facilitate the Navy's ability to ensure that a potential buyer would continue to conduct our operations in a satisfactory manner.

Provisions of our Restated Certificate of Incorporation and our Restated Bylaws and our existing contracts with the U.S. Navy may have the effect of discouraging, delaying, or preventing a change of control of our company that may be beneficial to our stockholders.

General Risk Factors

Our insurance coverage may be inadequate to cover all of our significant risks or our insurers may deny coverage of material losses we incur, which could adversely affect our profitability and financial position.

We seek to insure our significant risks and potential liabilities that are insurable, including, among others, property loss from natural disasters, product liability, and business interruption resulting from an insured property loss. In some circumstances, we may be indemnified for losses by the U.S. Government, subject to the availability of appropriated funds. Not every risk or liability can be protected by insurance, and, for insurable risks, the limits of coverage we can reasonably purchase may not be sufficient to cover the full amount of our actual losses or liabilities, including, for example, in the case of a catastrophic hurricane. In addition, the nature of our business can make it difficult to quantify the disruptive impact and loss resulting from such events. Limitations on the availability of insurance coverage may result in substantial uninsured losses, which could have a material adverse effect on our financial position, results of operations, or cash flows. Even in cases for which we have insurance coverage, disputes with insurance carriers over coverage may affect the timing of cash flows, and, in the event of litigation with an insurance carrier, an unfavorable outcome may have a material adverse effect on our financial position, results of operations, or cash flows.

Market volatility and adverse capital market conditions may affect our ability to access cost-effective sources of funding and may expose us to risks associated with the financial viability of suppliers and subcontractors.

The financial markets can experience high levels of volatility and disruption, reducing the availability of credit for certain issuers. We access these markets from time to time to support certain business activities, including funding acquisitions and capital expansion projects and refinancing existing indebtedness. We may also access these markets to acquire credit support for our workers' compensation self-insurance program and letters of credit. A number of factors could cause us to incur higher borrowing costs and experience greater difficulty accessing public and private markets for debt, including disruptions or declines in the global capital markets and/or a decline in our financial performance, outlook, or credit ratings. The occurrence of any or all of these events may adversely affect our ability to fund our operations, meet contractual commitments, make future investments or desirable acquisitions, or respond to competitive challenges.

Tightening capital markets could also adversely affect the ability of our suppliers and subcontractors to obtain financing. Delays in the ability of our suppliers or subcontractors to obtain financing, or the unavailability of financing, could negatively affect their ability to perform their contracts with us and, as a result, our ability to perform our contracts. The inability of our suppliers and subcontractors to obtain financing could also result in the need for us to transition to alternate suppliers and subcontractors, which could result in us incurring significant incremental costs and delays.

If we fail to manage acquisitions, divestitures, equity investments, and other transactions, including our acquisition of Alion, successfully or if acquired entities or equity investments fail to perform as expected, our financial results, business, and future prospects could be harmed.

As part of our business strategy, we identify and evaluate potential acquisitions and investments. When evaluating such transactions, we make significant judgments regarding the values of business opportunities, technologies, and other assets, the risks and costs of potential liabilities, and the future prospects of strategic acquisitions. We often compete with other potential buyers for the same opportunities. To be successful, we must conduct due diligence to identify valuation issues and potential loss contingencies; negotiate transaction terms; complete and close complex transactions; integrate acquired companies and employees; and realize anticipated operating synergies efficiently and effectively. Acquisition, divestiture, joint venture, and investment transactions often require substantial management resources and have the potential to divert our attention from our existing business. Unidentified or identified but un-indemnified pre-closing liabilities could affect our future financial results, particularly through successor liability under procurement laws and regulations, such as the False Claims Act or Truth in Negotiations Act, anti-corruption, environmental, tax, import-export, and technology transfer laws, which provide for civil and criminal penalties and the potential for debarment. We also may incur unanticipated costs or expenses, including post-closing asset impairment charges, expenses associated with eliminating duplicate facilities, employee retention, transaction-related or other litigation, and other liabilities. Any of the foregoing could adversely affect our business and results of operations.

Joint ventures and other non-controlling investments operate under shared control with other parties. These investments typically face many of the same risks and uncertainties as we do, but may also expose us to additional risks not present if we retained full control. A joint venture partner may have economic or other business interests that are inconsistent with our interests, and we may be unable to prevent strategic decisions that may adversely affect our business, financial condition, and results of operations. We also could be adversely affected by, or liable for, actions taken by these joint ventures that we do not control, including violations of anti-corruption, import and export, taxation, and anti-boycott laws.

There can be no assurance we will continue to increase our dividends or to repurchase shares of our common stock at current levels.

The payment of cash dividends and repurchases of our common stock are subject to limitations under applicable law and the discretion of our board of directors, considered in the context of then current conditions, including our earnings, other operating results, and capital requirements. Declines in asset values or increases in liabilities, including liabilities associated with benefit plans and assets and liabilities associated with taxes, can reduce stockholders' equity. A deficit in stockholders' equity could limit our ability under Delaware law to pay dividends and repurchase shares in the future. In addition, the timing and amount of share repurchases under board-approved share repurchase programs are within the discretion of management and depend upon many factors, including our share price, results of operations, capital requirements, and general business conditions, as well as applicable law.

ITEM 1B. UNRESOLVED STAFF COMMENTS

There were no unresolved staff comments.

ITEM 2. PROPERTIES

Our principal properties are located in Huntsville, Alabama; Pascagoula, Mississippi; Fairfax, Hampton, Newport News, Suffolk, and Virginia Beach, Virginia; and Washington, D.C.

Ingalls - The primary properties comprising our Ingalls operating segment are located in Pascagoula, Mississippi.

Our Pascagoula shipyard facilities are located on approximately 800 acres on the banks of the Pascagoula River where it flows into the Mississippi Sound. We lease the west bank of our Pascagoula shipyard from the State of Mississippi pursuant to a 99-year lease, consisting of a 40-year base term plus six optional terms. We anticipate continued use of this facility for the remaining 45 years of the lease and beyond.

Newport News - The primary properties comprising our Newport News operating segment are located in Newport News, Virginia.

Our Newport News facilities are located on approximately 550 acres we own near the mouth of the James River, which adjoins the Chesapeake Bay, the premier deep-water harbor on the east coast of the United States. Our Newport News shipyard is one of the largest in the United States and includes seven graving docks, a floating dry dock, two outfitting berths, five outfitting piers, and various other shops. It also has a variety of other facilities, including an 18-acre all-weather steel fabrication shop, accessible by both rail and transporter, module outfitting facilities that enable us to assemble a ship's basic structural modules indoors and on land, machine shops totaling

300,000 square feet, and an apprentice school, which provides a four-year accredited apprenticeship program to train shipbuilders.

Technical Solutions - The properties comprising our Technical Solutions operating segment are located throughout the United States. Our properties located in Alexandria, Fairfax, McLean, Vienna, and Virginia Beach, Virginia; Huntsville, Alabama; Orlando, Florida; San Antonio, Texas; Aberdeen and Annapolis Junction, Maryland; Bremerton, Washington; Honolulu, Hawaii; Columbus, Ohio; and Syracuse, New York primarily provide DFS services. Properties located in Pocasset, Massachusetts; Mayport and Panama City, Florida; and Hampton and Virginia Beach, Virginia primarily provide unmanned systems. Properties located in Newport News, Virginia primarily provide nuclear and environmental services.

We believe our physical facilities and equipment are generally well maintained, in good operating condition, and satisfactory for our current needs. We have undertaken substantial capital expenditure programs at our Ingalls and Newport News segments intended to increase our competitiveness and enable us to meet future obligations under our growing shipbuilding program backlog.

ITEM 3. LEGAL PROCEEDINGS

For information regarding legal proceedings, see Note 14: Investigations, Claims, and Litigation in Item 8.

ITEM 4. MINE SAFETY DISCLOSURES

None.

PART II

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

Market Information

Our common stock is listed on the New York Stock Exchange under the symbol "HII".

Stockholders

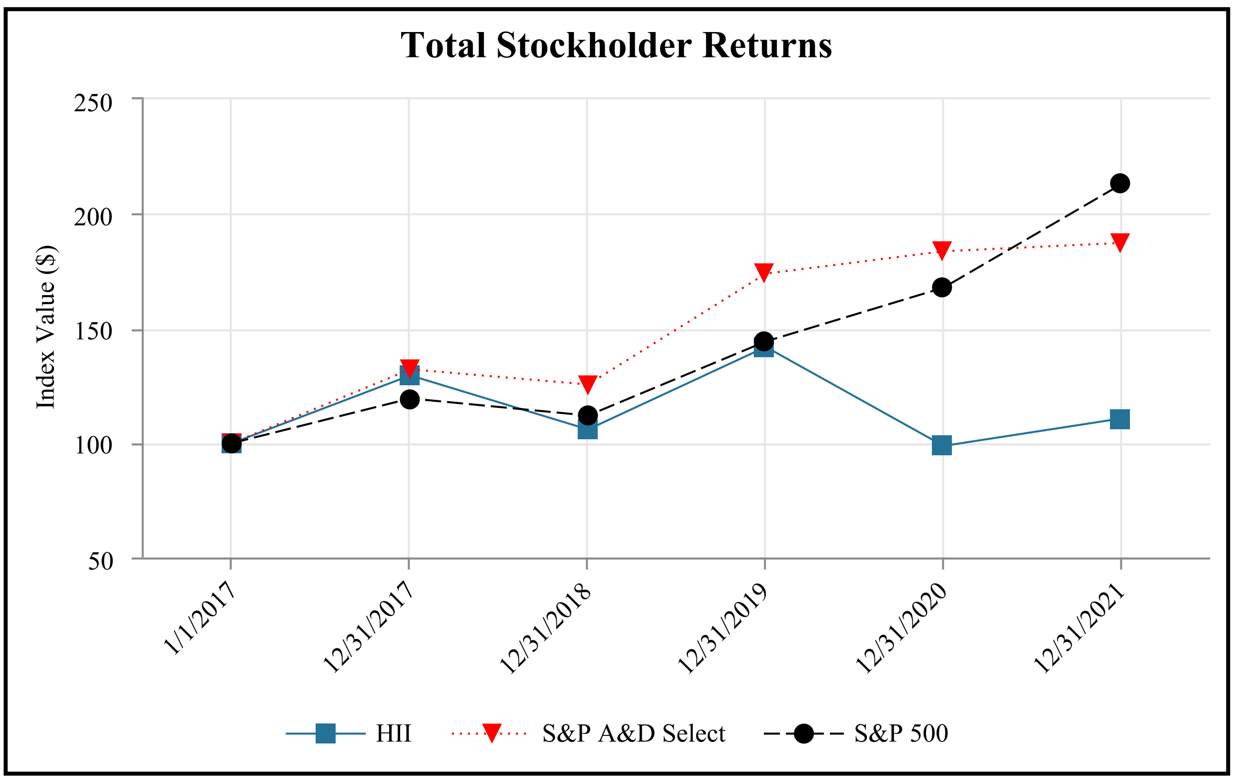
The approximate number of our common stockholders was 13,903 as of February 4, 2022.

Annual Meeting of Stockholders

Our Annual Meeting of Stockholders is currently scheduled to be held on May 3, 2022. The meeting will be held either through a virtual format or in person in Newport News, Virginia.

Stock Performance Graph

The following graph compares the total return on a cumulative basis of $100 invested in our common stock on January 1, 2017, to the Standard & Poor's ("S&P") 500 Index and the S&P Aerospace and Defense Select Index.



(◦) The cumulative total return assumes reinvestment of dividends.

(◦) The S&P Aerospace & Defense Select Index is comprised of The Boeing Company, General Dynamics Corporation, Huntington Ingalls Industries, Inc., L3 Harris Technologies, Inc., Lockheed Martin Corporation, Northrop Grumman Corporation, Raytheon Technologies Corporation, Textron, Inc., and TransDigm Group Incorporated, among other companies.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Repurchases under our stock repurchase program are made from time to time at management's discretion in accordance with applicable federal securities laws. All repurchases of HII common stock have been recorded as treasury stock. The following table summarizes information relating to purchases made by or on behalf of the Company of shares of the Company's common stock during the quarter ended December 31, 2021.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Program (in millions)[1,2]
October 1, 2021 to October 31, 2021	22,551	$ 205.84	22,551	$ 1,050.8
November 1, 2021 to November 30, 2021	22,253	190.40	22,253	1,046.5
December 1, 2021 to December 31, 2021	30,200	183.50	30,200	1,041.0
Total	75,004	$ 192.26	75,004	$ 1,041.0

[1] From the stock repurchase program's inception through December 31, 2021, we purchased 13,395,300 shares at an average price of $161.18 per share for a total of $2.2 billion.

[2] In October 2012, we commenced our stock repurchase program. In November 2019, we announced an increase in the stock repurchase program to $3.2 billion and an extension of the term to October 31, 2024.

Securities Authorized for Issuance Under Equity Compensation Plans

For information regarding securities authorized for issuance under our equity compensation plans, see Note 18: Stock Compensation Plans in Item 8 and Equity Compensation Plan Information in Item 12.

ITEM 6. [RESERVED]

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

OVERVIEW

Our Business

Huntington Ingalls Industries, Inc. is America’s largest military shipbuilding company and a provider of professional services to partners in government and industry. For more than a century, our Ingalls segment in Mississippi and Newport News segment in Virginia have built more ships in more ship classes than any other U.S. naval shipbuilder. Our Technical Solutions segment provides a range of services to government and commercial customers. Headquartered in Newport News, Virginia, HII employs approximately 44,000 people domestically and internationally.

We conduct most of our business with the U.S. Government, primarily the DoD. As prime contractor, principal subcontractor, team member, or partner, we participate in many high-priority U.S. defense programs. Ingalls includes our non-nuclear ship design, construction, repair, and maintenance businesses. Newport News includes all of our nuclear ship design, construction, overhaul, refueling, and repair and maintenance businesses. Our Technical Solutions segment provides a wide range of professional services, including DFS, nuclear and environmental services, and unmanned systems.

The following discussion should be read along with the audited consolidated financial statements included in Item 8 of this Annual Report on Form 10-K.

Business Environment

COVID-19 Pandemic - The COVID-19 global pandemic has had wide-ranging effects on the global health environment and disrupted the global and U.S. economies and financial markets, including impacts to our employees, customers, suppliers, and communities (collectively, “COVID-19 Events”). COVID-19 Events have also impacted our operations, and the extent of future impacts are uncertain. The most significant areas of impact have been the disruption of our employees’ ability to work effectively, disruption in our supply chain, disruption of the U.S. Government's and our other customers' abilities to perform their obligations, and impact on pension assets and other investment performance.

In September 2021, President Biden issued an executive order requiring certain employers with U.S. Government contracts to ensure that their U.S.-based employees, contractors, and subcontractors that work on or in support of U.S. Government contracts are fully vaccinated in accordance with the guidelines of the Safer Federal Workforce Task Force. In November 2021, OSHA issued an Emergency Temporary Standard (“ETS”) requiring that all employers with 100 or more employees mandate vaccines for covered employees or, in the alternative, weekly testing and masks. The U.S. federal contractor mandate was preliminarily enjoined by several U.S. federal district courts, the U.S. Supreme Court preliminarily stayed the OSHA ETS in January 2022, and OSHA subsequently withdrew the ETS.

While we are not currently subject to any vaccine mandate, it continues to be our policy to encourage each of our employees to be fully vaccinated against COVID-19. To the extent we become subject to a vaccine mandate in the future, our implementation of the mandate could result in employee attrition, including attrition of critical skilled labor, and difficulty meeting future labor requirements.

See Risk Factors in Item 1A for a discussion of COVID-19-related risks.

We have aggressively managed our response to the uncertainties regarding COVID-19 Events, and we have incurred costs to respond to COVID-19 Events, including paid leave, quarantining employees, vaccinations, and recurring facility cleaning. Our shipyards and other facilities have remained open and productive, but we continue to experience decreases in workforce attendance and challenges meeting our hiring requirements, which has impacted our operations due to delay and disruption from a shortage of critical skills and out-of-sequence work.

Under Section 3610 of the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"), contractors may submit claims for employee paid time off caused by restrictions from COVID-19 Events in circumstances where the employee could not work remotely. Such instances may include paid time off for employees to allow for plant decontamination, idle time due to social distancing restrictions, paid time off to take care of dependents impacted by government-ordered school or day care closures, paid time for employee vaccinations or responding to side effects from vaccination, and employee quarantines due to travel restrictions or coming into contact, being diagnosed, or taking care of someone diagnosed with COVID-19. We have taken steps to preserve our rights to pursue such claims for HII and our subcontractors, and we submitted an initial Section 3610 Reimbursement Request to the DoD for Ingalls and Newport News Shipbuilding. Section 3610 under the CARES Act was not extended past September 30, 2021. We anticipate submitting supplemental requests for Section 3610 reimbursement for HII and our subcontractors into 2022. Reimbursements of our requests are contingent upon contracting officers making funding available, and most DoD contracting officers are awaiting supplemental appropriations from Congress before approving such reimbursement requests. We have no assurance that Congress will appropriate sufficient funds to cover the reimbursement of costs contemplated by the CARES Act.

While costs related to COVID-19 Events are allowable under U.S. Government contracts, our contract estimates reflect margin impact uncertainty, because such costs may not result in equitable adjustments, particularly on firm fixed-price and fixed-price incentive contracts, or may not be adequately covered by insurance. Our reinsurers have failed to acknowledge coverage for various losses related to COVID-19, and we filed a complaint in state court in Vermont seeking a judgment declaring that our business interruption and other losses associated with COVID-19 are covered by our property insurance program. We also initiated arbitration proceedings against other reinsurers seeking similar relief. The Vermont court dismissed our complaint in response to a motion of the reinsurers for judgment on the pleadings, and we have appealed the decision. Although we continue to believe that our position is well-founded, no assurance can be provided regarding the ultimate resolution of this matter. See Note 14: Investigations, Claims, and Litigation in Item 8.

We have also focused on actively supporting our customers, suppliers, and communities. We have been proactive in engaging with our U.S. Government customers regarding future contract adjustments. While there has been no change in contract terms or substantial degradation in timely payments from customers, we have experienced delays in decisions on certain contract awards. We are unable to predict how our customers will allocate resources in the future as they react to the evolving demands of the COVID-19 response. We also accelerated payments to small business suppliers in an effort to minimize supply chain disruption.

We temporarily halted stock repurchases in the first quarter of 2020, but we resumed share repurchases during the first quarter of 2021. We also deferred certain payroll taxes in 2020 pursuant to the CARES Act, which increased our cash from operations in 2020, but will reduce cash from operations in 2021 and 2022.

U.S. Government Contracts - Long-term uncertainty exists with respect to overall levels of defense spending across the future years' defense plan, and it is likely that U.S. Government discretionary spending levels will continue to be subject to significant pressure.

The National Defense Authorization Act for Fiscal Year 2022 was enacted in December 2021 and broadly supports our shipbuilding programs, including increased funding authority for *Arleigh Burke*-class destroyers (DDG-51), LHA and LPD Flight II amphibious ships, and submarine supplier development assistance. However, more than one quarter into the fiscal year, Congressional appropriations for the federal government have yet to be finalized. Consequently, the U.S. Government is currently operating under a Continuing Resolution ("CR") that funds government operations through February 18, 2022. It remains uncertain at this point whether fiscal year 2022 government operations will require additional short-term funding or annual appropriations measures will be finalized prior to the expiration of the CR. Appropriations measures must be passed by Congress and enacted by the President, and we cannot predict the outcome of the fiscal year 2022 budget process.

Long-term funding for certain programs in which we participate may be reduced, delayed, or canceled. In addition, spending cuts and/or reprioritization of defense investment could adversely affect the viability of our suppliers, subcontractors, and employee base. Our contracts or subcontracts under programs in which we participate may be terminated or adjusted by the U.S. Government or the prime contractor as a result of lack of government funding or reductions or delays in government funding. Significant reductions in the number of ships procured by the U.S. Navy or significant delays in funding our ship programs would have a material effect on our financial position, results of operations, or cash flows.

The federal budget environment remains a significant long-term risk. Considerable uncertainty exists regarding how future budget and program decisions will develop and what challenges budget changes will present for the defense industry. We believe continued budget pressures will have serious implications for defense discretionary spending, the defense industrial base, including HII, and the customers, employees, suppliers, subcontractors, investors, and communities that rely on companies in the defense industrial base. Although it is difficult to determine specific impacts, we expect that over the longer term, the budget environment may result in fewer contract awards and lower revenues, profits, and cash flows from our U.S. Government contracts. It is likely budget and program decisions made in this environment will have long-term impacts on HII and the entire defense industry.

Defense Industry Overview

The United States faces a complex, uncertain, and rapidly changing national security environment. Upon assuming office in 2021, the Biden Administration released a broad interim National Security Strategy that lays out the contours of U.S. foreign policy over the next four years. Under this strategy, the Indo-Pacific region remains at the heart of U.S. defense planning. While the United States continues to face security challenges from Russia, North Korea, and non-state extremism, other ‘non-traditional’ threats such as pandemic disease and climate change, are now part of the national security dialogue.

The U.S. also faces a more lethal and disruptive battlefield, combined across domains and conducted at increasing speed and reach. The security environment is affected by rapid technological advancements and the changing character of war. The drive to develop new capabilities and enhance lethality is relentless, expanding to address emerging threats from peer-competitors as well as actors with lower barriers of entry, and moving at accelerating speed. To address these rapidly-evolving threats, the U.S. is investing in new capabilities and lethality enhancements, including unmanned and autonomous systems and platforms; artificial intelligence; hypersonics; directed energy; resilient networks; command, control, communications, computers, cyber, intelligence, surveillance and reconnaissance; and targeting requirements and microelectronics. Technologies are being prioritized that can penetrate and operate inside highly-contested and highly-defended territory, both physical and cyber.

In late December 2020, the U.S. Navy, Marine Corps, and Coast Guard released a Tri-Service Maritime Strategy titled *Advantage at Sea*. The document provides strategic guidance on how the sea services will prevail in day-to-day competition, crisis, and conflict over the next decade. The strategy directs the services to pursue an agile and aggressive approach to force modernization and experimentation by combining legacy assets with new capabilities to understand faster, decide faster, and act faster. The strategy also emphasizes the need to develop new operational concepts for fielded capabilities, employ resilient and integrated networks across the force, leverage the strengths of regional partners, and expand the use of optionally manned and unmanned platforms.

In January 2021, the Chief of Naval Operations released a *Navigation Plan to the Fleet* that nests under the Tri-Service Maritime Strategy and outlines how the U.S. Navy will grow its naval power to control the seas and project power across all domains. It lays out what must be done this decade to deliver the naval power America needs to compete and win, characterized as a ready fleet, a more lethal and better-connected fleet, and a larger more hybrid fleet. To this end, the Marine Corps is also reshaping its force under the Commandant's *Force Design 2030* guidance to become optimized for modern operations by 2030. The Marine Corps has already taken action to eliminate legacy capabilities, such as battle tanks, and a future force may feature an expanded assortment of smaller platforms, landing craft, and connectors that are manned, minimally manned, and unmanned, and exploit autonomy and artificial intelligence.

We anticipate the U.S. Navy's force projection strategy will continue to emphasize sea control and sea denial, enabling power projection against adversaries with long-range weapons and full-spectrum joint domain capabilities. The Navy will likely continue to employ the evolving concept of Distributed Maritime Operations ("DMO"), which features multiple sensors and shooters that are widely dispersed across a broad range of manned and unmanned platforms and linked through resilient networks. Naval forces are participating in a larger DoD-wide objective to modernize command and control architecture, the concept to connect sensors from all of the military services into a single network known as Joint All-Domain Command and Control ("JADC2"). Future conflicts may require leaders to analyze the operating environment and make decisions rapidly. With JADC2, DoD envisions creating an "internet of things" network that would connect numerous sensors with weapons systems, using artificial intelligence algorithms to help improve decision-making. Project Overmatch is the Navy's effort to develop the networks, infrastructure, data architecture, and analytics to participate in this larger, networked military operating environment. The end-state for the "Future Navy" envisions a fleet designed to ensure the wholeness of combat capability and lethal forces maximizing the benefits of DMO, expeditionary advanced base operations, and littoral operations in a contested environment. Manned and unmanned technology will be used to expand reach, lethality, and warfighter awareness.

The Navy's force structure goal of 355 ships, identified in the December 2016 Force Structure Assessment and codified in the fiscal year 2018 National Defense Authorization Act, has remained the fleet objective for five years. The Navy and the DoD have been working to develop a successor for the 355-ship force-level goal. In December 2020, the outgoing Administration released its vision for the Navy's future force structure in a fiscal year 2022 30-year Navy shipbuilding plan. The plan envisioned achievement of the Navy's force-level goal through a distributed fleet architecture, including 382 to 446 manned ships and 143 to 242 large unmanned vehicles by 2045. The new Administration did not submit a new force structure goal or shipbuilding plan in 2021, but is expected to do so with the delivery of the fiscal year 2023 budget in spring 2022.

The Defense Department and Navy not only face difficult tradeoffs between modernization priorities, but also tradeoffs about where to take risk across time. The shipbuilding defense industry is capital heavy and skilled labor intensive. The Navy, a large single customer with many needs and requirements, dominates the industry's customer base and is served by an increasingly fragile supplier base that has trended toward exclusive providers. Inconsistent shipbuilding plans and annual funding uncertainty severely degrade the ability of shipyards to conduct long-term planning and respond to near-term changes in requirements. This ultimately results in longer construction times and increased costs. For example, the high operational tempo of the Navy in recent years has resulted in a backlog of repair work across the fleet. Coupled with the impacts of COVID-19 and increases in new ship construction, many suppliers are experiencing a shortfall in their capacity to perform work and manufacture products. This increased demand is applying stress to already-aging production equipment. The combination of limited suppliers and an increase in workload could increase cost and potentially create schedule slips, impacting American warfighting capability.

Ultimately, a balance will need to be achieved between the competing priorities of upgrading legacy systems for the near-term, developing and procuring the next generation of systems for the mid-term, and investing in emerging technologies that could drive game-changing capabilities in the long-term. Additionally, the U.S. Navy must compete with other budget priorities, including other defense activities, non-defense discretionary spending, supplemental spending for COVID-19 relief, and entitlement programs for a share of federal budget funding. While the impact to our business resulting from these developments remains uncertain, they could have a material impact on current programs, as well as new business opportunities with the DoD. See Risk Factors in Item 1A.

Program Descriptions

For convenience, a brief description of certain programs discussed in this Annual Report on Form 10-K is included in the Glossary of Programs.

CONTRACTS

We generate most of our revenues from long-term U.S. Government contracts for design, production, and support activities. Government contracts typically include the following cost elements: direct material, labor and subcontracting costs, and certain indirect costs, including allowable general and administrative expenses. Unless otherwise specified in a contract, costs billed to contracts with the U.S. Government are treated as allowable and allocable costs under the FAR and CAS regulations. Examples of costs incurred by us that are not allowable under the FAR and CAS regulations include certain legal costs, lobbying costs, charitable donations, interest expense, organizational costs, including certain merger and acquisition costs, and advertising costs.

We monitor our policies and procedures with respect to our contracts on a regular basis to ensure consistent application under similar terms and conditions, as well as compliance with all applicable government regulations. In addition, the DCAA routinely audits the costs we incur that are allocated to U.S. Government contracts.

Our contracts typically fall into one of four categories: firm fixed-price, fixed-price incentive, cost-type, and time and materials. See Note 7: Revenue in Item 8.

- *Firm Fixed-Price Contracts* - A firm fixed-price contract is a contract in which the specified scope of work is agreed to for a price that is predetermined by bid or negotiation and not generally subject to adjustment regardless of costs incurred by the contractor.

- *Fixed-Price Incentive Contracts* - Fixed-price incentive contracts provide for reimbursement of the contractor's allowable costs, but are subject to a cost-share limit that affects profitability. Fixed-price incentive contracts effectively become firm fixed-price contracts once the cost-share limit is reached.

- *Cost-Type Contracts* - Cost-type contracts provide for reimbursement of the contractor's allowable costs plus a fee that represents profit. Cost-type contracts generally require that the contractor use its reasonable efforts to accomplish the scope of the work within some specified time and some stated dollar limitation.

- *Time and Materials* - Time and materials contracts specify a fixed hourly billing rate for each direct labor hour expended and reimbursement for allowable material costs and expenses.

Contract Fees - Negotiated contract fee structures include: fixed fee amounts, cost sharing arrangements to reward or penalize contractors for under- or over-cost target performance, respectively, positive award fees, and negative penalty arrangements. Profit margins may vary materially depending on the negotiated contract fee arrangements, percentage-of-completion of the contract, the achievement of performance objectives, and the stage of performance at which the right to receive fees, particularly under incentive and award fee contracts, is finally determined.

Award Fees - Certain contracts contain award fees based on performance criteria such as cost, schedule, quality, and technical performance. Award fees are determined and earned based on an evaluation by the customer of our performance against such negotiated criteria. We consider award fees to be variable consideration and generally include these fees in the transaction price using a most likely amount approach. Award fees are limited to the extent of funding allotted by the customer and available for performance and those amounts for which a significant reversal of revenue is not probable.

CRITICAL ACCOUNTING POLICIES, ESTIMATES, AND JUDGMENTS

Our consolidated financial statements are prepared in accordance with U.S. GAAP, which requires management to make estimates, judgments, and assumptions that affect the amounts reported in the consolidated financial statements and the accompanying notes. Management considers an accounting policy to be critical if it is important to our financial condition and results of operations and requires significant judgment and estimates by management in its application. The development and selection of these critical accounting policies have been determined by our management. We have reviewed our critical accounting policies and estimates with the audit committee of our board of directors. Due to the significant judgment involved in selecting certain of the assumptions used in these policies, it is possible that different parties could choose different assumptions and reach different conclusions. While we base estimates and assumptions on our knowledge of current events and actions we may undertake in the future, actual results may ultimately differ from these estimates and assumptions. We consider our policies relating to the following matters to involve our most critical accounting policies and estimates:

- Revenue recognition;
- Purchase accounting, goodwill, and intangible assets;
- Litigation, commitments, and contingencies;
- Retirement related benefit plans; and
- Workers' compensation.

We have incorporated realized and estimated future effects of COVID-19 Events, based upon current conditions and our judgment of the future impacts of COVID-19 Events, with respect to contract costs and revenue recognition, effective income tax rates, and the fair values of our long-lived assets, financial instruments, intangible assets, and goodwill recorded at our reporting units. See Note 2: Summary of Significant Accounting Policies in Item 8.

Revenue Recognition

Most of our revenues are derived from long-term contracts for the production of goods and services provided to the U.S. Government, which are generally accounted for by recognizing revenues over time using a cost-to-cost measure of progress. In estimating contract costs, we utilize a profit-booking rate based upon performance expectations that takes into consideration a number of assumptions and estimates regarding risks related to technical requirements, feasibility, schedule, and contract costs. Management performs periodic reviews of the contracts to evaluate the underlying risks, which may increase the profit-booking rate as we are able to mitigate and retire such risks. For the impacts of changes in estimates on our consolidated statements of operations and comprehensive income, see Note 8: Segment Information in Item 8.

Purchase Accounting, Goodwill, and Intangible Assets

Purchase Accounting and Goodwill - We allocate the purchase price of acquired businesses to the underlying tangible and intangible assets acquired and liabilities assumed based upon their respective fair values, with the excess recorded as goodwill. We recognize purchased intangible assets in connection with our business acquisitions at fair value on the acquisition date. The most significant purchased intangible assets recognized from our acquisitions are generally related to customer contracts, including backlog and recompeted contracts. We determine the fair values of those customer related intangible assets based on estimates and judgments, including the amount and timing of expected future cash flows, long-term growth rates, and discount rates.

Goodwill is tested for impairment on an annual basis at each of our reporting units by comparing the fair value of the reporting unit to its carrying value. If the fair value of the reporting unit is determined to be less than the carrying value, we record a charge to operations.

We estimate the fair value of each reporting unit using a combination of discounted cash flow analysis and market-based valuation methodologies. Determining fair value requires the exercise of significant judgment, including judgments about projected revenues, operating expenses, working capital investment, capital expenditures, and cash flows over a multi-year period. The discount rate applied to our forecasts of future cash flows is based on our estimated weighted average cost of capital. In assessing the reasonableness of our determined fair values, we evaluate our results against our market capitalization. Impairment assessment inherently involves management judgments as to assumptions about expected future cash flows and the impact of market conditions on those assumptions. Changes in our estimates and assumptions could materially affect the determination of fair value and/or goodwill impairment for each reporting unit.

Other Intangible Assets - We perform tests for impairment of amortizable intangible assets whenever events or circumstances suggest that amortizable intangible assets may be impaired.

Due to the many variables inherent in the estimation of the fair values of our business and the relative size of our recorded goodwill and other purchased intangible assets, differences in assumptions may have a material effect on the results of our impairment analysis.

For further information on purchase accounting, goodwill, and intangible assets, see Risk Factors in Item 1A and Note 2: Summary of Significant Accounting Policies, Note 4: Acquisitions and Divestitures, and Note 11: Goodwill and Other Intangible Assets in Item 8.

Litigation, Commitments, and Contingencies

Overview - We are subject to a range of legal proceedings before various courts and administrative agencies and are periodically subject to government audits, inquiries, and investigations that arise in the ordinary course of business. Estimating liabilities and costs associated with these matters requires judgment and assessment based upon professional knowledge and the experience of management and our internal and external legal counsel. In accordance with our practices relating to accounting for contingencies, we record charges to earnings when we determine, after taking into consideration the facts and circumstances of each matter, including any settlement offers, that it is probable a liability has been incurred and the amount of the loss can be reasonably estimated. The ultimate resolution of any such exposure may vary from earlier estimates as further facts and circumstances become known.

Environmental Accruals - We are subject to the environmental laws and regulations of the jurisdictions in which we conduct operations. We record a liability for the costs of expected environmental remediation obligations when we determine that it is probable we will incur such costs and the amount of the liability can be reasonably estimated. When a range of costs is possible and no amount within that range is a better estimate than another, we record the minimum amount of the range.

Factors that could result in changes to the assessment of probability, range of estimated costs, and environmental liability accruals include: modification of planned remedial actions, increase or decrease in the estimated time required to remediate, discovery of more extensive contamination than anticipated, results of efforts to involve other legally responsible parties, financial insolvency of other responsible parties, changes in laws and regulations or contractual obligations affecting remediation requirements, and improvements in remediation technology. Although we cannot predict whether new information gained as remediation projects progress will materially affect the accrued liability, we do not believe that future remediation expenditures will have a material effect on our financial position, results of operations, or cash flows.

Income Tax Matters - The evaluation of tax positions taken in a filed tax return, or planned to be taken in a future tax return or claim, requires judgment. We establish reserves for uncertain tax positions that do not meet the more-likely-than-not recognition threshold, based on the merits of the position. We recognize the amount of a tax benefit that is greater than 50% likely to be realized upon ultimate settlement with the related tax authority. If a tax position does not meet the minimum statutory threshold to avoid payment of penalties, we recognize an expense for the amount of the penalty in the period the tax position is claimed or expected to be claimed in our tax return. Penalties and accrued interest related to unrecognized tax benefits are recognized as a component of income tax expense. See Note 12: Income Taxes in Item 8. Changes in accruals associated with unrecognized tax benefits are recorded in earnings in the period they are determined.

For further information on litigation, commitments, and contingencies, see Risk Factors in Item 1A and Note 2: Summary of Significant Accounting Policies, Note 4: Acquisitions and Divestitures, Note 12: Income Taxes, Note 14: Investigations, Claims, and Litigation, and Note 16: Commitments and Contingencies in Item 8.

Retirement Related Benefit Plans

We recognize, on a plan-by-plan basis, the funded status of our retirement related benefit plans as an asset or liability on our balance sheet, with corresponding adjustments to after-tax accumulated other comprehensive loss and deferred tax assets or liabilities. The funded status represents the difference between the benefit obligation and the fair value of plan assets. See Note 17: Employee Pension and Other Postretirement Benefits in Item 8.

We calculate our retirement related benefit plan costs under both CAS and U.S. GAAP Financial Accounting Standards ("FAS"). The calculations under CAS and FAS require significant judgment. CAS prescribes the determination, allocation, and recovery of retirement related benefit plan costs on U.S. Government contracts through the pricing of products and services. FAS prescribes the methodology used to determine retirement related benefit plan expense or income, as well as the liability, for financial reporting purposes. The CAS requirements for these costs and their calculation methodologies differ from FAS. As a result, while both CAS and FAS use assumptions in their calculation methodologies, each method results in different calculated amounts of retirement related benefit plan costs.

We recover our CAS costs through the pricing of products and services on U.S. Government contracts, so that the CAS cost is recognized in segment product sales and service revenues and in the costs of those product sales and service revenues. In order to present our consolidated financial statements in accordance with FAS, we record the difference between our FAS expense and CAS cost (“FAS/CAS Adjustment”) as operating income within segment operating income and non-operating retirement benefit (expense).

The minimum funding requirements for our qualified pension plans are determined under the Employee Retirement Income Security Act of 1974 ("ERISA"), which is primarily based on the year's expected service cost and amortization of other previously unfunded liabilities. Effective January 1, 2011, we were subject to the funding requirements under the Pension Protection Act of 2006 ("PPA"), which amended ERISA. Under the PPA, we are required to fully fund our pension plans over a rolling seven-year period as determined annually based upon the funded status at the beginning of each year. PPA also introduced a variety of benefit restrictions that apply if a plan falls below certain funded percentages, as defined by the Internal Revenue Code. In funding our plans, we consider various factors, including the minimum funding requirements, maintaining the funded status needed to avoid potential benefit restrictions and other adverse consequences, maintaining minimum CAS funding requirements, and the current and anticipated funding levels of each plan.

Effective January 1, 2021, we adopted the Safe Harbor methodology used in determining CAS pension costs. The interest rates used to calculate pension liabilities under CAS are consistent with those used in the determination of minimum funding requirements under ERISA.

Pension funding requirements under ERISA are subject to pension relief for plan sponsors in the form of higher interest rate assumptions introduced by the Moving Ahead for Progress in the 21st Century Act and subsequently extended by the American Rescue Plan Act of 2021. Using these minimum funding interest rates for the purposes of determining pension costs under CAS reduces volatility in CAS costs year-over-year and provides more predictable costs for our customers, while better aligning reimbursements of pension costs under our contracts with our required pension plan contributions under ERISA.

Due to the differences in requirements and calculation methodologies between FAS and CAS, our FAS pension expense is not necessarily indicative of the funding requirements under PPA or the amounts we recover from the U.S. Government under CAS.

*Assumption*s - We account for our retirement related benefit plans on the accrual basis under FAS. The measurements of obligations, costs, assets, and liabilities require significant judgment. We annually review our assumptions, which are set at each year end and generally not changed during the following year unless a major plan event occurs, such as an amendment, curtailment, or settlement that would trigger a remeasurement. The key assumptions in these measurements are the interest rate used to discount future benefit payments and the expected long-term rate of return on plan assets.

Discount Rate - The assumed discount rate under FAS is used to determine the retirement related benefit plan obligations and expense, and represents the hypothetical rate at which plan benefit obligations could be effectively settled at the measurement date. Consequently, the discount rate can be volatile from year to year. The discount rate assumption is determined for each plan by constructing a hypothetical portfolio of high-quality bonds with cash flows that match the estimated outflows for future benefit payments to determine a single equivalent discount rate. Benefit payments are not only contingent on the terms of a plan but also on the underlying participant demographics, including current age and assumed mortality. We use only bonds that are denominated in U.S. Dollars, are rated Aa or better by nationally recognized statistical rating agencies, have a minimum outstanding issue of $100 million as of the measurement date, and are not callable, convertible, or index-linked.

Expected Long-Term Rate of Return - The expected long-term rate of return on assets is used to calculate net periodic expense, based on such factors as historical returns, targeted asset allocations, investment policy, duration, expected future long-term performance of individual asset classes, interest rates, inflation, portfolio volatility, investment management and administrative fees, and risk management strategies. Historical plan asset performance alone has inherent limitations in predicting future returns. While studies are helpful in understanding past and current trends and performance, the rate of return assumption is based more on long-term prospective views to avoid short-term market influences. Unless plan assets and benefit obligations are subject to re-measurement during the year, the expected return on pension assets is based on the fair value of plan assets at the beginning of the year.

Mortality - Mortality assumptions are used to determine the retirement related benefit obligations and expense, and represent the likelihood and duration of benefit payments to plan participants based on historical experience and projected longevity. We periodically update our mortality assumptions as circumstances warrant.

Differences arising from actual experience or changes in assumptions might materially affect retirement related benefit plan obligations and the funded status. Actuarial gains and losses arising from differences between assumptions and actual experience or changes in assumptions are deferred in accumulated other comprehensive loss. This unrecognized amount is amortized as a component of net expense to the extent it exceeds 10% of the greater of the plan's benefit obligation or plan assets. The amortization period for actuarial gains and losses is the estimated average remaining service life of the plan participants. In 2021, the actual return on assets was approximately 12.7%, which was more than the expected return assumption of 7.25%. For the year ended December 31, 2021, the weighted average discount rates for our pension and other postretirement benefit plans increased by 20 and 19 basis points, respectively. These differences in asset returns and discount rates resulted in actuarial gains of $412 million and $289 million, respectively, for the year ended December 31, 2021.

An increase or decrease of 25 basis points in the discount rate and the expected long-term rate of return assumptions would have had the following approximate impacts on pension expense and obligations:

($ in millions)	Increase (Decrease) in 2022 Expense	Increase (Decrease) in December 31, 2021 Obligations
25 basis point decrease in discount rate	$ 29	$ 329
25 basis point increase in discount rate	(15)	(310)
25 basis point decrease in expected return on assets	21	
25 basis point increase in expected return on assets	(21)	

Assuming a 7.25% expected return on assets assumption, a $50 million pension plan contribution is generally expected to favorably impact the current year expected return on assets by approximately $2 million, depending on the timing of the contribution.

Sensitivities to assumptions are not necessarily linear and are specific to the time periods noted.

CAS Cost - In addition to providing the methodology for calculating retirement related benefit plan costs, CAS also prescribes the method for assigning those costs to specific periods. While the ultimate liability for such costs under FAS and CAS is similar, the pattern of cost recognition is different. The key drivers of CAS pension cost include the funded status and the method used to calculate CAS reimbursement for each of our plans. A plan’s CAS pension cost can only be allocated until the plan is fully funded as defined under the CAS requirements.

Other FAS and CAS Pension Considerations - A key driver of the difference between FAS expense and CAS cost (and consequently the FAS/CAS Adjustment) is the pattern of earnings and expense recognition for actuarial gains and losses that arise when our asset and liability experiences differ from our assumptions under each set of requirements. Under FAS, our net actuarial gains and losses exceeding the 10% corridor are amortized over the estimated average remaining service life of the plan participants. Under CAS Harmonization, the amortization period is 10 years for actuarial gains and losses. Both FAS and CAS use a "market-related value" of plan assets approach to calculate the amount of deferred asset gains or losses to be amortized. Under CAS, actual asset gains and losses are systematically smoothed over five years, subject to certain limitations. For FAS, we do not use this smoothing method, and instead use fair value in determining our FAS expense. Accordingly, FAS expense generally reflects recent asset gains and losses sooner than CAS.

Additionally, CAS cost is only recognized for plans that are not fully funded as defined under CAS. If a plan becomes or ceases to be fully funded due to our asset or liability experience, our CAS cost will change accordingly.

Retirement Plan Assets - Retirement plan assets are stated at fair value. Investments in equity securities (common and preferred) are valued at the last reported sales price when an active market exists. Investments in fixed-income securities are generally valued based on market transactions for comparable securities and various relationships between securities that are generally recognized by institutional traders. Investments in hedge funds, real estate investment funds, private partnerships, collective trust funds, and commingled funds are generally valued at their Net Asset Values ("NAV") or equivalent, which are based on the current fair values of the fund's underlying assets.

Management reviews independently appraised values, audited financial statements, and additional pricing information to evaluate the NAV or its equivalent.

For the limited group of investments for which market quotations are not readily available or for which the above valuation procedures are deemed not to reflect fair value, additional information is obtained from the investment manager and evaluated internally to determine whether any adjustments are required to reflect fair value. See Note 17: Employee Pension and Other Postretirement Benefits in Item 8.

Accumulated Other Comprehensive Loss - Changes in assumptions and changes to plan assets and benefit obligations due to differences between actuarial assumptions and actual results are reported as actuarial gains and losses and recorded in accumulated other comprehensive loss, along with unrecognized prior service costs arising from plan amendments. As disclosed in Note 17: Employee Pension and Other Postretirement Benefits in Item 8, net pre-tax unrecognized actuarial losses as of December 31, 2021 and 2020 were $1,194 million and $2,007 million, respectively. The decrease in actuarial losses in 2021 was primarily driven by asset returns exceeding expected returns by $412 million, lower benefit obligations of $289 million resulting from higher discount rates, and $107 million of amortization of previously unrecognized actuarial losses.

Net pre-tax unrecognized prior service costs (credits) as of December 31, 2021 and 2020 were $60 million and $85 million, respectively. These net deferred costs (credits) primarily originated from plan amendments, including those resulting from collective bargaining agreements. The change in unrecognized prior service costs (credits) in 2021 resulted from plan amendments and the amortization of previously accumulated prior service costs (credits).

Workers' Compensation

Our operations are subject to federal and state workers' compensation laws. We maintain self-insured workers' compensation plans and participate in federally administered second injury workers' compensation funds. We estimate the liability for such claims and funding requirements on a discounted basis utilizing actuarial methods based on various assumptions, which include our historical loss experience and projected loss development factors. We periodically, and at least annually, update our assumptions based on an actuarial analysis. For further information on workers’ compensation, see Environmental, Health & Safety in Item 1 and Note 16: Commitments and Contingencies in Item 8.

Accounting Standards Updates

See Note 3: Accounting Standards Updates in Item 8 for further information.

CONSOLIDATED OPERATING RESULTS

The following table presents selected financial highlights:

	Year Ended December 31			2021 over 2020		2020 over 2019	
($ in millions)	**2021**	**2020**	**2019**	**Dollars**	**Percent**	**Dollars**	**Percent**
Sales and service revenues	**$ 9,524**	$ 9,361	$ 8,899	$ 163	2 %	$ 462	5 %
Cost of product sales and service revenues	**8,156**	7,691	7,368	465	6 %	323	4 %
Income from operating investments, net	**41**	32	22	9	28 %	10	45 %
Other income and gains, net	**2**	1	—	1	100 %	1	— %
General and administrative expenses	**898**	904	788	(6)	(1)%	116	15 %
Goodwill impairment	**—**	—	29	—	— %	(29)	(100)%
Operating income	**513**	799	736	(286)	(36)%	63	9 %
Interest expense	**(89)**	(114)	(70)	25	22 %	(44)	(63)%
Non-operating retirement benefit	**181**	119	12	62	52 %	107	892 %
Other, net	**17**	6	5	11	183 %	1	20 %
Federal and foreign income taxes	**78**	114	134	(36)	(32)%	(20)	(15)%
Net earnings	**$ 544**	$ 696	$ 549	$ (152)	(22)%	$ 147	27 %

Operating Performance Assessment and Reporting

We manage and assess the performance of our business based on our performance on individual contracts and programs using the financial measures referred to below, with consideration given to the Critical Accounting Policies, Estimates, and Judgments referred to in this section. Our portfolio of long-term contracts is largely flexibly-priced. Therefore, sales tend to fluctuate in concert with costs across our large portfolio of active contracts, with operating income being a critical measure of operating performance. Under FAR rules that govern our business with the U.S. Government, most types of costs are allowable, and we do not focus on individual cost groupings, such as cost of sales or general and administrative expenses, as much as we do on total contract costs, which are a key factor in determining contract operating income. As a result, in evaluating our operating performance, we look primarily at changes in sales and service revenues, as well as operating income, including the effects of significant changes in operating income as a result of changes in contract estimates and the use of the cumulative catch-up method of accounting in accordance with GAAP. This approach is consistent with the long-term life cycle of our contracts, as management assesses the bidding of each contract by focusing on net sales and operating profit and monitors performance in a similar manner through contract completion. Consequently, our discussion of business segment performance focuses on net sales and operating profit, consistent with our approach for managing our business.

Cost of sales for both product sales and service revenues consists of materials, labor, and subcontracting costs, as well as an allocation of indirect costs for overhead. We manage the type and amount of costs at the contract level, which is the basis for estimating our total costs at completion of our contracts. Unusual fluctuations in operating performance driven by changes in a specific cost element across multiple contracts are described in our analysis.

Sales and Service Revenues

Sales and service revenues were comprised as follows:

	Year Ended December 31			2021 over 2020		2020 over 2019	
($ in millions)	**2021**	**2020**	**2019**	**Dollars**	**Percent**	**Dollars**	**Percent**
Product sales	**$ 7,000**	$ 6,850	$ 6,265	$ 150	2 %	$ 585	9 %
Service revenues	**2,524**	2,511	2,634	13	1 %	(123)	(5)%
Sales and service revenues	**$ 9,524**	$ 9,361	$ 8,899	$ 163	2 %	$ 462	5 %

2021 - Product sales in 2021 increased $150 million, or 2%, from 2020. Product sales at our Ingalls segment decreased $105 million in 2021, primarily as a result of lower volumes in the *Legend* class NSC program and amphibious assault ships, partially offset by higher volumes in surface combatants. Newport News product sales increased $231 million in 2021, primarily as a result of higher volumes in submarines and aircraft carriers. Technical Solutions product sales increased $24 million in 2021, primarily as a result of higher volumes in DFS, partially offset by lower volumes in unmanned systems.

Service revenues in 2021 increased $13 million, or 1%, from 2020. Service revenues at our Ingalls segment decreased $56 million in 2021, primarily as a result of lower volumes in surface combatant and amphibious assault ship services. Service revenues at our Newport News segment decreased $138 million in 2021, primarily as a result of lower volumes in naval nuclear support services. Service revenues at our Technical Solutions segment increased $207 million in 2021, primarily as a result of higher volumes in DFS services due to the acquisition of Alion, partially offset by the divestiture of our oil and gas business and contribution of our San Diego Shipyard to a joint venture.

2020 - Product sales in 2020 increased $585 million, or 9%, from 2019. Product sales at our Ingalls segment increased $143 million in 2020, primarily as a result of higher volumes in amphibious assault ships and surface combatants, partially offset by lower volume in the *Legend* class NSC program. Newport News product sales increased $366 million in 2020, primarily as a result of higher volumes in aircraft carriers and submarines, partially offset by lower volume on commercial nuclear products. Technical Solutions product sales increased $76 million in 2020, primarily as a result of the acquisition of Hydroid, Inc. ("Hydroid") in March 2020.

Service revenues in 2020 decreased $123 million, or 5%, from 2019. Service revenues at our Ingalls segment decreased $21 million in 2020, as a result of lower volumes in amphibious assault ship services. Service revenues at our Newport News segment decreased $30 million in 2020, primarily as a result of lower volumes in aircraft carrier services, partially offset by higher volumes in naval nuclear support and submarine services. Service revenues at our Technical Solutions segment decreased $72 million in 2020, primarily as a result of lower volumes at our San Diego Shipyard and on DFS, oil and gas, and nuclear and environmental services, partially offset by the acquisition of Hydroid in March 2020.

Cost of Sales and Service Revenues

Cost of product sales, cost of service revenues, income from operating investments, net, and general and administrative expenses were as follows:

	Year Ended December 31			2021 over 2020		2020 over 2019	
($ in millions)	**2021**	**2020**	**2019**	**Dollars**	**Percent**	**Dollars**	**Percent**
Cost of product sales	**$ 5,958**	$ 5,621	$ 5,158	$ 337	6 %	$ 463	9 %
% of product sales	**85.1 %**	82.1 %	82.3 %				
Cost of service revenues	**2,198**	2,070	2,210	128	6 %	(140)	(6)%
% of service revenues	**87.1 %**	82.4 %	83.9 %				
Income from operating investments, net	**41**	32	22	9	28 %	10	45 %
Other income and gains, net	**2**	1	—	1	100 %	1	— %
General and administrative expenses	**898**	904	788	(6)	(1)%	116	15 %
% of total sales and service revenues	**9.4 %**	9.7 %	8.9 %				
Goodwill impairment	**—**	—	29	—	— %	(29)	(100)%
Cost of sales and service revenues	**$ 9,011**	$ 8,562	$ 8,163	$ 449	5 %	$ 399	5 %

Cost of Product Sales

2021 - Cost of product sales in 2021 increased $337 million, or 6%, compared to 2020. Cost of product sales at our Ingalls segment decreased $82 million in 2021, primarily as a result of volume decreases described above. Cost of product sales at our Newport News segment increased $65 million in 2021, primarily as a result of submarine volume increases described above, partially offset by impacts related to performance on Block IV boats of the *Virginia* class (SSN 774) submarine program and delay and disruption from discrete COVID-19 Events in 2020. Cost of product sales at our Technical Solutions segment increased $20 million in 2021, primarily due to the higher volumes described above. Cost of product sales related to the Operating FAS/CAS Adjustment increased $334 million from 2020 to 2021.

Cost of product sales as a percentage of product sales increased from 82.1% in 2020 to 85.1% in 2021, primarily due to an unfavorable change in the Operating FAS/CAS Adjustment, lower risk retirement on *Delbert D. Black* (DDG 119), and year-to-year variances in contract mix, partially offset by impacts related to performance on Block IV boats of the *Virginia* class (SSN 774) submarine program and delay and disruption from discrete COVID-19 Events in 2020, higher risk retirement on *Bougainville* (LHA 8), and a contract incentive on *Jack H. Lucas* (DDG 125).

2020 - Cost of product sales in 2020 increased $463 million, or 9%, compared to 2019. Cost of product sales at our Ingalls segment increased $22 million in 2020, primarily as a result of the volume changes described above, partially offset by higher risk retirement on *Delbert D. Black* (DDG 119) in connection with its delivery and a capital expenditure contract incentive. Cost of product sales at our Newport News segment increased $480 million in 2020, primarily as a result of program cost growth and the volume increases described above. Cost of product sales at our Technical Solutions segment increased $65 million in 2020, primarily due to the higher volumes described above. Cost of product sales related to the Operating FAS/CAS Adjustment decreased $104 million from 2019 to 2020.

Cost of product sales as a percentage of product sales decreased from 82.3% in 2019 to 82.1% in 2020, primarily due to a favorable change in the Operating FAS/CAS Adjustment and higher risk retirement on *Delbert D. Black* (DDG 119), USS *Tripoli* (LHA 7), and *Richard M. McCool Jr.* (LPD 29), as well as year-to-year variances in contract mix, partially offset by unfavorable cumulative catch-up adjustments in the second quarter of 2020 of $111 million on Block IV boats of the *Virginia* class (SSN 774) submarine program, including $95 million for cost and schedule performance and updates to our assumptions for future program efficiencies and performance as a result of cost and schedule trends, as well as $16 million from delay and disruption directly attributable to COVID-19 Events. The decrease in cost of product sales as a percentage of product sales was also offset by unfavorable cumulative catch-up adjustments in the second quarter of 2020 aggregating $61 million across all programs, resulting from cost estimates for delay and disruption from discrete COVID-19 Events, including $16 million in relation to the Block IV boats of the *Virginia* class (SSN 774) submarine program discussed above.

Cost of Service Revenues

2021 - Cost of service revenues in 2021 increased $128 million, or 6%, compared to 2020. Cost of service revenues at our Ingalls segment decreased $46 million in 2021, primarily as a result of lower volumes described above. Cost of service revenues at our Newport News segment decreased $74 million in 2021, primarily as a result of lower volumes described above. Cost of service revenues at our Technical Solutions segment increased $177 million in 2021, primarily as a result of higher volumes described above. Cost of service revenues related to the Operating FAS/CAS Adjustment increased $71 million from 2020 to 2021.

Cost of service revenues as a percentage of service revenues increased from 82.4% in 2020 to 87.1% in 2021, primarily driven by an unfavorable change in the Operating FAS/CAS Adjustment, lower risk retirement on submarine support services, and year-to-year variances in contract mix.

2020 - Cost of service revenues in 2020 decreased $140 million, or 6%, compared to 2019. Cost of service revenues at our Ingalls segment decreased $10 million in 2020, primarily as a result of the volume changes described above, partially offset by recovery of losses on a long-term design contract in 2019. Cost of service revenues at our Newport News segment decreased $12 million in 2020, primarily as a result of the volume changes described above, partially offset by lower risk retirement on naval nuclear support services. Cost of service revenues at our Technical Solutions segment decreased $98 million in 2020, primarily as a result of the volume changes described above, partially offset by a loss on a fleet support services contract in 2019. Cost of service revenues related to the Operating FAS/CAS Adjustment decreased $20 million from 2019 to 2020.

Cost of service revenues as a percentage of service revenues decreased from 83.9% in 2019 to 82.4% in 2020, primarily driven by a favorable change in the Operating FAS/CAS Adjustment, a loss on a fleet support services contract in 2019, and year-to-year variances in contract mix, partially offset by lower risk retirement on naval nuclear support services.

Income from Operating Investments, Net

The activities of our operating investments are closely aligned with the operations of the segments holding the investments. We therefore record income related to earnings from equity method investments in our operating income.

2021 - Income from operating investments, net increased $9 million, or 28%, to $41 million in 2021 from $32 million in 2020. The increase resulted from higher equity income from our ship repair and specialty fabrication joint venture and nuclear and environmental joint ventures.

2020 - Income from operating investments, net increased $10 million, or 45%, to $32 million in 2020 from $22 million in 2019. The increase resulted from higher equity income from our SRNS and MSTS investments.

Other Income and Gains, Net

2021 - Other income and gains, net in 2021 were flat compared to 2020.

2020 - Other income and gains, net in 2020 were flat compared to 2019.

General and Administrative Expenses

In accordance with industry practice and the regulations that govern the cost accounting requirements for government contracts, most general and administrative expenses are considered allowable and allocable costs on government contracts. These costs are allocated to contracts in progress on a systematic basis, and contract performance factors include this cost component as an element of cost.

2021 - General and administrative expenses in 2021 decreased $6 million, or 1%, compared to 2020. This decrease was primarily driven by favorable changes in current state income tax expense, partially offset by unfavorable changes in non-current state income tax expense and higher overhead costs driven by the acquisition of Alion.

2020 - General and administrative expenses in 2020 increased $116 million, or 15%, compared to 2019. This increase was primarily driven by the acquisition of Hydroid and higher overhead costs and current state income tax expense, partially offset by favorable changes in non-current state income tax expense.

Goodwill Impairment

As discussed above in Critical Accounting Policies, Estimates and Judgments, we perform impairment tests for goodwill as of November 30 each year, or when evidence of potential impairment exists. We record a charge to operations when we determine that an impairment has occurred.

Operating Income

We consider operating income to be an important measure for evaluating our operating performance, and, consistent with industry practice, we define operating income as revenues less the related costs of producing the revenues and general and administrative expenses.

We internally manage our operations by reference to "segment operating income," which is defined as operating income before the Operating FAS/CAS Adjustment and non-current state income taxes, neither of which affects segment performance. Segment operating income is not a recognized measure under GAAP. When analyzing our operating performance, investors should use segment operating income in addition to, and not as an alternative for, operating income or any other performance measure presented in accordance with GAAP. It is a measure we use to evaluate our core operating performance. We believe segment operating income reflects an additional way of viewing aspects of our operations that, when viewed with our GAAP results, provides a more complete understanding of factors and trends affecting our business. We believe the measure is used by investors and is a useful indicator to measure our performance. Because not all companies use identical calculations, our presentation of segment operating income may not be comparable to similarly titled measures of other companies.

The following table reconciles operating income to segment operating income:

($ in millions)	Year Ended December 31 2021	2020	2019	2021 over 2020 Dollars	Percent	2020 over 2019 Dollars	Percent
Operating income	**$ 513**	$ 799	$ 736	$ (286)	(36)%	$ 63	9 %
Operating FAS/CAS Adjustment	**157**	(248)	(124)	405	163 %	(124)	(100)%
Non-current state income taxes	**13**	4	19	9	225 %	(15)	(79)%
Segment operating income	**$ 683**	$ 555	$ 631	$ 128	23 %	$ (76)	(12)%

Segment Operating Income

2021 - Segment operating income in 2021 was $683 million, compared to $555 million in 2020. The increase was driven by impacts related to performance on Block IV boats of the *Virginia* class (SSN 774) submarine program and delay and disruption from discrete COVID-19 Events in 2020.

2020 - Segment operating income in 2020 was $555 million, compared to $631 million in 2019. The decrease was driven by unfavorable cumulative catch-up adjustments in the second quarter of 2020 totaling $167 million from updated cost and schedule assumptions across all programs.

Included in the $167 million of unfavorable adjustments was $111 million related to Block IV boats of the *Virginia* class (SSN 774) submarine program for unfavorable cost and schedule performance and updates to our assumptions for future program efficiencies and performance as a result of cost and schedule trends. Our risk retirement assumptions on Block IV boats anticipated boat-to-boat cost and schedule improvements working down the learning curve, but performance trends, exacerbated by COVID-19 Events, made those improvements less likely to occur. Also included in the $167 million of unfavorable adjustments was $61 million for the margin impact of delay and disruption cost estimates across all programs from discrete COVID-19 Events, including $16 million relating to Block IV boats of the *Virginia* class (SSN 774) submarine program, which was included in the $111 million unfavorable adjustments noted above. These unfavorable margin adjustments were partially offset by higher risk retirement on USS *Delbert D. Black* (DDG 119) in connection with its delivery and a capital expenditure contract incentive, higher risk retirement and improved performance on USS *Tripoli* (LHA 7) and *Richard M. McCool Jr.* (LPD 29), and a loss on a fleet support services contract in 2019.

Activity within each segment is discussed under Segment Operating Results below.

FAS/CAS Adjustment and Operating FAS/CAS Adjustment

The FAS/CAS Adjustment reflects the difference between expenses for pension and other postretirement benefits determined in accordance with GAAP and the expenses for these items included in segment operating income in accordance with CAS. The Operating FAS/CAS Adjustment excludes the following components of net periodic benefit costs: interest cost, expected return on plan assets, amortization of prior service cost (credit) and actuarial loss (gain), and settlement and curtailment effects.

Effective January 1, 2021, we adopted the Safe Harbor methodology for determining CAS pension costs. Under the new methodology, the interest rates used to calculate pension liabilities under CAS are consistent with those used in the determination of minimum funding requirements under the Employee Retirement Income Security Act of 1974 ("ERISA").

The components of the Operating FAS/CAS Adjustment were as follows:

($ in millions)	Year Ended December 31 2021	2020	2019	2021 over 2020 Dollars	Percent	2020 over 2019 Dollars	Percent
FAS expense	**$ (28)**	$ (70)	$ (139)	$ 42	60 %	$ 69	50 %
CAS cost	**52**	437	275	(385)	(88)%	162	59 %
FAS/CAS Adjustment	**24**	367	136	(343)	(93)%	231	170 %
Non-operating retirement benefit	**(181)**	(119)	(12)	(62)	(52)%	(107)	(892)%
Operating FAS/CAS Adjustment (expense) benefit	**$ (157)**	$ 248	$ 124	$ (405)	(163)%	$ 124	100 %

2021 - The Operating FAS/CAS Adjustment in 2021 was a net expense of $157 million, compared to a net benefit of $248 million in 2020. The unfavorable change was primarily driven by the more immediate recognition of higher interest rates under CAS.

2020 - The Operating FAS/CAS Adjustment in 2020 was a net benefit of $248 million, compared to a net benefit of $124 million in 2019. The favorable change was primarily driven by the more immediate recognition of lower interest rates under CAS.

We expect the FAS/CAS Adjustment in 2022 to be a net benefit of approximately $152 million (($105) million FAS and $47 million CAS), primarily driven by the more immediate recognition of the 2021 asset returns under FAS.

We expect the Operating FAS/CAS Adjustment in 2022 to be a net expense of approximately $142 million ($189 million FAS and $47 million CAS). The expected FAS/CAS Adjustment is subject to change during 2022, when we remeasure our actuarial estimate of the unfunded benefit obligation for CAS with updated census data and other items later in the year.

Non-current State Income Taxes

Non-current state income taxes include deferred state income taxes, which reflect the change in deferred state tax assets and liabilities, and the tax expense or benefit associated with changes in state unrecognized tax benefits in the relevant period. These amounts are recorded within operating income. Current period state income tax expense is charged to contract costs and included in cost of sales and service revenues in segment operating income.

2021 - Non-current state income tax expense in 2021 was $13 million, compared to $4 million in 2020. The unfavorable change in non-current state income taxes was driven by an increase in deferred state income tax expense, primarily attributable to a decrease in expenses not currently deductible for income tax purposes.

2020 - Non-current state income tax expense in 2020 was $4 million, compared to $19 million in 2019. The decrease in non-current state income tax expense was driven by a decrease in deferred state income tax expense. The decrease in deferred state income tax expense was primarily attributable to an increase in expenses that are not currently deductible for income tax purposes and pension related adjustments.

Interest Expense

2021 - Interest expense in 2021 was $89 million, compared to $114 million in 2020. The decrease was primarily a result of costs associated with the early redemption in 2020 of $600 million aggregate principal amount of our 5.000% senior notes due in 2025, partially offset by increased borrowing to fund the acquisition of Alion with the issuance of $400 million aggregate principal amount of 0.670% senior notes due 2023, $600 million aggregate principal amount of 2.043% senior notes due 2028, and a $650 million three-year Term Loan.

2020 - Interest expense in 2020 was $114 million, compared to $70 million in 2019. The increase was primarily a result of costs associated with the early redemption of $600 million aggregate principal amount of our 5.000% senior notes due 2025 and the issuance in 2020 of $500 million aggregate principal amount of 3.844% senior notes due 2025 and $500 million aggregate principal amount of 4.200% senior notes due 2030, partially offset by reduced borrowing on our credit facilities.

Non-Operating Retirement Benefit

The non-operating retirement benefit includes the following components of net periodic benefit costs: interest cost, expected return on plan assets, amortization of prior service cost (credit) and actuarial loss (gain), and settlement and curtailment effects.

2021 - A favorable change in the non-operating retirement benefit of $62 million from 2020 to 2021 was primarily driven by higher 2020 returns on plan assets.

2020 - A favorable change in the non-operating retirement benefit of $107 million from 2019 to 2020 was primarily driven by higher 2019 returns on plan assets.

Other, Net

2021 - Other, net income in 2021 was $17 million, compared to $6 million in 2020. The increase was primarily driven by an impairment of a loan receivable in 2020.

2020 - Other, net income in 2020 was consistent with 2019.

Federal and Foreign Income Taxes

2021 - Our effective tax rate on earnings from continuing operations was 12.5% in 2021, compared to 14.1% in 2020. The decrease in our effective tax rate for 2021 was primarily attributable to an increase in research and development tax credits for prior periods and a tax loss associated with the sale of our oil and gas business, partially offset by an increase in unrecognized tax benefits.

2020 - Our effective tax rate on earnings from continuing operations was 14.1% in 2020, compared to 19.6% in 2019. The decrease in our effective tax rate for 2020 was primarily attributable to favorable adjustments related to research and development tax credits for prior tax years.

SEGMENT OPERATING RESULTS

Basis of Presentation

We are aligned into three reportable segments: Ingalls, Newport News, and Technical Solutions.

The following table presents segment operating results:

	Year Ended December 31			2021 over 2020		2020 over 2019	
($ in millions)	**2021**	**2020**	**2019**	**Dollars**	**Percent**	**Dollars**	**Percent**
Sales and Service Revenues							
Ingalls	**$ 2,528**	$ 2,678	$ 2,555	$ (150)	(6)%	$ 123	5 %
Newport News	**5,663**	5,571	5,231	92	2 %	340	6 %
Technical Solutions	**1,476**	1,268	1,237	208	16 %	31	3 %
Intersegment eliminations	**(143)**	(156)	(124)	13	8 %	(32)	(26)%
Sales and service revenues	**$ 9,524**	$ 9,361	$ 8,899	$ 163	2 %	$ 462	5 %
Operating Income							
Ingalls	**$ 281**	$ 281	$ 235	$ —	— %	$ 46	20 %
Newport News	**352**	233	410	119	51 %	(177)	(43)%
Technical Solutions	**50**	41	(14)	9	22 %	55	393 %
Segment operating income	**683**	555	631	128	23 %	(76)	(12)%
Non-segment factors affecting operating income							
Operating FAS/CAS Adjustment	**(157)**	248	124	(405)	(163)%	124	100 %
Non-current state income taxes	**(13)**	(4)	(19)	(9)	(225)%	15	79 %
Operating income	**$ 513**	$ 799	$ 736	$ (286)	(36)%	$ 63	9 %

KEY SEGMENT FINANCIAL MEASURES

Sales and Service Revenues

Period-to-period revenues reflect performance under new and ongoing contracts. Changes in sales and service revenues are typically expressed in terms of volume. Unless otherwise described, volume generally refers to increases (or decreases) in reported revenues due to varying production activity levels, delivery rates, or service levels on individual contracts. Volume changes will typically carry a corresponding income change based on the margin rate for a particular contract.

Segment Operating Income

Segment operating income reflects the aggregate performance results of contracts within a segment. Excluded from this measure are certain costs not directly associated with contract performance, such as the Operating FAS/CAS Adjustment and non-current state income taxes. Changes in segment operating income are typically expressed in terms of volume, as discussed above, or performance. Performance refers to changes in contract margin rates. These changes typically relate to profit recognition associated with revisions to estimated costs at completion ("EAC") that reflect improved or deteriorated operating performance on that contract. Operating income changes are accounted for on a cumulative to date basis at the time an EAC change is recorded. Segment operating income may also be affected by, among other things, contract performance, the effects of workforce stoppages, the effects of natural disasters such as hurricanes, resolution of disputed items with the customer, recovery of insurance proceeds, and other discrete events. At the completion of a long-term contract, any originally estimated costs not incurred or reserves not fully utilized, such as warranty reserves, could also impact contract earnings. Where such items have occurred and the effects are material, a separate description is provided.

Cumulative Adjustments

For the years ended December 31, 2021, 2020, and 2019, favorable and unfavorable cumulative catch-up adjustments were as follows:

	Year Ended December 31		
($ in millions)	**2021**	**2020**	**2019**
Gross favorable adjustments	**$ 244**	$ 244	$ 247
Gross unfavorable adjustments	**(129)**	(273)	(151)
Net adjustments	**$ 115**	$ (29)	$ 96

For the year ended December 31, 2021, favorable cumulative catch-up adjustments included risk retirement on *Bougainville* (LHA 8), a contract incentive on *Jack H. Lucas* (DDG 125) and risk retirement on *Fort Lauderdale* (LPD 28). During the same period, no unfavorable cumulative catch-up margin adjustments were individually significant.

For the year ended December 31, 2020, favorable cumulative catch-up adjustments included risk retirement on *Delbert D. Black* (DDG 119) in connection with its delivery and a capital expenditure contract incentive, naval nuclear support services, the *San Antonio* class (LPD 17) program, and other individually insignificant adjustments.

During the same period, unfavorable cumulative catch-up adjustments were primarily driven by $111 million in the second quarter of 2020 on the Block IV boats of the *Virginia* class (SSN 774) submarine program, including $95 million for cost and schedule performance and updates to our assumptions for future program efficiencies and performance as a result of cost and schedule trends. Our risk retirement assumptions on Block IV boats anticipated boat-to-boat cost and schedule improvements working down the learning curve, but performance trends, exacerbated by the COVID-19 Events, made those improvements less likely to occur. Unfavorable cumulative catch-up adjustments on the Block IV boats of the *Virginia* class (SSN 774) submarine program also included $16 million from delay and disruption directly attributable to COVID-19 Events due to lower employee attendance, decreased availability of critical skills, and out-of-sequence work. Unfavorable cumulative catch-up adjustments across all programs resulting from delay and disruption cost estimates for discrete COVID-19 Events were $61 million, including $16 million in relation to the Block IV boats of the *Virginia* class (SSN 774) submarine program discussed above.

For the year ended December 31, 2019, favorable cumulative catch-up adjustments were related to contract changes on submarine support services, risk retirement on the *Legend* class NSC program, surface combatants, and the RCOH of USS *George Washington* (CVN 73), as well as other individually insignificant adjustments. During the same period, unfavorable cumulative catch-up adjustments included recognition of a forward loss on a fleet support services contract and schedule delays on USS *Tripoli* (LHA 7), as well as other individually insignificant adjustments.

When estimates of total costs to be incurred exceed estimates of total revenue to be earned on a performance obligation related to a complex, construction-type contract, we recognize the entire loss on the performance obligation in the period the loss is determined.

Ingalls

	Year Ended December 31			2021 over 2020		2020 over 2019	
($ in millions)	2021	2020	2019	Dollars	Percent	Dollars	Percent
Sales and service revenues	**$ 2,528**	$ 2,678	$ 2,555	$ (150)	(6)%	$ 123	5 %
Segment operating income	**281**	281	235	—	— %	46	20 %
As a percentage of segment sales	***11.1 %***	*10.5 %*	*9.2 %*				

Sales and Service Revenues

2021 - Ingalls revenues, including intersegment sales, decreased $150 million, or 6%, in 2021 compared to 2020, primarily driven by lower revenues in the *Legend* class NSC program and amphibious assault ships, partially offset by higher revenues in surface combatants. Revenues on the *Legend* class NSC program decreased due to lower volumes on USCGC *Ston*e (NSC 9) following its delivery. Amphibious assault ship revenues decreased due to lower volumes on *Fort Lauderdale* (LPD 28), *Richard M. McCool Jr.* (LPD 29), *Harrisburg* (LPD 30), and USS *Tripoli* (LHA 7), partially offset by higher volumes on *Pittsburgh* (LPD 31) and LHA 9 (unnamed). Surface combatant revenues increased due to higher volumes on *Jack H. Lucas* (DDG 125), *George M. Neal* (DDG 131), *Jeremiah Denton* (DDG 129), and *Sam Nunn* (DDG 133), partially offset by lower volumes on USS *Delbert D. Black* (DDG 119) following its delivery and USS *Fitzgerald* (DDG 62) following its redelivery.

2020 - Ingalls revenues, including intersegment sales, increased $123 million, or 5%, in 2020 compared to 2019, primarily driven by higher revenues in surface combatants and amphibious assault ships, partially offset by lower revenues in the *Legend* class NSC program. Surface combatant revenues increased due to higher volumes on *Ted Stevens* (DDG 128), *Jeremiah Denton* (DDG 129), USS *Delbert D. Black* (DDG 119), *Sam Nunn* (DDG 133), *George M. Neal* (DDG 131), and *Thad Cochran* (DDG 135), partially offset by lower volumes on USS *Fitzgerald* (DDG 62) restoration and modernization, USS *Paul Ignatius* (DDG 117), *Frank E. Petersen Jr.* (DDG 121), and *Jack H. Lucas* (DDG 125). Amphibious assault ship revenues increased as a result of higher volumes on *Harrisburg* (LPD 30), *Pittsburgh* (LPD 31), LHA 9 (unnamed), *Fort Lauderdale* (LPD 28), and *Richard M. McCool Jr.* (LPD 29), partially offset by lower volumes on USS *Tripoli* (LHA 7), LPD life cycle services, and *Bougainville* (LHA 8). Revenues on the *Legend* class NSC program decreased due to lower volumes on USCGC *Midgett* (NSC 8) and *Friedman* (NSC 11), partially offset by higher volume on *Calhoun* (NSC 10).

Segment Operating Income

2021 - Ingalls segment operating income in 2021 was flat compared to 2020.

2020 - Ingalls segment operating income in 2020 was $281 million, compared to segment operating income of $235 million in 2019. The increase was primarily driven by higher risk retirement on USS *Delbert D. Black* (DDG 119) in connection with its delivery and a capital expenditure contract incentive, as well as higher risk retirement and improved performance on USS *Tripoli* (LHA 7) and *Richard M. McCool Jr.* (LPD 29), partially offset by unfavorable adjustments across programs, including delay and disruption from COVID-19 Events.

Newport News

	Year Ended December 31			2021 over 2020		2020 over 2019	
($ in millions)	2021	2020	2019	Dollars	Percent	Dollars	Percent
Sales and service revenues	**$ 5,663**	$ 5,571	$ 5,231	$ 92	2 %	$ 340	6 %
Segment operating income	**352**	233	410	119	51 %	(177)	(43)%
As a percentage of segment sales	***6.2 %***	*4.2 %*	*7.8 %*				

Sales and Service Revenues

2021 - Newport News revenues, including intersegment sales, increased $92 million, or 2%, in 2021 compared to 2020, primarily driven by higher revenues in submarines and aircraft carriers, partially offset by lower revenues in naval nuclear support services. Submarine revenues increased primarily as a result of higher volumes on Block V boats of the *Virginia* class (SSN 774) submarine program and the *Columbia* class (SSBN 826) submarine program, partially offset by lower volumes on Block IV boats of the *Virginia* class (SSN 774) submarine program. Aircraft carrier revenues increased primarily as a result of higher volumes on the RCOH of USS *John C. Stennis* (CVN 74), the construction of *Enterprise* (CVN 80), and the construction of *Doris Miller* (CVN 81), partially offset by lower volumes on the construction of *John F. Kennedy* (CVN 79) and the RCOH of USS *George Washington* (CVN 73). Naval nuclear support service revenues decreased primarily as a result of lower volumes in submarine fleet support services and facility maintenance services, partially offset by higher volumes in carrier fleet support services.

2020 - Newport News revenues, including intersegment sales, increased $340 million, or 6%, in 2020 compared to 2019, primarily driven by higher revenues in aircraft carriers, submarines, and naval nuclear support services. Aircraft carrier revenues increased primarily as a result of higher volumes on the construction of *Enterprise* (CVN 80), the RCOH of USS *John C. Stennis* (CVN 74), and *Doris Miller* (CVN 81), partially offset by lower volumes on the RCOH of USS *George Washington* (CVN 73), *John F. Kennedy* (CVN 79), and USS *Gerald R. Ford* (CVN 78). Submarine revenues increased primarily as a result of higher volumes on the *Columbia* class (SSBN 826) submarine program and the *Virginia* class (SSN 774) submarine program. The higher volumes on the *Virginia* class (SSN 774) submarine program were due to higher volumes on Block V boats, partially offset by lower volumes on Block III and Block IV boats. Naval nuclear support service revenues increased primarily as a result of higher volumes in carrier fleet support services.

Segment Operating Income

2021 - Newport News segment operating income in 2021 was $352 million, compared to segment operating income of $233 million in 2020. The increase was primarily due to impacts related to performance on Block IV boats of the *Virginia* class (SSN 774) submarine program and delay and disruption from discrete COVID-19 Events in 2020.

2020 - Newport News segment operating income in 2020 was $233 million, compared to segment operating income of $410 million in 2019. The decrease was primarily due to unfavorable cumulative catch-up adjustments in the second quarter on Block IV boats of the *Virginia* class (SSN 774) submarine program for the reasons described above in "Segment Operating Results - Cumulative Adjustments” and 2019 contract changes on submarine support services.

Technical Solutions

	Year Ended December 31			2021 over 2020		2020 over 2019	
($ in millions)	**2021**	**2020**	**2019**	**Dollars**	**Percent**	**Dollars**	**Percent**
Sales and service revenues	**$ 1,476**	$ 1,268	$ 1,237	$ 208	16 %	$ 31	3 %
Segment operating income (loss)	**50**	41	(14)	9	22 %	55	393 %
As a percentage of segment sales	***3.4 %***	*3.2 %*	*(1.1)%*				

Sales and Service Revenues

2021 - Technical Solutions revenues, including intersegment sales, for the year ended December 31, 2021, increased $208 million, or 16%, compared to 2020, primarily due to higher volumes in DFS from the acquisition of Alion, partially offset by the divestiture of our oil and gas business and contribution of our San Diego Shipyard to a joint venture.

2020 - Technical Solutions revenues, including intersegment sales, for the year ended December 31, 2020, increased $31 million, or 3%, compared to 2019, primarily due to the acquisition of Hydroid in 2020, partially offset by lower volume at our San Diego Shipyard following the conclusion of several repair contracts.

Segment Operating Income

2021 - Technical Solutions segment operating income for the year ended December 31, 2021, was $50 million, compared to operating segment operating income of $41 million in 2020. The increase was primarily driven by the acquisition of Alion and equity income from nuclear and environmental joint ventures, partially offset by lower performance in unmanned systems and the amortization of Alion purchased intangible assets.

2020 - Technical Solutions segment operating income for the year ended December 31, 2020, was $41 million, compared to a segment operating loss of $14 million in 2019. The increase was primarily due to a goodwill impairment at our oil and gas reporting unit and a loss on a fleet support services contract in 2019, as well as higher equity income from our nuclear and environmental joint ventures and improved performance on DFS services.

BACKLOG

Total backlog as of December 31, 2021, was approximately $48.5 billion. Total backlog includes both funded backlog (firm orders for which funding is contractually obligated by the customer) and unfunded backlog (firm orders for which funding is not currently contractually obligated by the customer). Backlog excludes unexercised contract options and unfunded Indefinite Delivery/Indefinite Quantity orders. For contracts having no stated contract values, backlog includes only the amounts committed by the customer.

The following table presents funded and unfunded backlog by segment as of December 31, 2021 and 2020:

	December 31, 2021			December 31, 2020		
($ in millions)	**Funded**	**Unfunded**	**Total Backlog**	**Funded**	**Unfunded**	**Total Backlog**
Ingalls	**$ 10,216**	**$ 792**	**$ 11,008**	$ 10,443	$ 1,758	$ 12,201
Newport News	**11,121**	**21,198**	**32,319**	9,536	23,132	32,668
Technical Solutions	**1,334**	**3,789**	**5,123**	502	646	1,148
Total backlog	**$ 22,671**	**$ 25,779**	**$ 48,450**	$ 20,481	$ 25,536	$ 46,017

We expect approximately 19% of the $48.5 billion total backlog as of December 31, 2021, to be converted into sales in 2022. U.S. Government orders comprised substantially all of the backlog as of December 31, 2021 and 2020.

Awards

2021 - The value of new contract awards during the year ended December 31, 2021, was approximately $8.1 billion, comprised primarily of awards for the RCOH of USS *John C. Stennis* (CVN 74), construction of a 10th boat of the *Virginia* class (SSN 774) submarine program, and construction of *John F. Lehma*n (DDG 137).

2020 - The value of new contract awards during the year ended December 31, 2020, was approximately $8.9 billion, comprised primarily of construction contracts for *Pittsburgh* (LPD 31), module sections for each of the first two *Columbia* class (SSBN 826) submarines, *Sam Nunn* (DDG 133), and *Thad Cochran* (DDG 135).

LIQUIDITY AND CAPITAL RESOURCES

We seek to efficiently convert operating results into cash for deployment in operating our businesses, implementing our business strategy, and maximizing stockholder value. We use various financial measures to assist in capital deployment decision making, including net cash provided by operating activities and free cash flow. We believe these measures are useful to investors in assessing our financial performance.

The following table summarizes key components of cash flow provided by operating activities:

	Year Ended December 31			2021 over 2020		2020 over 2019	
($ in millions)	2021	2020	2019	Dollars	Percent	Dollars	Percent
Net earnings	**$ 544**	$ 696	$ 549	$ (152)	(22)%	$ 147	27 %
Depreciation and amortization	**301**	254	230	47	19 %	24	10 %
Provision for doubtful accounts	**7**	(1)	(6)	8	800 %	5	83 %
Stock-based compensation	**33**	23	30	10	43 %	(7)	(23)%
Deferred income taxes	**98**	23	97	75	326 %	(74)	(76)%
Loss (gain) on investments in marketable securities	**(19)**	(17)	(11)	(2)	(12)%	(6)	(55)%
Asset impairments	**—**	13	6	(13)	(100)%	7	117 %
Retiree benefit funding in excess of expense	**(78)**	(176)	80	98	56 %	(256)	(320)%
Goodwill impairment	**—**	—	29	—	— %	(29)	(100)%
Loss on early extinguishment of debt	**—**	21	—	(21)	(100)%	21	— %
Trade working capital decrease (increase)	**(126)**	257	(108)	(383)	(149)%	365	338 %
Net cash provided by operating activities	**$ 760**	$ 1,093	$ 896	$ (333)	(30)%	$ 197	22 %

We have historically maintained a capital structure comprising a mix of equity and debt financing. We vary our leverage both to optimize our equity return and to pursue acquisitions. We expect to meet our current debt obligations as they come due through internally generated funds from current levels of operations and/or through refinancing in the debt markets prior to the maturity dates of our debt.

Cash Flows

We discuss below our significant operating, investing, and financing activities affecting cash flows for each of the three years in the period ended December 31, 2021, as classified in our consolidated statements of cash flows.

Operating Activities

2021 - Cash provided by operating activities was $760 million in 2021, compared to $1,093 million in 2020. The unfavorable change of $333 million in operating cash flow was primarily due to changes in trade working capital, partially offset by lower income tax payments and lower contributions to retiree benefit plans. The change in trade working capital was primarily driven by the timing of payments of accounts payable and receipts of accounts receivable.

We expect cash generated from operations in 2022, in combination with our current cash and cash equivalents, as well as existing borrowing facilities, to be sufficient to service debt and retiree benefit plans, meet contractual obligations, and fund capital expenditures for at least the next 12 calendar months beginning January 1, 2022 and beyond such 12-month period based on our current business plans.

2020 - Cash provided by operating activities was $1,093 million in 2020, compared to $896 million in 2019. The favorable change of $197 million in operating cash flow was primarily due to changes in trade working capital, partially offset by higher contributions to retiree benefit plans, higher income tax payments, and higher interest payments. The change in trade working capital was primarily driven by deferred payroll tax payments under the CARES Act, as well as the timing of receipts of accounts receivable and payments of accounts payable.

Investing Activities

2021 - Cash used in investing activities was $1,954 million in 2021, an increase of $1,195 million from 2020. The change in investing cash flow was primarily driven by the acquisitions of Alion and a non-controlling interest in a specialty fabrication and ship repair joint venture in 2021, partially offset by the acquisition of Hydroid in 2020 and lower capital expenditures and the disposition of our oil and gas business in 2021.

For 2022, we expect our capital expenditures for maintenance and sustainment to be approximately 1.0% of annual revenues and our discretionary capital expenditures to be approximately 1.5% to 2.0% of annual revenues.

2020 - Cash used in investing activities was $759 million in 2020, an increase of $132 million from 2019. The change in investing cash flow was driven by business acquisitions, including Hydroid, partially offset by lower capital expenditures in 2020 and the acquisition of Fulcrum in 2019.

Financing Activities

2021 - Cash provided by financing activities in 2021 was $1,309 million, compared to $103 million provided by financing activities in 2020. The change in financing cash was primarily due to an increase of $1,225 million in net proceeds from long-term debt, a decrease of $15 million in premiums related to the 2020 early extinguishment of debt, and a decrease of $6 million in employee taxes on share-based payment arrangements, partially offset by an increase of $17 million in common stock repurchases, an increase of $14 million in cash dividend payments, and an increase of $9 million in debt issuance costs.

2020 - Cash provided by financing activities in 2020 was $103 million, compared to $434 million used in financing activities in 2019. The change in financing cash was primarily due to $1 billion of proceeds from the issuance of senior notes, a decrease of $178 million from common stock repurchases, and a decrease of $10 million in employee tax withholdings on share-based payment arrangements, partially offset by a $600 million increase in repayment of long-term debt, a $23 million increase in cash dividend payments, an increase of $15 million in premiums related to early extinguishment of debt, and an increase of $13 million in debt issuance costs.

Free Cash Flow

Free cash flow represents cash provided by (used in) operating activities less capital expenditures net of related grant proceeds. Free cash flow is not a measure recognized under GAAP. Free cash flow has limitations as an analytical tool and should not be considered in isolation from, or as a substitute for, net earnings as a measure of our performance or net cash provided by operating activities as a measure of our liquidity. We believe free cash flow is an important liquidity measure for our investors because it provides them insight into our current and period-to-period performance and our ability to generate cash from continuing operations. We also use free cash flow as a key operating metric in assessing the performance of our business and as a key performance measure in evaluating management performance and determining incentive compensation. Free cash flow may not be comparable to similarly titled measures of other companies.

The following table reconciles net cash provided by operating activities to free cash flow:

	Year Ended December 31		
($ in millions)	**2021**	**2020**	**2019**
Net cash provided by operating activities	**$ 760**	$ 1,093	$ 896
Less capital expenditures:			
Capital expenditure additions	**(331)**	(353)	(530)
Grant proceeds for capital expenditures	**20**	17	94
Free cash flow	**$ 449**	$ 757	$ 460

2021 - Free cash flow decreased $308 million from 2020, primarily due to changes in trade working capital, partially offset by lower income tax payments, lower contributions to retiree benefit plans, and lower capital expenditures.

2020 - Free cash flow increased $297 million from 2019, primarily due to a change in trade working capital and lower capital expenditures, partially offset by higher contributions to retiree benefit plans and higher income tax payments.

Retirement Related Benefit Plan Contributions

ERISA, including amendments under pension relief, defines the minimum amount that must be contributed to our qualified defined benefit pension plans. In determining whether to make discretionary contributions to these plans above the minimum required amounts, we consider various factors, including maintaining the funded status needed to avoid potential benefit restrictions and other adverse consequences, maintaining minimum CAS funding requirements, and the current and anticipated future funding levels of each plan. The contributions to our qualified defined benefit pension plans are affected by a number of factors, including published IRS interest rates, the actual return on plan assets, actuarial assumptions, and demographic experience. These factors and our resulting contributions also impact the funded status of the plans. We made the following minimum and discretionary contributions to our pension and other postretirement benefit plans in the years ended December 31, 2021, 2020, and 2019:

	Year Ended December 31		
($ in millions)	**2021**	**2020**	**2019**
Pension plans			
Discretionary			
Qualified	**$ 60**	$ 205	$ 21
Non-qualified	**9**	8	7
Other benefit plans	**37**	33	31
Total contributions	**$ 106**	$ 246	$ 59

We made discretionary contributions to our qualified defined benefit pension plans totaling $60 million, $205 million, and $21 million in the years ended December 31, 2021, 2020, and 2019, respectively.

As of December 31, 2021 and 2020, our qualified pension plans were funded 102% and 91%, respectively, on a FAS basis. As of December 31, 2021 and 2020, these plans were sufficiently funded on an ERISA basis so as not to be subject to benefit payment restrictions. The funded percentages under ERISA and FAS vary due to inherent differences in the assumptions and methodologies used to calculate the respective obligations. We expect our 2022 cash contributions to our qualified defined benefit pension plans to be less than $1 million, all of which we anticipate will be discretionary and which are exclusive of CAS cost recoveries under our contracts. Due to the differences in calculation methodologies, our FAS expense is not necessarily representative of our funding requirements or CAS cost recoveries.

Other postretirement benefit plan contributions were $37 million, $33 million, and $31 million in 2021, 2020, and 2019, respectively. We expect 2022 contributions to our other postretirement benefit plans to be approximately $34 million, which are exclusive of CAS cost recoveries under our contracts. Contributions for other postretirement benefit plans are not required to be funded in advance and are paid on an as-incurred basis.

Other Sources and Uses of Capital

Stockholder Distributions - In November 2021, our board of directors authorized an increase in our quarterly cash dividend to $1.18 per share. The board previously increased the quarterly cash dividend to $1.14 per share in November 2020 and $1.03 per share in November 2019. We paid cash dividends totaling $186 million ($4.60 per share), $172 million ($4.23 per share), and $149 million ($3.61 per share) in the years ended December 31, 2021, 2020, and 2019, respectively.

In November 2019, our board of directors authorized an increase to our stock repurchase program from $2.2 billion to $3.2 billion and an extension of the term of the program to October 31, 2024. Repurchases are made from time to time at management's discretion in accordance with applicable federal securities laws. For the year ended December 31, 2021, we repurchased 544,440 shares at an aggregate cost of $101 million. For the years ended December 31, 2020 and 2019, we repurchased 390,904 and 1,005,762 shares, respectively, at aggregate costs of $84 million and $214 million, respectively. The cost of repurchased shares is recorded as treasury stock in the consolidated statements of financial position.

Additional Capital - In 2021, we issued $400 million aggregate principal amount of callable unregistered 0.670% senior notes due 2023 and $600 million aggregate principal amount of unregistered 2.043% senior notes due 2028, both with registration rights. The net proceeds were used to fund a portion of the purchase price for the acquisition of Alion. Interest on these senior notes is payable semiannually.

In 2021, we amended and restated our existing $1.25 billion credit facility, increasing the capacity thereunder to $1.5 billion and extending the maturity date to five years from signing (the "Revolving Credit Facility"). The Revolving Credit Facility includes a letter of credit subfacility of $300 million. The Revolving Credit Facility has a variable interest rate on outstanding borrowings based on the London Interbank Offered Rate ("LIBOR"), plus a spread based upon our credit rating, which may vary between 1.125% and 2.000%. As of December 31, 2021, the interest rate spread on drawn amounts was 1.375% based on our current credit rating. The Revolving Credit Facility also has a commitment fee rate on the unutilized balance based on our credit ratings. The commitment fee rate as of December 31, 2021 was 0.200% and may vary between 0.125% and 0.300%.

As of December 31, 2021, we had $15 million in issued but undrawn letters of credit and $1,485 million unutilized under the Revolving Credit Facility.

In 2021, we entered into a $650 million 3-year delayed draw term loan (the “Term Loan”) to finance a portion of the purchase price for Alion. The Term Loan must be repaid prior to or at maturity, which is 36 months from the date of the initial draw. The Term Loan has a variable interest rate on outstanding borrowings based on LIBOR, plus a spread based upon our credit rating, which may vary between 1.125% and 2.000%. As of December 31, 2021, the annual interest rate spread was 1.375% based on our current credit rating, and the outstanding balance was $625 million.

In 2020, we issued $500 million aggregate principal amount of 3.844% senior notes due 2025 and $500 million aggregate principal amount of 4.200% senior notes due 2030. The net proceeds were intended to be used for general corporate purposes, including debt repayments and working capital. Interest on these senior notes is payable semiannually.

In 2020, we redeemed $600 million aggregate principal amount of our outstanding 5.000% senior notes due 2025 in accordance with the terms of the indenture governing the notes.

In 2019, we established an unsecured commercial paper note program, under which we may issue up to $1 billion of unsecured commercial paper notes. As of December 31, 2021, we had no outstanding debt under the commercial paper program.

We were in compliance with all debt-related covenants as of and during the year ended December 31, 2021. For a description of our outstanding debt amounts and related restrictive covenants, see Note 13: Debt in Item 8.

Contractual obligations - Our future contractual obligations are related to debt, leases, pension liabilities, unrecognized tax benefits, workers compensation, and purchase obligations. See Note 13: Debt, Note 15: Leases, Note 17: Employee Pension and Other Postretirement Benefits, Note 12: Income Taxes, and Note 2: Summary of Significant Accounting Policies in Item 8 for information about those obligations. Our purchase obligations as of December 31, 2021, were approximately $5,384 million, with approximately $2,333 million expected to be paid in 2022 and $3,051 million thereafter. A purchase obligation is defined as an agreement to purchase goods or services that is enforceable and legally binding on us and that specifies all significant terms, including: fixed or minimum quantities to be purchased; fixed, minimum, or variable price provisions; and the approximate timing of the transaction. As of December 31, 2021, future scheduled periodic interest payments on our outstanding long-term debt, including commitment fees that we are obligated to pay on our Revolving Credit Facility, were approximately $527 million, with approximately $97 million expected to be paid in 2022 and $430 million thereafter.

Off-Balance Sheet Arrangements

In the ordinary course of business, we use letters of credit issued by commercial banks to support certain leases, insurance policies, and contractual performance obligations, as well as surety bonds issued by insurance companies principally to support our self-insured workers' compensation plans. As of December 31, 2021, $15 million in letters of credit were issued but undrawn and $276 million of surety bonds were outstanding. As of December 31, 2021, we had no other significant off-balance sheet arrangements.

GLOSSARY OF PROGRAMS

Included below are brief descriptions of some of the programs discussed in this Annual Report on Form 10-K.

Program Name	Program Description
America class (LHA 6) amphibious assault ships	Design and build large deck amphibious assault ships that provide forward presence and power projection as an integral part of joint, interagency and multinational maritime expeditionary forces. The *America* class (LHA 6) ships, together with the *Wasp* class (LHD 1) ships, are the successors to the decommissioned *Tarawa* class (LHA 1) ships. The *America* class (LHA 6) ships optimize aviation operations and support capabilities. In 2020, we delivered USS *Tripoli* (LHA 7), and we were awarded a long-lead-time material and construction contract for LHA 9 (unnamed). We are currently constructing *Bougainville* (LHA 8).
Arleigh Burke class (DDG 51) destroyers	Build guided missile destroyers designed for conducting anti-air, anti-submarine, anti-surface, and strike operations. The Aegis-equipped *Arleigh Burke* class (DDG 51) destroyers are the U.S. Navy's primary surface combatant, and have been constructed in variants, allowing technological advances during construction. We delivered USS *Paul Ignatius* (DDG 117), USS *Delbert D. Black* (DDG 119), and *Frank E. Petersen Jr.* (DDG 121) in 2019, 2020, and 2021, respectively. We have contracts to construct the following *Arleigh Burke* class (DDG 51) destroyers: *Lenah H. Sutcliffe Higbee* (DDG 123), *Jack H. Lucas* (DDG 125), *Ted Stevens* (DDG 128), J*eremiah Denton* (DDG 129), *George M. Neal* (DDG 131), *Sam Nunn* (DDG 133), *Thad Cochran* (DDG 135), and *John F. Lehman* (DDG 137).
Carrier RCOH	Perform refueling and complex overhaul ("RCOH") of nuclear-powered aircraft carriers, which is required at the mid-point of their 50-year life cycle. USS *George Washington* (CVN 73) arrived at Newport News for the start of its RCOH in August 2017, and USS *John C. Stennis* (CVN 74) arrived at Newport News for the start of its RCOH in May 2021.
Columbia class (SSBN 826) submarines	Newport News is participating in designing the *Columbia* class submarine as a replacement for the current aging *Ohio* class nuclear ballistic missile submarines, which were first introduced into service in 1981. The *Ohio* class SSBN includes 14 nuclear ballistic missile submarines and four nuclear cruise missile submarines. The *Columbia* class program plan of record is to construct 12 new ballistic missile submarines. The U.S. Navy has initiated the design process for the new class of submarines, and, in early 2017, the DoD signed the acquisition decision memorandum approving the *Columbia* class program's Milestone B, which formally authorizes the program's entry into the engineering and manufacturing development phase. We perform design work as a subcontractor to Electric Boat, and we have entered into a teaming agreement with Electric Boat to build modules for the entire *Columbia* class (SSBN 826) submarine program that leverages our *Virginia* class (SSN 774) experience. We have been awarded contracts from Electric Boat for integrated product and process development, providing long–lead–time material and advance construction, and construction of the first two boats of the Columbia class (SSBN 826) program. Construction of the first Columbia class (SSBN 826) submarine began in 2020.
Defense and federal solutions	DFS is focused on solving tough national security challenges for the DoD, the intelligence community, and federal civilian agencies around the globe. The group provides a wide range of professional services and products, including fleet sustainment, cyber and electronic warfare, intelligence, surveillance, and reconnaissance, and live, virtual, and constructive solutions.

USS *Gerald R. Ford* class (CVN 78) aircraft carriers	Design and construction for the *Ford* class program, which is the aircraft carrier replacement program for the decommissioned *Enterprise* (CVN 65) and *Nimitz* class (CVN 68) aircraft carriers. USS *Gerald R. Ford* (CVN 78), the first ship of the *Ford* class, was delivered to the U.S. Navy in the second quarter of 2017. In June 2015, we were awarded a contract for the detail design and construction of *John F. Kennedy* (CVN 79), following several years of engineering, advance construction, and purchase of long-lead-time components and material. In addition, we have received awards for detail design and construction of *Enterprise* (CVN 80) and *Doris Miller* (CVN 81). This category also includes the class' non-recurring engineering. The class is expected to bring improved warfighting capability, quality of life improvements for sailors, and reduced life cycle costs.
Legend class National Security Cutter	Design and build the U.S. Coast Guard's National Security Cutters ("NSCs"), the largest and most technically advanced class of cutter in the U.S. Coast Guard. The NSC is equipped to carry out maritime homeland security, maritime safety, protection of natural resources, maritime mobility, and national defense missions. The plan is for a total of 11 ships, of which the first nine ships have been delivered. *Calhoun* (NSC 10) and *Friedman* (NSC 11) are currently under construction.
Naval nuclear support services	Provide services to and in support of the U.S. Navy, ranging from services supporting the Navy's carrier and submarine fleets to maintenance services at U.S. Navy training facilities. Naval nuclear support services include design, construction, maintenance, and disposal activities for in-service U.S. Navy nuclear ships worldwide through mobile and in-house capabilities. Services include maintenance services on nuclear reactor prototypes.
Nuclear and environmental services	Provide services in nuclear management and operations, including site management, nuclear and industrial facilities operations and maintenance, decontamination and decommissioning, radiological and hazardous waste management services, and technical engineering services. We participate in several joint ventures, including Newport News Nuclear BWXT Los Alamos, LLC (" N3B"), Mission Support and Test Services, LLC ("MSTS"), and Savannah River Nuclear Solutions, LLC ("SRNS"), and we are an integrated subcontractor to Triad National Security. N3B was awarded the Los Alamos Legacy Cleanup Contract at the DoE/National Nuclear Security Administration’s Los Alamos National Laboratory. MSTS was awarded a contract for site management and operations at the Nevada National Security Site. SRNS provides site management and operations at the DoE’s Savannah River Site near Aiken, South Carolina. Triad provides site management and operations at the DoE’s Los Alamos National Laboratory.
San Antonio class (LPD 17) amphibious transport dock ships	Design and build amphibious transport dock ships, which are warships that embark, transport, and land elements of a landing force for a variety of expeditionary warfare missions, and also serve as the secondary aviation platform for Amphibious Readiness Groups. The *San Antonio* class (LPD 17) is the newest addition to the U.S. Navy's 21st century amphibious assault force, and these ships are a key element of the U.S. Navy's seabase transformation. We are currently constructing *Fort Lauderdale* (LPD 28), *Richard M. McCool Jr.* (LPD 29), and *Harrisburg* (LPD 30). In 2020 we were awarded a contract to construct *Pittsburgh* (LPD 31).
Unmanned systems	Our unmanned systems products and services create advanced unmanned maritime solutions for defense, marine research, and commercial applications. Serving customers in more than 30 countries, unmanned systems provides design, autonomy, manufacturing, testing, operations, and sustainment of unmanned systems, including unmanned underwater vehicles and unmanned surface vessels.

Virginia class (SSN 774) fast attack submarines	Construct attack submarines as the principal subcontractor to Electric Boat. The *Virginia* class (SSN 774) is a post-Cold War design tailored to excel in a wide range of warfighting missions, including anti-submarine and surface ship warfare; special operation forces; strike; intelligence, surveillance, and reconnaissance; carrier and expeditionary strike group support; and mine warfare.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to certain market risks, primarily related to interest rates and foreign currency exchange rates.

Interest Rates - Our floating rate financial instruments subject to interest rate risk include a $650 million Term Loan, a $1.5 billion Revolving Credit Facility, and a $1 billion commercial paper program. As of December 31, 2021, we had $625 million outstanding on the Term Loan and no indebtedness outstanding under our Revolving Credit Facility or our commercial paper program. Based on the amounts outstanding under our Term Loan as of December 31, 2021, an increase of 1% in interest rates would increase the interest expense on our debt by approximately $6 million on an annual basis.

Foreign Currency - We currently have, and in the future may enter into, foreign currency forward contracts to manage foreign currency exchange rate risk related to payments to suppliers denominated in foreign currencies. As of December 31, 2021, the fair values of our outstanding foreign currency forward contracts were not significant.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of
Huntington Ingalls Industries, Inc.
Newport News, Virginia

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial position of Huntington Ingalls Industries, Inc. and subsidiaries (the “Company”) as of December 31, 2021 and 2020, the related consolidated statements of operations and comprehensive income, changes in equity, and cash flows for each of the three years in the period ended December 31, 2021, the related notes and the financial statement schedule listed in the Index at Item 15 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, in conformity with the accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 10, 2022, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

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

Revenue – Long Term Contracts — Refer to Note 2 to the financial statements

Critical Audit Matter Description
The Company recognizes revenue on long-term contracts with U.S. Government customers over time as the work progresses, either as products are produced or as services are rendered, because transfer of control to the customer is continuous. Ordinarily the Company’s contracts represent a single distinct performance obligation due to the highly interdependent and interrelated nature of the underlying goods, services, or both. The use of the cost-to-cost method to measure performance progress over time is supported by clauses in the related contracts that

allow the customer to unilaterally terminate the contract for convenience, pay the Company for costs incurred plus a reasonable profit, and take control of any work in process. The accounting for these contracts involves judgment, particularly as it relates to the process of estimating total material costs, labor costs, and profit for the performance obligation. Cost of sales is recognized as incurred, and revenues are determined by adding a proportionate amount of the estimated profit to the amount reported as cost of sales. For the year ended December 31, 2021, revenue was $9.5 billion, most of which was derived from long-term contracts.

Given the judgments necessary to estimate total material costs, labor costs, and profit in order to recognize revenue for certain long-term contracts, auditing such estimates required extensive audit effort due to the complexity of long-term contracts and a high degree of auditor judgment, especially given the limited historical data for certain contracts, when performing audit procedures and evaluating the results of those procedures.

How the Critical Audit Matter Was Addressed in the Audit
Our audit procedures related to management's estimates of total material costs, labor costs, and profit in order to recognize revenue for certain long-term contracts included the following, among others:

- We tested the effectiveness of controls over long-term contract revenue, including management's controls over the estimates of total material costs, labor costs, and profit for performance obligations.
- We developed independent estimates of revenue based on historical profit margins and current year recorded costs. We compared those estimates to revenue recognized by the Company.
- We obtained the population of active contracts during 2021 and assessed the financial and performance risk of the contracts based on our knowledge gained through prior year audits of the Company, industry experience, and ongoing conversations with members of program management regarding the contract performance to identify contracts that we believe were riskier. For those contracts selected, we performed further audit procedures that were tailored to address the specific characteristics of audit interest identified. Procedures performed, among others, included:
    - Read the relevant portions of contracts to understand contract terms, including incentives, fee arrangement, scope of work, and other unusual contract terms.
    - Compared the transaction prices to the consideration expected to be received based on current rights and obligations under the contracts and any modifications that were agreed upon with the customers.
    - Tested management's identification of distinct performance obligations by evaluating whether the underlying goods, services, or both were highly interdependent and interrelated.
    - Tested the accuracy and completeness of the costs incurred to date for the performance obligation.
    - Evaluated the estimates of total materials costs, labor costs, and profit for the performance obligation by:
        - Evaluating management's ability to achieve the estimates of total material costs, labor costs and profit by 1) performing inquiries with the business managers and corroborating the information gained from these inquiries with other parties who have detailed knowledge of the contract's progress, issues being encountered, and overall production status, 2) considering management's historical performance against estimates, 3) detail testing the appropriateness of the timing of changes in estimates, and 4) considering any contradictory information.
        - Comparing materials cost estimates to purchase orders, supplier contracts, or other source documents.
        - Comparing management's estimates for the selected contracts to costs and profits of similar performance obligations, when applicable.

/s/ Deloitte & Touche LLP

Richmond, Virginia
February 10, 2022

We have served as the Company's auditor since 2011.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING

To the Shareholders and the Board of Directors of
Huntington Ingalls Industries, Inc.
Newport News, Virginia

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Huntington Ingalls Industries, Inc. and subsidiaries (the "Company") as of December 31, 2021, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2021, of the Company and our report dated February 10, 2022, expressed an unqualified opinion on those financial statements.

As described in Management's Report on Internal Control Over Financial Reporting, management excluded from its assessment the internal control over financial reporting at Alion, which was acquired on August 19, 2021, and whose financial statements constitute 5% of total assets, 5% of revenues, and 2% of net income of the consolidated financial statement amounts as of and for the year ended December 31, 2021. Accordingly, our audit did not include the internal control over financial reporting at Alion.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ Deloitte & Touche LLP

Richmond, Virginia
February 10, 2022

HUNTINGTON INGALLS INDUSTRIES, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME

	Year Ended December 31		
(in millions, except per share amounts)	**2021**	**2020**	**2019**
Sales and service revenues			
Product sales	**$ 7,000**	$ 6,850	$ 6,265
Service revenues	**2,524**	2,511	2,634
Sales and service revenues	**9,524**	9,361	8,899
Cost of sales and service revenues			
Cost of product sales	**5,958**	5,621	5,158
Cost of service revenues	**2,198**	2,070	2,210
Income from operating investments, net	**41**	32	22
Other income and gains, net	**2**	1	—
General and administrative expenses	**898**	904	788
Goodwill impairment	**—**	—	29
Operating income	**513**	799	736
Other income (expense)			
Interest expense	**(89)**	(114)	(70)
Non-operating retirement benefit	**181**	119	12
Other, net	**17**	6	5
Earnings before income taxes	**622**	810	683
Federal and foreign income taxes	**78**	114	134
Net earnings	**$ 544**	$ 696	$ 549
Basic earnings per share	**$ 13.50**	$ 17.14	$ 13.26
Weighted-average common shares outstanding	**40.3**	40.6	41.4
Diluted earnings per share	**$ 13.50**	$ 17.14	$ 13.26
Weighted-average diluted shares outstanding	**40.3**	40.6	41.4
Net earnings from above	**$ 544**	$ 696	$ 549
Other comprehensive income (loss)			
Change in unamortized benefit plan costs	**838**	(187)	(167)
Other	**—**	2	3
Tax benefit (expense) for items of other comprehensive income	**(214)**	47	43
Other comprehensive income (loss), net of tax	**624**	(138)	(121)
Comprehensive income	**$ 1,168**	$ 558	$ 428

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

HUNTINGTON INGALLS INDUSTRIES, INC.
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

	December 31	
($ in millions)	2021	2020
Assets		
Current Assets		
Cash and cash equivalents	**$ 627**	$ 512
Accounts receivable, net of allowance for doubtful accounts of $9 million as of 2021 and $2 million as of 2020	**433**	397
Contract assets	**1,310**	1,049
Inventoried costs, net	**161**	137
Income taxes receivable	**209**	171
Assets held for sale	**—**	133
Prepaid expenses and other current assets	**50**	45
Total current assets	**2,790**	2,444
Property, Plant, and Equipment		
Land and land improvements	**329**	309
Buildings and leasehold improvements	**2,643**	2,442
Machinery and other equipment	**2,058**	2,017
Capitalized software costs	**226**	234
	5,256	5,002
Accumulated depreciation and amortization	**(2,149)**	(2,024)
Property, plant, and equipment, net	**3,107**	2,978
Other Assets		
Operating lease assets	**241**	192
Goodwill	**2,628**	1,617
Other intangible assets, net of accumulated amortization of $741 million as of 2021 and $655 million as of 2020	**1,159**	512
Pension plan assets	**281**	—
Long-term deferred tax assets	**—**	133
Miscellaneous other assets	**421**	281
Total other assets	**4,730**	2,735
Total assets	**$ 10,627**	$ 8,157

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

HUNTINGTON INGALLS INDUSTRIES, INC.
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION - CONTINUED

($ in millions)	December 31 2021		December 31 2020	
Liabilities and Stockholders' Equity				
Current Liabilities				
Trade accounts payable	**$**	**603**	$	460
Accrued employees' compensation		**361**		293
Current portion of postretirement plan liabilities		**137**		133
Current portion of workers' compensation liabilities		**252**		225
Contract liabilities		**651**		585
Liabilities held for sale		**—**		68
Other current liabilities		**423**		462
Total current liabilities		**2,427**		2,226
Long-term debt		**3,298**		1,686
Pension plan liabilities		**351**		960
Other postretirement plan liabilities		**368**		401
Workers' compensation liabilities		**506**		511
Long-term operating lease liabilities		**194**		157
Deferred tax liabilities		**313**		—
Other long-term liabilities		**362**		315
Total liabilities		**7,819**		6,256
Commitments and Contingencies (Note 16)				
Stockholders' Equity				
Common stock, $0.01 par value; 150 million shares authorized; 53.4 million issued and 40.0 million outstanding as of December 31, 2021, and 53.3 million issued and 40.5 million outstanding as of December 31, 2020		**1**		1
Additional paid-in capital		**1,998**		1,972
Retained earnings		**3,891**		3,533
Treasury stock		**(2,159)**		(2,058)
Accumulated other comprehensive loss		**(923)**		(1,547)
Total stockholders' equity		**2,808**		1,901
Total liabilities and stockholders' equity	**$**	**10,627**	$	8,157

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

HUNTINGTON INGALLS INDUSTRIES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

($ in millions)	Year Ended December 31 2021	2020	2019
Operating Activities			
Net earnings	**$ 544**	$ 696	$ 549
Adjustments to reconcile to net cash provided by (used in) operating activities			
Depreciation	**207**	191	180
Amortization of purchased intangibles	**86**	56	47
Amortization of debt issuance costs	**8**	7	3
Provision for doubtful accounts	**7**	(1)	(6)
Stock-based compensation	**33**	23	30
Deferred income taxes	**98**	23	97
Goodwill impairment	**—**	—	29
Loss on early extinguishment of debt	**—**	21	—
Loss (gain) on investments in marketable securities	**(19)**	(17)	(11)
Asset impairments	**—**	13	6
Change in			
Accounts receivable	**58**	(70)	(51)
Contract assets	**(126)**	22	32
Inventoried costs	**(25)**	11	(11)
Prepaid expenses and other assets	**(88)**	(62)	(93)
Accounts payable and accruals	**45**	344	4
Retiree benefits	**(78)**	(176)	80
Other non-cash transactions, net	**10**	12	11
Net cash provided by operating activities	**760**	1,093	896
Investing Activities			
Capital expenditures			
Capital expenditure additions	**(331)**	(353)	(530)
Grant proceeds for capital expenditures	**20**	17	94
Acquisitions of businesses, net of cash received	**(1,643)**	(417)	(195)
Investment in affiliates	**(22)**	—	—
Proceeds from disposition of business	**20**	—	—
Other investing activities, net	**2**	(6)	4
Net cash used in investing activities	**(1,954)**	(759)	(627)
Financing Activities			
Proceeds from issuance of long-term debt	**1,650**	1,000	—
Repayment of long-term debt	**(25)**	(600)	—
Proceeds from line of credit borrowings	**—**	385	5,119
Repayment of line of credit borrowings	**—**	(385)	(5,119)
Debt issuance costs	**(22)**	(13)	—
Premiums and fees related to early extinguishment of debt	**—**	(15)	—
Dividends paid	**(186)**	(172)	(149)
Repurchases of common stock	**(101)**	(84)	(262)
Employee taxes on certain share-based payment arrangements	**(7)**	(13)	(23)
Net cash provided by (used in) financing activities	**1,309**	103	(434)
Change in cash and cash equivalents	**115**	437	(165)
Cash and cash equivalents, beginning of period	**512**	75	240
Cash and cash equivalents, end of period	**$ 627**	$ 512	$ 75
Supplemental Cash Flow Disclosure			
Cash paid for income taxes (net of refunds)	**$ 33**	$ 155	$ 137
Cash paid for interest	**$ 76**	$ 89	$ 75
Non-Cash Investing and Financing Activities			
Capital expenditures accrued in accounts payable	**$ 6**	$ 7	$ 22

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

HUNTINGTON INGALLS INDUSTRIES, INC.
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

($ in millions)	Common Stock	Additional Paid-in Capital	Retained Earnings (Deficit)	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
Balance as of December 31, 2018	$ 1	$ 1,954	$ 2,609	$ (1,760)	$ (1,288)	$ 1,516
Net earnings	—	—	549	—	—	549
Dividends declared ($3.61 per share)	—	—	(149)	—	—	(149)
Stock compensation	—	7	—	—	—	7
Other comprehensive loss, net of tax	—	—	—	—	(121)	(121)
Treasury stock activity	—	—	—	(214)	—	(214)
Balance as of December 31, 2019	1	1,961	3,009	(1,974)	(1,409)	1,588
Net earnings	—	—	696	—	—	696
Dividends declared ($4.23 per share)	—	—	(172)	—	—	(172)
Stock compensation	—	11	—	—	—	11
Other comprehensive income, net of tax	—	—	—	—	(138)	(138)
Treasury stock activity	—	—	—	(84)	—	(84)
Balance as of December 31, 2020	1	1,972	3,533	(2,058)	(1,547)	1,901
Net earnings	**—**	**—**	**544**	**—**	**—**	**544**
Dividends declared ($4.60 per share)	**—**	**—**	**(186)**	**—**	**—**	**(186)**
Stock compensation	**—**	**26**	**—**	**—**	**—**	**26**
Other comprehensive income, net of tax	**—**	**—**	**—**	**—**	**624**	**624**
Treasury stock activity	**—**	**—**	**—**	**(101)**	**—**	**(101)**
Balance as of December 31, 2021	**$ 1**	**$ 1,998**	**$ 3,891**	**$ (2,159)**	**$ (923)**	**$ 2,808**

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

1. DESCRIPTION OF BUSINESS

Huntington Ingalls Industries, Inc. ("HII" or the "Company") is one of America's largest military shipbuilding companies and a provider of professional services to partners in government and industry. HII is organized into three reportable segments: Ingalls Shipbuilding ("Ingalls"), Newport News Shipbuilding ("Newport News"), and Technical Solutions. For more than a century, the Company's Ingalls segment in Mississippi and Newport News segment in Virginia have built more ships in more ship classes than any other U.S. naval shipbuilder. The Technical Solutions segment provides a range of services to the government and commercial customers.

HII conducts most of its business with the U.S. Government, primarily the Department of Defense ("DoD"). As prime contractor, principal subcontractor, team member, or partner, the Company participates in many high-priority U.S. defense programs. Through its Ingalls segment, HII is a builder of amphibious assault and expeditionary warfare ships for the U.S. Navy, the sole builder of National Security Cutters for the U.S. Coast Guard, and one of only two companies that builds the Navy's current fleet of *Arleigh Burke* class (DDG 51) destroyers. Through its Newport News segment, HII is the nation's sole designer, builder and refueler of nuclear-powered aircraft carriers, and one of only two companies currently designing and building nuclear-powered submarines for the U.S. Navy. The Technical Solutions segment provides a wide range of professional services and products, including defense and federal solutions ("DFS"), nuclear and environmental services, and unmanned systems.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation - The consolidated financial statements of HII and its subsidiaries have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP") and the instructions to Form 10-K promulgated by the Securities and Exchange Commission ("SEC"). All intercompany transactions and balances are eliminated in consolidation. For classification of current assets and liabilities related to its long-term production contracts, the Company uses the duration of these contracts as its operating cycle, which is generally longer than one year.

Accounting Estimates - The preparation of the Company's consolidated financial statements requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and the disclosure of contingencies at the date of the financial statements, as well as the reported amounts of revenues and expenses during the reporting period. Estimates have been prepared on the basis of the most current and best available information, and actual results could differ materially from those estimates.

Additionally, the Company has incorporated realized and estimated future effects of the global outbreak of coronavirus disease 2019 ("COVID-19"), including, among other things, impacts from orders of civil authorities associated with COVID-19 and steps taken to mitigate the effects of COVID-19 (collectively, "COVID-19 Events"), with respect to contract costs and revenue recognition, effective income tax rates, and the fair values of the Company's long-lived assets, financial instruments, intangible assets, and goodwill recorded at our reporting units. For the year ended December 31, 2020, the Company recognized across all programs an aggregate unfavorable impact on operating margin of $61 million for delay and disruption from lower employee attendance, limited availability of critical skills, and out-of-sequence work directly attributable to COVID-19 Events. While costs related to COVID-19 Events are allowable under U.S. Government contracts, the Company's estimates of the effects of COVID-19 Events reflect uncertainty regarding the Company's ability to recover the full costs related to COVID-19 Events under government relief actions such as the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") and U.S. Department of Defense ("DoD") guidance. For the year ended December 31, 2021, the Company did not have a material impact on its operating margin directly attributable to COVID-19 Events.

Revenue Recognition - Most of the Company's revenues are derived from long-term contracts for the production of goods and services provided to its U.S. Government customers. The Company generally recognizes revenues on contracts with U.S. Government customers over time using a cost-to-cost measure of progress. The use of the cost-to-cost method to measure performance progress over time is supported by clauses in the related contracts that allow the customer to unilaterally terminate the contract for convenience, pay the Company for costs incurred plus a reasonable profit, and take control of any work in process. The Company utilizes the cost-to-cost method to measure performance progress, because it best reflects the continuous transfer of control over the related goods and services to the customer as the Company satisfies its performance obligations.

When the customer is not a U.S. Government entity, the Company may recognize revenue over time or at a point in time when control transfers upon delivery, depending upon the facts and circumstances of the related arrangement. When the Company determines that revenue should be recognized over time, the Company utilizes a measure of progress that best depicts the transfer of control of the relevant goods and services to the customer. Generally, the terms and conditions of the contracts result in a transfer of control over the related goods and services as the Company satisfies its performance obligations. Accordingly, the Company recognizes revenue over time using the cost-to-cost method to measure performance progress. The Company may, however, utilize a measure of progress other than cost-to-cost, such as a labor-based measure of progress, if the terms and conditions of the arrangement require such accounting.

When using the cost-to-cost method to measure performance progress, certain contracts may include costs that are not representative of performance progress, such as large upfront purchases of uninstalled materials, unexpected waste, or inefficiencies. In these cases, the Company adjusts its measure of progress to exclude such costs, with the goal of better reflecting the transfer of control over the related goods or services to the customer and recognizing revenue only to the extent of the costs incurred that reflect the Company's performance under the contract.

In addition, for time and material arrangements, the Company often utilizes the practical expedient allowing the recognition of revenue in the amount the Company invoices, which corresponds with the value provided to the customer and to which the Company is entitled to payment for performance to date.

A performance obligation is a promise to transfer a distinct good or service to the customer and is the unit of account for which revenue is recognized. To determine the proper revenue recognition method, consideration is given to whether two or more contracts should be combined and accounted for as one contract and whether a single contract consists of more than one performance obligation. For contracts with multiple performance obligations, the contract transaction price is allocated to each performance obligation using an estimate of the standalone selling price based upon expected cost plus a margin at contract inception, which is generally the price disclosed in the contract. Contracts are often modified to account for changes in contract specifications and requirements. In the majority of circumstances, modifications do not result in additional performance obligations that are distinct from the existing performance obligations in the contract, and the effects of the modifications are recognized as an adjustment to revenue on a cumulative catch-up basis. Alternatively, in instances in which the performance obligations in the modifications are deemed distinct, contract modifications are accounted for prospectively.

The amount of revenue recognized as the Company satisfies performance obligations associated with contracts with customers is based upon the determination of transaction price. Transaction price reflects the amount of consideration to which the Company expects to be entitled for performance under the terms and conditions of the relevant contract and may reflect fixed and variable components, including shareline incentive fees whereby the value of the contract is variable based upon the amount of costs incurred, as well as other incentive fees based upon achievement of contractual schedule commitments or other specified criteria in the contract. Shareline incentive fees are determined based upon the formula under the relevant contract using the Company’s estimated cost to complete for each period. The Company generally utilizes a most likely amount approach to estimate variable consideration. In all such instances, the estimated revenues represent those amounts for which the Company believes a significant reversal of revenue is not probable.

Contract Estimates - In estimating contract costs, the Company utilizes a profit-booking rate based upon performance expectations that takes into consideration a number of assumptions and estimates regarding risks related to technical requirements, feasibility, schedule, and contract costs. Management performs periodic reviews of the contracts to evaluate the underlying risks, which may increase the profit-booking rate as the Company is able to mitigate and retire such risks. Conversely, if the Company is not able to retire these risks, cost estimates may increase, resulting in a lower profit-booking rate.

The cost estimation process requires significant judgment based upon the professional knowledge and experience of the Company’s engineers, program managers, and financial professionals. Factors considered in estimating the work to be completed and ultimate contract recovery include the availability, productivity, and cost of labor, the nature and complexity of the work to be performed, the effect of change orders, the availability of materials, the effect of any performance delays, the availability and timing of funding from the customer, and the recoverability of any claims included in the estimates to complete.

Changes in estimates of sales, costs, and profits on a performance obligation are recognized using the cumulative catch-up method of accounting, which recognizes in the current period the cumulative effect of the changes in current and prior periods. A significant change in an estimate on one or more contracts in a period could have a material effect on the Company's consolidated financial position or results of operations for that period.

When estimates of total costs to be incurred exceed estimates of total revenue to be earned on a performance obligation related to a complex, construction-type contract, a provision for the entire loss on the performance obligation is recognized in the period the loss is determined.

Accounts Receivable - Accounts receivable include amounts related to any unconditional Company right to receive consideration and are presented as receivables in the consolidated statement of financial position, separate from other contract balances. Accounts receivable are comprised of amounts billed and currently due from customers. The Company reports accounts receivable net of an allowance for doubtful accounts. Because the Company's accounts receivable are primarily with the U.S. Government or with companies acting as a contractor to the U.S. Government, the Company does not have material exposure to accounts receivable credit risk.

Contract Assets - Contract assets primarily relate to the Company's rights to consideration for work completed but not billed as of the reporting date when the right to payment is not just subject to the passage of time, including retention amounts. Contract assets are classified as current assets and, in accordance with industry practice, include amounts that may be billed and collected beyond one year due to the long-term nature of many of the Company's contracts. Contract assets are transferred to accounts receivable when the right to consideration becomes unconditional.

Contract Liabilities - Contract liabilities are comprised of advance payments, billings in excess of revenues, and deferred revenue amounts. Such advances are generally not considered a significant financing component, because they are utilized to pay for contract costs within a one-year period. Contract liability amounts are recognized as revenue once the requisite performance progress has occurred.

Inventoried Costs - Inventoried costs primarily relate to company-owned raw materials, which are stated at the lower of cost or net realizable value, generally using the average-cost method, and costs capitalized pursuant to applicable provisions of the Federal Acquisition Regulation ("FAR") and U.S. Cost Accounting Standards ("CAS"). Under the Company's U.S. Government contracts, the customer asserts title to, or a security interest in, inventories related to such contracts as a result of contract advances, performance-based payments, and progress payments. In accordance with industry practice, inventoried costs are classified as current assets and include amounts related to contracts having production cycles longer than one year.

Warranty Costs - Certain of the Company's contracts contain assurance-type warranty provisions, which generally promise that the service or vessel will comply with agreed upon specifications. In such instances, the Company accrues the estimated loss by a charge to income in the relevant period. In limited circumstances, the Company's complex construction type contracts may provide the customer with an option to purchase a warranty or provide an extended assurance service coupled with the primary assurance warranty. In such cases, the Company accounts for the warranty as a separate performance obligation to the extent it is material within the context of the contract. Warranty liabilities are reported within other current liabilities and are not material.

Government Grants - The Company recognizes incentive grants, inclusive of transfers of depreciable assets, from federal, state, and local governments at fair value upon compliance with the conditions of their receipt and reasonable assurance that the grants will be received or the depreciable assets will be transferred. Grants in recognition of specific expenses are recognized in the same period as an offset to those related expenses. Grants related to depreciable assets are recognized over the periods and in the proportions in which depreciation expense on those assets is recognized.

For the years ended December 31, 2021, 2020, and 2019, the Company recognized cash grant benefits of $20 million, $17 million, and $94 million, respectively, in other long-term liabilities in the consolidated statements of financial position.

General and Administrative Expenses - In accordance with industry practice and regulations that govern the cost accounting requirements for government contracts, most general corporate expenses incurred at both the segment and corporate locations are allowable and allocable costs on government contracts. These costs are allocated to contracts in progress on a systematic basis, and contract performance factors include this as an element of cost.

General and administrative expenses also include certain other costs that do not affect segment operating income, primarily non-current state income taxes. Non-current state income taxes include deferred state income taxes, which reflect the change in deferred state tax assets and liabilities, and the tax expense or benefit associated with changes in state unrecognized tax benefits in the relevant period.

Research and Development - Company-sponsored research and development activities primarily include independent research and development ("IR&D") related to experimentation, design, development, and test activities for government programs. IR&D expenses are included in general and administrative expenses and are generally allocable to government contracts. Company-sponsored IR&D expenses totaled $34 million, $31 million, and $23 million for the years ended December 31, 2021, 2020, and 2019, respectively. Expenses for research and development sponsored by the customer are charged directly to the related contracts.

Environmental Costs - Environmental liabilities are accrued when the Company determines remediation costs are probable and such costs are reasonably estimable. When only a range of costs is established and no amount within the range is more probable than another, the minimum amount in the range is accrued. Environmental liabilities are recorded on an undiscounted basis and are not material. Environmental expenditures are expensed or capitalized as appropriate. Capitalized expenditures, if any, relate to long-lived improvements in currently operating facilities. The Company does not record insurance recoveries before collection is probable. As of December 31, 2021 and 2020, the Company did not have any accrued receivables related to insurance reimbursements or recoveries for environmental matters.

Fair Value of Financial Instruments - The accounting standard for fair value measurements provides a framework for measuring fair value and requires expanded disclosures regarding fair value measurements. Fair value is defined as the price that would be received for an asset or the exit price that would be paid to transfer a liability in the principal or most advantageous market in an orderly transaction between market participants on the measurement date. The accounting standard provides a fair value hierarchy, which requires an entity to maximize the use of observable inputs, where available. The three levels of inputs consist of:

Level 1: Quoted prices in active markets for identical assets and liabilities.

Level 2: Observable inputs, other than Level 1 prices, such as: quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or that the Company corroborates with observable market data for substantially the full term of the related assets or liabilities.

Level 3: Unobservable inputs supported by little or no market activity that are significant to the fair value of the assets and liabilities.

Except for the Company's long-term debt, the carrying amounts of the Company's financial instruments recorded at historical cost approximate fair value due to the short-term nature of the instruments and low credit risk associated with the respective counterparties.

The Company maintains multiple grantor trusts to fund certain non-qualified pension plans. These trusts were valued at $220 million and $182 million as of December 31, 2021 and 2020, respectively, and are presented within miscellaneous other assets within the consolidated statements of financial position. These trusts consist primarily of investments in marketable securities, which are held at fair value within Level 1 of the fair value hierarchy.

Foreign Currency Translation - The Company's international subsidiaries that do not have the U.S. dollar as their functional currency translate assets and liabilities at current rates of exchange in effect at the balance sheet date. Revenues and expenses from these international subsidiaries are translated using the monthly average exchange rates in effect for the periods in which the items occur. The cumulative foreign currency translation gains and losses are included as a component of accumulated other comprehensive loss in stockholders’ equity. Gains and losses from foreign currency transactions are included in other income (expense) in the consolidated statements of operations and comprehensive income. Such amounts are not material.

Asset Retirement Obligations - Environmental remediation and/or asset decommissioning may be required when the Company ceases to utilize certain facilities. The Company records, within other current liabilities or other long-term liabilities as appropriate, all known asset retirement obligations for which the liability's fair value can be reasonably estimated, including certain asbestos removal, asset decommissioning, and lease restoration obligations. Asset retirement obligations for which the liability's fair value can be reasonably estimated were immaterial as of December 31, 2021 and 2020.

The Company also has known conditional asset retirement obligations related to assets currently in use, including certain asbestos remediation and asset decommissioning activities to be performed in the future, that were not reasonably estimable as of December 31, 2021, due to insufficient information about the timing and method of settlement of the obligation. Accordingly, the fair value of these obligations has not been recorded in the consolidated financial statements. A liability for these obligations is recorded in the period in which sufficient information regarding timing and method of settlement becomes available to make a reasonable estimate of the liability's fair value. In addition, there may be conditional environmental asset retirement obligations that the Company has not yet discovered.

Income Taxes - Income tax expense and other related information are based on the prevailing statutory rates for U.S. federal income taxes and the composite state income tax rate for the Company for each period presented. Non-current state income taxes include deferred state income taxes, which reflect the change in deferred state tax assets and liabilities, and the tax expense or benefit associated with changes in state unrecognized tax benefits in the relevant period. These amounts are recorded within operating income, while the current period state income tax expense, which is generally allowable and allocable to contracts, is charged to contract costs and included in cost of sales and service revenues in segment operating income.

Deferred income taxes are recorded when revenues and expenses are recognized in different periods for financial statement purposes and for tax return purposes. Deferred tax asset or liability account balances are calculated at the balance sheet date using current tax laws and rates expected to be in effect when the deferred tax items reverse in future periods.

The Company recognizes deferred tax assets to the extent it believes these assets are more likely than not to be realized. In making such a determination, the Company considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. Based on the Company's evaluation of these deferred tax assets, valuation allowances of $22 million were recognized as of each of December 31, 2021 and 2020.

Uncertain tax positions meeting the more-likely-than-not recognition threshold, based on the merits of the position, are recognized in the financial statements. The Company recognizes the amount of tax benefit that is greater than 50% likely to be realized upon ultimate settlement with the related tax authority. If a tax position does not meet the minimum statutory threshold to avoid payment of penalties, the Company recognizes an expense for the amount of the penalty in the period the tax position is claimed or expected to be claimed in its tax return. Penalties and accrued interest related to unrecognized tax benefits are recognized as a component of income tax expense. Changes in accruals associated with unrecognized tax benefits are recorded in earnings in the period in which they are determined.

Cash and Cash Equivalents - The carrying amounts of cash and cash equivalents approximate fair value due to the short-term nature of these assets, which have original maturity dates of 90 days or less.

Concentration Risk - The Company’s assets that are exposed to concentrations of credit risk consist primarily of cash and cash equivalents. The Company places its cash and cash equivalents with reputable financial institutions and limits the amount of credit exposure with any one of them. The Company regularly evaluates the creditworthiness of these financial institutions and minimizes this credit risk by entering into transactions with high-quality counterparties, limiting the exposure to each counterparty, and monitoring the financial condition of its counterparties.

In connection with its U.S. Government contracts, the Company is required to procure certain raw materials, components, and parts from supply sources approved by the U.S. Government. Only one supplier may exist for certain components and parts required to manufacture the Company's products.

Property, Plant, and Equipment - Depreciable properties owned by the Company are recorded at cost and depreciated over the estimated useful lives of individual assets. Major improvements are capitalized while expenditures for maintenance, repairs, and minor improvements are expensed. Costs incurred for computer software developed or purchased for internal use are capitalized and amortized over the expected useful life of the software, not to exceed nine years. Leasehold improvements are amortized over the shorter of their useful lives or the term of the lease.

The remaining assets are depreciated using the straight-line method, with the following lives:

	Years
Land improvements	2 - 40
Buildings and improvements	2 - 60
Capitalized software costs	3 - 9
Machinery and other equipment	2 - 40

The Company evaluates the recoverability of its property, plant, and equipment when there are changes in economic circumstances or business objectives that indicate the carrying value may not be recoverable. The Company's evaluations include estimated future cash flows, profitability, and other factors affecting fair value. As these assumptions and estimates may change over time, it may or may not be necessary to record impairment charges.

Leases - The Company determines if an arrangement is a lease at contract inception. A lease exists when a contract conveys to a party the right to control the use of identified property, plant, or equipment for a period of time in exchange for consideration. The Company recognizes a lease liability at the lease commencement date, as the present value of future lease payments, using an estimated rate of interest that the Company would pay to borrow equivalent funds over an equivalent term on a collateralized basis. A lease asset is recognized based on the lease liability value and adjusted for any prepaid lease payments, initial direct costs, or lease incentive amounts. The lease term at the commencement date includes any renewal options or termination options when it is reasonably certain that the Company will exercise or not exercise those options, respectively.

Right of use assets associated with operating leases are recognized in operating lease assets in the consolidated statements of financial position. Lease liabilities associated with operating leases are recognized in long-term operating lease liabilities, with short-term lease liability amounts included in other current liabilities in the consolidated statements of financial position.

Rent expense for operating leases is recognized on a straight-line basis over the lease term and included in cost of sales and service revenues in the consolidated statements of operations and comprehensive income. Variable lease payments are recognized as incurred and include lease operating expenses, which are based on contractual lease terms.

The Company elected for all asset classes to exclude from its consolidated statements of financial position leases having terms of 12 months or less (short-term leases) and elected not to separate lease and non-lease components in the determination of lease payment obligations for its long-term lease contracts.

Assets and Liabilities Held for Sale - Assets and liabilities held for sale represent land, buildings, and other assets and liabilities that have met the criteria of “held for sale” accounting at the lower of carrying value or fair value less costs to sell. Fair value is based on the estimated proceeds from the sale of the assets utilizing recent purchase offers, market comparables, and reliable third-party data.

Goodwill and Other Intangible Assets - The Company performs impairment tests for goodwill as of November 30 of each year and between annual impairment tests if evidence of potential impairment exists, by comparing the carrying value of net assets to the fair value of the reporting unit. If the fair value is determined to be less than the carrying value, the Company records an impairment charge to the reporting unit. Purchased intangible assets are amortized on a straight-line basis or a method based on the pattern of benefits over their estimated useful lives, and the carrying value of these assets is reviewed for impairment when events indicate that a potential impairment may have occurred.

Equity Method Investments - Investments in which the Company has the ability to exercise significant influence over the investee but does not own a majority interest or otherwise control are accounted for under the equity method of accounting and included in other assets in its consolidated statements of financial position. The Company's equity investments align strategically and are integrated with the Company's operations. Accordingly, the Company's share of the net earnings or losses of the investee is included in operating income. The Company evaluates its equity investments for other than temporary impairment whenever events or changes in business circumstances indicate that the carrying amounts of such investments may not be fully recoverable. If a decline in the value of an equity method investment is determined to be other than temporary, a loss is recorded in earnings in the current period.

Self-Insured Group Medical Insurance - The Company maintains a self-insured group medical insurance plan. The plan is designed to provide a specified level of coverage for employees and their dependents. Estimated liabilities for incurred but not paid claims utilize actuarial methods based on various assumptions, which include, but are not limited to, HII's historical loss experience and projected loss development factors. These liabilities are recorded in other current liabilities and were immaterial.

Self-Insured Workers' Compensation Plan - The operations of the Company are subject to federal and state workers' compensation laws. The Company maintains self-insured workers' compensation plans and participates in federally administered second injury workers' compensation funds. The Company estimates the liability for claims and funding requirements on a discounted basis utilizing actuarial methods based on various assumptions, which include, but are not limited to, the Company's historical loss experience and projected loss development factors as compiled in an annual actuarial study. Self-insurance accruals include amounts related to the liability for reported claims and an estimated accrual for claims incurred but not reported. The Company's workers' compensation liability was discounted at 1.47% and 0.92% as of December 31, 2021 and 2020, respectively. These discount rates were determined using a risk-free rate based on future payment streams. Workers' compensation benefit obligations on an undiscounted basis were $785 million and $752 million as of December 31, 2021 and 2020, respectively.

Other Current Liabilities - Other current liabilities were $423 million as of December 31, 2021, and $462 million as of December 31, 2020. Payroll taxes payable, which is a component of other current liabilities, was $125 million as of December 31, 2020. No other component of other current liabilities was more than 5% of total current liabilities.

Litigation, Commitments, and Contingencies - Amounts associated with litigation, commitments, and contingencies are recorded as charges to earnings when management, after taking into consideration the facts and circumstances of each matter, including any settlement offers and projected loss or claim development factors, has determined it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated.

Restructuring - Restructuring related accruals are reviewed and adjusted when circumstances require. Accruals for restructuring activities include estimates primarily related to facility consolidations and closures, asset retirement obligations, long-lived asset write-downs, employment reductions, and contract termination costs. There were no restructuring accruals or activity as of and for the years ended December 31, 2021, 2020, and 2019.

Loan Receivable - The Company holds a loan receivable in connection with the financing of the sale of its previously owned Avondale Shipyard facility. The receivable was carried at amortized cost of $36 million, net of $13 million of loan discount, as of December 31, 2021, and at amortized cost of $34 million, net of $15 million loan discount, as of December 31, 2020. The loan receivable approximates fair value and is recorded in miscellaneous other assets on the consolidated statements of financial position. Interest income is recognized on an accrual basis using the effective yield method. The discount is accreted into income using the effective yield method over the estimated life of the loan receivable.

Retirement Related Benefit Costs - The Company accounts for its retirement related benefit plans on the accrual basis. The measurements of obligations, costs, assets, and liabilities require significant judgment. The costs of benefits provided by defined benefit pension plans are recorded in the period participating employees provide service. The costs of benefits provided by other postretirement benefit plans are recorded in the period participating employees attain full eligibility. The discount rate assumption is defined under GAAP as the rate at which a plan's obligation could be effectively settled. The discount rate is established for each of the retirement related benefit plans at its respective measurement date.

The expected return on plan assets component of retirement related costs is used to calculate net periodic expense. Unless plan assets and benefit obligations are subject to re-measurement during the year, the expected return on assets is based on the fair value of plan assets at the beginning of the year. The costs of plan amendments that provide benefits already earned by plan participants (prior service costs and credits) are deferred in accumulated other comprehensive loss and amortized over the expected future service period of active participants as of the date of amendment. Actuarial gains and losses arising from differences between assumptions and actual experience or changes in assumptions are deferred in accumulated other comprehensive loss. This unrecognized amount is amortized to the extent it exceeds 10% of the greater of the plan's benefit obligation or plan assets. The amortization period for actuarial gains and losses is the estimated remaining service life of the plan participants.

The Company recognizes the funded status of each retirement related benefit plan as an asset or liability in its consolidated statements of financial position. The funded status represents the difference between the plan's benefit obligation and the fair value of the plan's assets. Unrecognized deferred amounts, such as demographic or asset gains or losses and the impacts of plan amendments, are included in accumulated other comprehensive loss and amortized as described above.

Stock Compensation - Stock-based compensation value is determined based on the closing market price of the Company's common stock on grant date, and the expense is recognized over the vesting period. At each reporting date, the number of shares is adjusted to equal the number ultimately expected to vest based on the Company's expectations regarding the relevant performance and service criteria.

3. ACCOUNTING STANDARDS UPDATES

In August 2018, the Financial Accounting Standards Board ("FASB") issued ASU 2018-14, Compensation—Retirement Benefits—Defined Benefit Plans—General (Subtopic 715-20): Disclosure Framework—Changes to the Disclosure Requirements for Defined Benefit Plans, which reduces disclosure requirements of Subtopic 715-20 and requires additional disclosure related to weighted-average interest crediting rates and significant gains and losses related to changes in the benefit obligation for the reporting period. The update was effective on a retrospective basis for fiscal years ending after December 15, 2020, with early adoption allowed. The adoption did not result in a material impact to the Company's financial results or disclosures.

In December 2019, the FASB issued ASU 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes, which amends and simplifies the requirements for income taxes. The ASU was effective for fiscal years beginning after December 15, 2020, and interim periods within those fiscal years, with early adoption permitted. The adoption did not result in a material impact to the Company's financial results or disclosures.

In March 2020, the FASB issued ASU 2020-04, Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting, which provides optional exceptions to GAAP for certain transactions related to the transition away from The London Interbank Offered Rate (“LIBOR”). The amended guidance is designed to provide relief from the accounting analysis and impacts that may otherwise be required for modifications to agreements (e.g., loans, debt securities, derivatives, borrowings) necessitated by the reference rate reform. It also provides optional expedients to enable companies to continue to apply hedge accounting to certain hedging relationships impacted by the reference rate reform. Application of the guidance in the amendment is optional, is only available in certain situations, and is only available for companies to apply until December 31, 2022. The Company is currently evaluating the impacts of reference rate reform and the new guidance on its consolidated financial statements.

In October 2021, the FASB issued ASU No. 2021-08, Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers (“ASU 2021-08”). The update requires contract assets and contract liabilities acquired in a business combination to be recognized and measured by the acquirer on the acquisition date in accordance with ASU 2014-09, Revenue from Contracts with Customers (Topic 606). Generally, this new guidance will result in the acquirer recognizing contract assets and contract liabilities at the same amounts recorded by the acquiree. Historically, such amounts were recognized by the acquirer at fair value in accordance with acquisition accounting. The standard 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 standard in fiscal year 2021, and it did not have a material impact on the Company's consolidated financial statements.

In November 2021, the FASB issued ASU 2021-10, Government Assistance (Topic 832), which requires business entities to disclose information about transactions with a government that are accounted for by applying a grant or contribution model by analogy (“ASU 2021-10”). For transactions within scope, the new standard requires the disclosure of information about the nature of the transaction, including significant terms and conditions, as well as the amounts and specific financial statement line items affected by the transaction. The new guidance is effective for annual reporting periods beginning after December 15, 2021, with early adoption permitted. The Company is currently evaluating the impacts of the new guidance on its consolidated financial statements.

Other accounting pronouncements issued but not effective until after December 31, 2021, are not expected to have a material impact on the Company's consolidated financial position, results of operations, or cash flows.

4. ACQUISITIONS AND DIVESTITURES

Acquisition of Alion

On August 19, 2021, the Company acquired all of the outstanding common stock of Alion Holding Corp., the parent company of Alion Science and Technology Corporation ("Alion"), a technology-driven solutions provider. The Company accounted for the transaction as a business combination using the acquisition method of accounting in accordance with ASC 805 – "Business Combinations." The preliminary purchase price was $1.79 billion, including $148 million of cash received in the acquisition. The purchase price was paid in cash and funded through the net proceeds of the Company's issuance of $400 million aggregate principal amount of 0.670% Senior Notes due 2023 and $600 million aggregate principal amount of 2.043% Senior Notes due 2028, together with the proceeds of a $650 million term loan. See Note 13: Debt. The preliminary purchase price is subject to customary adjustments as provided in the purchase agreement.

Alion provides advanced engineering and R&D services in the areas of intelligence, surveillance, and reconnaissance, military training and simulation, cyber, data analytics and other next-generation technology based solutions to the DoD and intelligence community customers, with the U.S. Navy representing about one-third of current annual revenues.

The table below summarizes the preliminary fair value estimates of identifiable assets acquired and liabilities assumed in the acquisition. These estimates are subject to revisions, which may result in an adjustment to the preliminary values presented below.

($ in millions)	**Preliminary 8/19/2021**
Cash and cash equivalents	$ 148
Accounts receivable	91
Contract assets	137
Operating lease assets	46
Intangible assets	720
Other identifiable assets acquired	20
Total identifiable assets acquired	**1,162**
Trade accounts payable	95
Accrued employees' compensation	52
Deferred tax liabilities - noncurrent	131
Operating lease liabilities	49
Other identifiable liabilities assumed	68
Total identifiable liabilities assumed	**395**
Net identifiable assets acquired	767
Transaction price	1,791
Goodwill	**$ 1,024**

The Company is in various phases of valuing the assets acquired and liabilities assumed in the acquisition, including intangible assets and tax balances, and its estimate of these values was still preliminary as of December 31, 2021. These provisional amounts are therefore subject to change as the Company continues to evaluate information required to complete the valuations through the measurement period, which will not exceed one year from the acquisition date.

Goodwill is calculated as the excess of the purchase price over the fair value of the net assets acquired. The recognized goodwill is attributable to operational synergies and growth opportunities and was allocated to the Company's Technical Solutions segment. None of the goodwill resulting from this acquisition is expected to be amortizable for tax purposes.

Approximately $16 million of one-time acquisition-related costs was included in general and administrative expenses in the consolidated statements of operations and comprehensive income for the year ended December 31, 2021.

The Company identified Alion’s contract backlog and customer relationships as finite-lived assets with estimated fair values as of the acquisition date of $240 million and $480 million, respectively. The finite-lived assets are subject to amortization under the pattern of benefits method over six years for backlog and 20 years for customer relationships.

Total revenue and operating income for Alion for the period from August 19, 2021, through December 31, 2021, were as follows:

($ in millions)	Period from 8/19/2021-12/31/2021	
Sales and service revenues	$	506
Operating income	$	10

Pro Forma Financial Information

The following unaudited consolidated pro forma summary has been prepared by adjusting the Company's historical data to give effect to the acquisition of Alion as if it had occurred on January 1, 2020.

	Pro Forma (Unaudited)			
	Year Ended December 31			
($ in millions, except per share amounts)	2021		2020	
Sales and service revenues	$	10,364	$	10,453
Net earnings	$	539	$	648
Basic earnings per share	$	13.37	$	15.96
Diluted earnings per share	$	13.37	$	15.96

These unaudited pro forma results include adjustments, such as the amortization of acquired intangible assets and interest expense on debt financing, in connection with the acquisition.

The unaudited consolidated pro forma financial information was prepared in accordance with GAAP and is not necessarily indicative of the results of operations that would have occurred if the acquisition had been completed on the date indicated, nor is it indicative of the future operating results of the Company.

The unaudited pro forma results do not reflect events that either have occurred or may occur after the acquisition date, including, but not limited to, the anticipated realization of operating synergies in subsequent periods. These results also do not give effect to certain charges that the Company expects to incur in connection with the acquisition, including, but not limited to, additional professional fees and employee integration.

Other Acquisitions

In December 2020, the Company acquired the autonomy business of Spatial Integrated Systems, Inc. ("SIS"), a leading provider of autonomous technology, for approximately $40 million in cash. The acquisition further expanded the Company's unmanned systems capabilities. In connection with this acquisition, the Company preliminarily recorded $40 million of goodwill, which included the value of SIS's workforce, all of which was allocated to the Company's Technical Solutions segment. For the year ended December 31, 2021, the Company recorded a decrease in goodwill of $13 million, due to a reallocation of purchase price to intangible assets related to technology and existing contract backlog. See Note 11: Goodwill and Other Intangible Assets. The assets, liabilities, and results of operations of SIS are not material to the Company's consolidated financial position, results of operations, or cash flows.

In March 2020, the Company acquired Hydroid, Inc. ("Hydroid"), a leading provider of advanced marine robotics to the defense and maritime markets, for approximately $377 million in cash, net of $2 million of acquired cash. The acquisition expanded the Company's capabilities in the strategically important and rapidly growing autonomous and unmanned maritime systems market. In connection with this acquisition, the Company recorded $239 million of goodwill, which included the value of Hydroid's workforce, and $76 million of intangible assets related to technology and existing contract backlog. See Note 11: Goodwill and Other Intangible Assets. The assets, liabilities, and results of operations of Hydroid are not material to the Company's consolidated financial position, results of operations, or cash flows.

The Company funded the SIS and Hydroid acquisitions using cash on hand, issuances of commercial paper, and borrowings on its revolving credit facility. The acquisition costs incurred in connection with these acquisitions were not material. The operating results of these businesses have been included in the Company's consolidated results as of the respective closing dates of the acquisitions. In allocating the purchase prices of these businesses, the Company considered the estimated fair values of net tangible and intangible assets acquired, with any excess purchase price recorded as goodwill. The total amount of goodwill resulting from these acquisitions is expected to be amortizable for tax purposes. These acquisitions are not material either individually or in the aggregate, and pro forma revenues and results of operations have therefore not been provided.

Divestitures

In February 2021, the Company contributed its San Diego Shipyard ("SDSY") business to a joint venture, Titan Acquisition Holdings, L.P. ("Titan"), in exchange for a 10% non-controlling interest. Titan is a leading provider of ship repair and specialty fabrication services to government and commercial customers. The joint venture contribution was completed as part of the Company's operating strategy. The Company recognized its interest in Titan at fair value, which approximated $83 million. No gain or loss was recognized in the transaction. The contributed assets and liabilities were previously reported in assets and liabilities held for sale. The Company transferred $22 million to Titan as part of the exchange. As of December 31, 2021, the Company's investment in Titan of $87 million, inclusive of equity earnings, is recorded in miscellaneous other assets in the consolidated statements of financial position.

In February 2021, the Company completed the sale of its oil and gas business. The divestiture was completed as part of the Company's plan to exit this part of the oil and gas industry and focus on its core services and customers. The divested assets and liabilities were previously reported in assets and liabilities held for sale. In connection with the sale, the Company received $25 million net cash and recorded a net pre-tax gain of $1 million in other income and gains, net within operating income in the consolidated statements of operations.

5. STOCKHOLDERS' EQUITY

Common Stock - Changes in the Company's number of outstanding shares for the year ended December 31, 2021, resulted from shares purchased in the open market under the Company's stock repurchase program and share activity under its stock compensation plans. See Note 18: Stock Compensation Plans.

Treasury Stock - In November 2019, the Company's board of directors authorized an increase in the Company's stock repurchase program from $2.2 billion to $3.2 billion and an extension of the term of the program to October 31, 2024. Repurchases are made from time to time at management's discretion in accordance with applicable federal securities laws. For the year ended December 31, 2021, the Company repurchased 544,440 shares at an aggregate cost of $101 million. For the years ended December 31, 2020 and 2019, the Company repurchased 390,904 and 1,005,762 shares, respectively, at aggregate costs of $84 million and $214 million, respectively. The cost of purchased shares is recorded as treasury stock in the consolidated statements of financial position.

Dividends - In November 2021, the Company's board of directors authorized an increase in the Company's quarterly cash dividend from $1.14 per share to $1.18 per share. In November 2020, the Company's board of directors authorized an increase in the Company's quarterly cash dividend from $1.03 per share to $1.14 per share. In November 2019, the Company's board of directors authorized an increase in the Company's quarterly cash dividend from $0.86 per share to $1.03 per share. The Company paid cash dividends totaling $186 million ($4.60 per share),

$172 million ($4.23 per share), and $149 million ($3.61 per share) in the years ended December 31, 2021, 2020, and 2019, respectively.

Accumulated Other Comprehensive Loss - Other comprehensive income (loss) refers to gains and losses recorded as an element of stockholders' equity but excluded from net earnings. The accumulated other comprehensive loss was comprised of unamortized benefit plan costs of $923 million as of December 31, 2021, and unamortized benefit plan costs of $1,546 million and other comprehensive loss items of $1 million as of December 31, 2020.

The changes in accumulated other comprehensive loss by component for the years ended December 31, 2021, 2020, and 2019, were as follows:

($ in millions)	Benefit Plans	Other	Total
Balance as of December 31, 2018	$ (1,283)	$ (5)	$ (1,288)
Other comprehensive income (loss) before reclassifications	(265)	3	(262)
Amounts reclassified from accumulated other comprehensive loss			
Amortization of prior service (credit)[1]	(4)	—	(4)
Amortization of net actuarial loss[1]	102	—	102
Tax expense for items of other comprehensive income	43	—	43
Net current period other comprehensive income (loss)	(124)	3	(121)
Balance as of December 31, 2019	(1,407)	(2)	(1,409)
Other comprehensive income (loss) before reclassifications	(279)	2	(277)
Amounts reclassified from accumulated other comprehensive loss			
Amortization of prior service (credit)[1]	(10)	—	(10)
Amortization of net actuarial loss[1]	102	—	102
Tax expense (benefit) for items of other comprehensive income	48	(1)	47
Net current period other comprehensive income (loss)	(139)	1	(138)
Balance as of December 31, 2020	(1,546)	(1)	(1,547)
Other comprehensive income before reclassifications	**720**	**—**	**720**
Amounts reclassified from accumulated other comprehensive loss			
Amortization of prior service cost[1]	**11**	**—**	**11**
Amortization of net actuarial loss[1]	**107**	**—**	**107**
Tax expense (benefit) for items of other comprehensive income	**(215)**	**1**	**(214)**
Net current period other comprehensive income	**623**	**1**	**624**
Balance as of December 31, 2021	**$ (923)**	**$ —**	**$ (923)**

[1] These accumulated comprehensive loss components are included in the computation of net periodic benefit cost. See Note 17: Employee Pension and Other Postretirement Benefits. The tax expense associated with amounts reclassified from accumulated other comprehensive loss for the years ended December 31, 2021, 2020, and 2019, was $30 million, $23 million, and $25 million, respectively.

6. EARNINGS PER SHARE

Basic and diluted earnings per common share were calculated as follows:

(in millions, except per share amounts)	Year Ended December 31 2021	2020	2019
Net earnings	**$ 544**	$ 696	$ 549
Weighted-average common shares outstanding	**40.3**	40.6	41.4
Net effect of dilutive stock options and awards	**—**	—	—
Dilutive weighted-average common shares outstanding	**40.3**	**40.6**	**41.4**
Earnings per share - basic	**$ 13.50**	$ 17.14	$ 13.26
Earnings per share - diluted	**$ 13.50**	$ 17.14	$ 13.26

The Company's calculation of diluted earnings per common share includes the dilutive effects of the assumed exercise of stock options and vesting of restricted stock based on the treasury stock method. Under the treasury stock method, the Company has excluded from the diluted share amounts presented above the effects of 0.4 million Restricted Performance Stock Rights ("RPSRs") for the year ended December 31, 2021, and 0.3 million RPSRs for each of the years ended December 31, 2020 and 2019.

7. REVENUE

The following is a description of principal activities from which the Company generates its revenues. For more detailed information regarding reportable segments, see Note 8: Segment Information. For more detailed information regarding the Company's significant accounting policy for revenue, see Note 2: Summary of Significant Accounting Policies.

U.S. Government Contracts

The Ingalls and Newport News segments generate revenue primarily from performance under multi-year contracts with the U.S. Government, generally the U.S. Navy and U.S. Coast Guard, or prime contractors to contracts with the U.S. Government, relating to the advance planning, design, construction, repair, maintenance, refueling, overhaul, or inactivation of nuclear-powered ships and non-nuclear ships. The period over which the Company performs may extend past five years. The Technical Solutions segment also generates the majority of its revenue from contracts with the U.S. Government, including U.S. Government agencies. The Company generally invoices and receives related payments based upon performance progress no less frequently than monthly.

Shipbuilding - For most of the Company's shipbuilding contracts, the customer contracts with the Company to provide a comprehensive service of designing, procuring long-lead-time materials, manufacturing, and integrating complex equipment and technologies into a single ship or project, often resulting in a single performance obligation. Contract modifications to account for changes in specifications and requirements are recognized when approved by the customer. In the majority of circumstances, modifications do not result in additional performance obligations that are distinct from the existing performance obligations in the contract, and the effects of the modifications are recognized as an adjustment to revenue on a cumulative catch-up basis. Alternatively, in instances where the performance obligations in the modifications are deemed distinct, contract modifications are accounted for prospectively.

The Company considers incentive and award fees to be variable consideration and includes in the transaction price at inception the consideration to which the Company expects to be entitled under the terms and conditions of the contract, generally estimated using a most likely amount approach. Transaction price is limited to the extent of funding allotted by the customer and available for performance, and estimated revenues represent those amounts for which the Company believes a significant reversal of revenue is not probable.

The Company recognizes revenues related to shipbuilding contracts as it satisfies the related performance obligations over time using a cost-to-cost input method to measure performance progress, which best reflects the transfer of control to the customer.

Services - The Technical Solutions segment generates revenue primarily under U.S. Government contracts. Contracts generally are structured using either an Indefinite Delivery/Indefinite Quantity ("IDIQ") vehicle, under which orders are issued, or a standalone contract. Contracts may be fixed-price or cost-type, include variable consideration such as incentives and awards, and structured as task orders under an IDIQ contract vehicle or requirements contract vehicle. In either case, the Company generally performs services over a shorter duration and may continue to perform upon exercise of related period of performance options that are also shorter in duration. The Company’s performance obligations vary in nature and may be stand-ready, in which case the Company responds to the customer’s needs on the basis of its demand, a recurring service, typically recurring maintenance services, or a single performance obligation that does not comprise a series of distinct services.

In determining transaction price, the Company considers incentives and other contingencies to be variable consideration and includes in the initial transaction price the consideration to which the Company expects to be entitled under the terms and conditions of the contract, generally estimated using a most likely amount approach. Transaction price is limited to the extent of funding allotted by the customer and available for performance, and estimated revenues represent those amounts for which the Company believes a significant reversal of revenue is not probable. Where a series of distinct services has been identified, the Company generally allocates variable consideration to distinct time increments of service.

The Company generally recognizes revenue as it satisfies the related performance obligations over time using a cost-to-cost input method to measure performance progress, because, even where the Company has identified a series of services, its cost incurrence pattern generally is not ratable given the complex nature of the services the Company provides. Invoices are issued and related payments are received, on the basis of performance progress, no less frequently than monthly. In addition, many of the Company's U.S. Government services contracts are time and material arrangements. As a result, the Company often utilizes the practical expedient of allowing the recognition of revenue in the amount the Company invoices, which corresponds with the value provided to the customer and to which the Company is entitled to payment for performance to date.

Non-U.S. Government Contracts

Revenues generated under commercial and state and local government agency contracts are primarily derived from the provision of nuclear and environmental services. Non-U.S. Government contracts typically are one or two years in duration.

In determining transaction price, the Company considers incentives and other contingencies to be variable consideration and includes in the initial transaction price the consideration to which the Company expects to be entitled under the terms and conditions of the contract, generally estimated using a most likely amount approach. In the context of variable consideration, the Company limits the transaction price to amounts for which the Company believes a significant reversal of revenue is not probable. Such amounts may relate to transaction price in excess of funding, a lack of history with the customer, a lack of history with the goods or services being provided, or other items.

Revenue generally is recognized over time given the terms and conditions of the related contracts. The Company generally utilizes a cost-to-cost input method to measure performance progress, which best reflects the transfer of control to the customer. The Company’s non-U.S. Government contract portfolio is comprised of a large number of time and material arrangements. As a result, the Company often utilizes the practical expedient allowing the recognition of revenue in the amount the Company invoices, which corresponds with the value provided to the customer and to which the Company is entitled to payment for performance to date.

Disaggregation of Revenue

The following tables present revenues on a disaggregated basis, in a manner that reconciles with the Company's reportable segment disclosures, for the following categories: product versus service type, customer type, contract type, and major program. See Note 8: Segment Information. The Company believes that this level of disaggregation provides investors with information to evaluate the Company's financial performance and provides the Company with information to make capital allocation decisions in the most appropriate manner.

	Year Ended December 31, 2021				
($ in millions)	Ingalls	Newport News	Technical Solutions	Intersegment Eliminations	Total
Revenue Type					
Product sales	$ 2,357	$ 4,543	$ 100	$ —	$ 7,000
Service revenues	156	1,109	1,259	—	2,524
Intersegment	15	11	117	(143)	—
Sales and service revenues	$ 2,528	$ 5,663	$ 1,476	$ (143)	$ 9,524
Customer Type					
Federal	$ 2,513	$ 5,652	$ 1,310	$ —	$ 9,475
Commercial	—	—	48	—	48
State and local government agencies	—	—	1	—	1
Intersegment	15	11	117	(143)	—
Sales and service revenues	$ 2,528	$ 5,663	$ 1,476	$ (143)	$ 9,524
Contract Type					
Firm fixed-price	$ 33	$ 41	$ 205	$ —	$ 279
Fixed-price incentive	2,329	2,913	5	—	5,247
Cost-type	151	2,698	894	—	3,743
Time and materials	—	—	255	—	255
Intersegment	15	11	117	(143)	—
Sales and service revenues	$ 2,528	$ 5,663	$ 1,476	$ (143)	$ 9,524

($ in millions)	Year Ended December 31, 2020 Ingalls	Newport News	Technical Solutions	Intersegment Eliminations	Total
Revenue Type					
Product sales	$ 2,462	$ 4,312	$ 76	$ —	$ 6,850
Service revenues	212	1,247	1,052	—	2,511
Intersegment	4	12	140	(156)	—
Sales and service revenues	$ 2,678	$ 5,571	$ 1,268	$ (156)	$ 9,361
Customer Type					
Federal	$ 2,674	$ 5,558	$ 882	$ —	$ 9,114
Commercial	—	1	245	—	246
State and local government agencies	—	—	1	—	1
Intersegment	4	12	140	(156)	—
Sales and service revenues	$ 2,678	$ 5,571	$ 1,268	$ (156)	$ 9,361
Contract Type					
Firm fixed-price	$ 50	$ 15	$ 222	$ —	$ 287
Fixed-price incentive	2,347	2,719	29	—	5,095
Cost-type	277	2,825	465	—	3,567
Time and materials	—	—	412	—	412
Intersegment	4	12	140	(156)	—
Sales and service revenues	$ 2,678	$ 5,571	$ 1,268	$ (156)	$ 9,361

($ in millions)	Year Ended December 31, 2019 Ingalls	Newport News	Technical Solutions	Intersegment Eliminations	Total
Revenue Type					
Product sales	$ 2,319	$ 3,946	$ —	$ —	$ 6,265
Service revenues	233	1,277	1,124	—	2,634
Intersegment	3	8	113	(124)	—
Sales and service revenues	$ 2,555	$ 5,231	$ 1,237	$ (124)	$ 8,899
Customer Type					
Federal	$ 2,552	$ 5,179	$ 878	$ —	$ 8,609
Commercial	—	43	245	—	288
State and local government agencies	—	1	1	—	2
Intersegment	3	8	113	(124)	—
Sales and service revenues	$ 2,555	$ 5,231	$ 1,237	$ (124)	$ 8,899
Contract Type					
Firm fixed-price	$ 91	$ 11	$ 240	$ —	$ 342
Fixed-price incentive	2,060	2,359	1	—	4,420
Cost-type	401	2,853	454	—	3,708
Time and materials	—	—	429	—	429
Intersegment	3	8	113	(124)	—
Sales and service revenues	$ 2,555	$ 5,231	$ 1,237	$ (124)	$ 8,899

($ in millions)	Year Ended December 31 2021	2020	2019
Major Programs			
Amphibious assault ships	**$ 1,328**	$ 1,403	$ 1,336
Surface combatants and coast guard cutters	**1,179**	1,267	1,209
Other	**21**	8	10
Total Ingalls	**2,528**	2,678	2,555
Aircraft carriers	**3,073**	3,056	2,878
Submarines	**1,917**	1,727	1,595
Other	**673**	788	758
Total Newport News	**5,663**	5,571	5,231
Government and energy services	**1,462**	1,033	996
Oil and gas services	**14**	235	241
Total Technical Solutions	**1,476**	1,268	1,237
Intersegment eliminations	**(143)**	(156)	(124)
Sales and service revenues	**$ 9,524**	$ 9,361	$ 8,899

As of December 31, 2021, the Company had $48.5 billion of remaining performance obligations. The Company expects to recognize approximately 19% of its remaining performance obligations as revenue through 2022, an additional 35% through 2024, and the balance thereafter.

Cumulative Catch-up Adjustments

For the year ended December 31, 2021, net cumulative catch-up adjustments increased operating income by $115 million and increased diluted earnings per share by $2.26. For the year ended December 31, 2020, net cumulative catch-up adjustments decreased operating income by $29 million and decreased diluted earnings per share by $0.56. For the year ended December 31, 2019, net cumulative catch-up adjustments increased operating income by $96 million and increased diluted earnings per share by $1.84.

No individual adjustment was material to the Company's consolidated statements of operations and comprehensive income for the year ended December 31, 2021.

Cumulative catch-up adjustments for the year ended December 31, 2020, included unfavorable adjustments of $148 million, relating to Block IV of the *Virginia* class (SSN 774) submarine program at the Company's Newport News segment, which decreased diluted earnings per share by $2.88. While other unfavorable cumulative catch-up adjustments for the year ended December 31, 2020, were not individually material, cost estimates for discrete delay and disruption from COVID-19 Events drove $61 million of unfavorable cumulative catch-up adjustments across our contracts, including $16 million relating to Block IV of the *Virginia* class (SSN 774) submarine program, which is included in the $148 million unfavorable adjustments discussed above. For the year ended December 31, 2020, no individual favorable cumulative catch-up adjustment was material to the Company's consolidated statements of operations and comprehensive income.

No individual adjustment was material to the Company's consolidated statements of operations and comprehensive income for the year ended December 31, 2019.

Contract Balances

Contract balances include accounts receivable, contract assets, and contract liabilities from contracts with customers. Accounts receivable represent an unconditional right to consideration and include amounts billed and currently due from customers. Contract assets primarily relate to the Company's rights to consideration for work completed but not billed as of the reporting date when the right to payment is not just subject to the passage of time. Fixed-price contracts are generally billed to the customer using either progress payments, whereby amounts are billed monthly as costs are incurred or work is completed, or performance-based payments, which are based upon the achievement of specific, measurable events or accomplishments defined and valued at contract inception. Cost-type contracts are typically billed to the customer on a monthly or semi-monthly basis. Contract liabilities relate to advance payments, billings in excess of revenues, and deferred revenue amounts.

The Company reports contract balances in a net contract asset or contract liability position on a contract-by-contract basis at the end of each reporting period. The Company's net contract assets increased $195 million from December 31, 2020 to December 31, 2021, primarily resulting from favorable cumulative catch-up adjustments and revenue on certain U.S. Navy contracts. For the year ended December 31, 2021, the Company recognized revenue of $382 million related to its contract liabilities as of December 31, 2020. For the year ended December 31, 2020, the Company recognized revenue of $266 million related to its contract liabilities as of December 31, 2019. For the year ended December 31, 2019, the Company recognized revenue of $279 million related to its contract liabilities as of December 31, 2018.

8. SEGMENT INFORMATION

The Company is organized into three reportable segments: Ingalls, Newport News, and Technical Solutions, consistent with how management makes operating decisions and assesses performance.

U.S. Government Sales - Revenues from the U.S. Government include revenues from contracts for which HII is the prime contractor, as well as contracts for which the Company is a subcontractor and the ultimate customer is the U.S. Government. The Company derived over 95% of its revenues from the U.S. Government for each of the years ended December 31, 2021, 2020, and 2019.

Assets - Substantially all of the Company's assets are located or maintained in the United States.

Results of Operations by Segment

The following table presents the Company's operating results by segment:

	Year Ended December 31		
($ in millions)	**2021**	**2020**	**2019**
Sales and Service Revenues			
Ingalls	**$ 2,528**	$ 2,678	$ 2,555
Newport News	**5,663**	5,571	5,231
Technical Solutions	**1,476**	1,268	1,237
Intersegment eliminations	**(143)**	(156)	(124)
Total sales and service revenues	**$ 9,524**	$ 9,361	$ 8,899
Operating Income (Loss)			
Ingalls	**$ 281**	$ 281	$ 235
Newport News	**352**	233	410
Technical Solutions	**50**	41	(14)
Total segment operating income	**683**	555	631
Non-segment factors affecting operating income			
Operating FAS/CAS Adjustment	**(157)**	248	124
Non-current state income taxes	**(13)**	(4)	(19)
Total operating income	**$ 513**	$ 799	$ 736

Sales transactions between segments are generally recorded at cost.

Other Financial Information

The following tables present the Company's assets, capital expenditures, and depreciation and amortization by segment:

($ in millions)	December 31 2021	2020	2019
Assets			
Ingalls	**$ 1,659**	$ 1,612	1,618
Newport News	**4,179**	4,124	3,886
Technical Solutions	**3,553**	1,379	1,022
Corporate	**1,236**	1,042	505
Total assets	**$ 10,627**	$ 8,157	$ 7,031

($ in millions)	Year Ended December 31 2021	2020	2019
Capital Expenditures(1)			
Ingalls	**$ 72**	$ 104	$ 182
Newport News	**201**	212	244
Technical Solutions	**38**	20	9
Corporate	**—**	—	1
Total capital expenditures	**$ 311**	$ 336	$ 436

(1) Net of grant proceeds for capital expenditures

($ in millions)	Year Ended December 31 2021	2020	2019
Depreciation and Amortization(1)			
Ingalls	**$ 74**	$ 73	$ 70
Newport News	**146**	133	124
Technical Solutions	**72**	40	32
Corporate	**1**	1	1
Total depreciation and amortization	**$ 293**	$ 247	$ 227

(1) Excluding amortization of debt issuance costs

9. ACCOUNTS RECEIVABLE AND CONTRACT ASSETS

Accounts Receivable

Accounts receivable include amounts related to any unconditional Company right to receive consideration. Substantially all amounts included in accounts receivable as of December 31, 2021, are expected to be collected in 2022. Because the Company's accounts receivable are primarily with the U.S. Government or with companies acting as a contractor to the U.S. Government, the Company does not have material exposure to accounts receivable credit risk.

Accounts receivable were comprised of the following:

($ in millions)	December 31 2021	2020
Due from U.S. Government	**$ 425**	$ 396
Due from other customers	**17**	3
Total accounts receivable	**442**	399
Allowances for doubtful accounts	**(9)**	(2)
Total accounts receivable, net	**$ 433**	$ 397

Contract Assets

Contract assets primarily relate to the Company's rights to consideration for work completed but not billed as of the reporting date when the right to payment is not subject solely to the passage of time. Contract assets include retention amounts, substantially all of which were under U.S. Government contracts.

Contract assets were comprised of the following:

	December 31	
($ in millions)	**2021**	**2020**
Due from U.S. Government	**$ 1,218**	$ 964
Due from other customers	**92**	85
Total contract assets	**$ 1,310**	$ 1,049

10. INVENTORIED COSTS, NET

Inventoried costs were comprised of the following:

	December 31	
($ in millions)	**2021**	**2020**
Production costs of contracts in process[(1)]	**$ 37**	$ 17
Raw material inventory	**124**	120
Total inventoried costs, net	**$ 161**	$ 137

[(1)] Includes amounts capitalized pursuant to applicable provisions of the FAR and CAS.

11. GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill

HII performs impairment tests for goodwill as of November 30 of each year and between annual impairment tests if an event occurs or circumstances change that would more likely than not reduce the fair values of the Company's reporting units below their carrying values. Reporting units are aligned with the Company's businesses. The Company's testing approach utilizes a combination of discounted cash flow analysis and comparative market multiples to determine the fair values of its businesses for comparison to their corresponding book values.

In connection with the Company's annual goodwill impairment test as of November 30, 2021, management tested goodwill for each of its three reporting units with goodwill balances. As a result of the Company's annual goodwill impairment analysis, it estimated that the fair value of the Government Services reporting unit within the Technical Solutions segment exceeded carrying value by less than 10%. The Company determined that the estimated fair values of its remaining reporting units exceeded by more than 10% their corresponding carrying values as of November 30, 2021.

As a result of slower than expected growth in operating margin, a revised future outlook for the business, and less favorable market conditions, the Company concluded the fair value of its oil and gas reporting unit was less than its carrying value as of November 30, 2019. The Company recorded the resulting goodwill impairment charge of $29 million at the oil and gas reporting unit in its Technical Solutions segment in the fourth quarter of 2019.

Accumulated goodwill impairment losses as of each of December 31, 2021 and 2020, were $2,906 million. The accumulated goodwill impairment losses for Ingalls as of each of December 31, 2021 and 2020, were $1,568 million. The accumulated goodwill impairment losses for Newport News as of each of December 31, 2021 and 2020, were $1,187 million. The accumulated goodwill impairment losses for the Technical Solutions segment as of each of December 31, 2021 and 2020, were $151 million.

For the year ended December 31, 2021, the Company recorded $1,024 million of goodwill related to its acquisition of Alion. For the year ended December 31, 2020, the Company recorded $350 million of goodwill related to its acquisitions of Hydroid and SIS. For the year ended December 31, 2021, the Company recorded goodwill adjustments of $13 million relating to the acquisition of SIS, primarily related to allocations to other intangible assets. For the year ended December 31, 2020, the Company recorded goodwill adjustments of $71 million relating to the acquisition of Hydroid, primarily related to allocations to other intangible assets. For the year ended December 31, 2020, the Company allocated $35 million of goodwill at its Technical Solutions segment to an asset group that was classified as held for sale.

For the years ended December 31, 2021 and 2020, the carrying amounts of goodwill changed as follows:

($ in millions)	Ingalls	Newport News	Technical Solutions	Total
Balance as of December 31, 2019	$ 175	$ 721	$ 477	$ 1,373
Acquisitions	—	—	350	350
Adjustments	—	—	(106)	(106)
Balance as of December 31, 2020	175	721	721	1,617
Acquisitions	**—**	**—**	**1,024**	**1,024**
Adjustments	**—**	**—**	**(13)**	**(13)**
Balance as of December 31, 2021	**$ 175**	**$ 721**	**$ 1,732**	**$ 2,628**

Other Intangible Assets

The Company performs tests for impairment of long-lived assets whenever events or circumstances suggest that long-lived assets may be impaired. In connection with the Alion purchase in 2021, the Company recorded $720 million of intangible assets pertaining to customer relationships and existing contract backlog, which is being amortized using the pattern of benefits method over a weighted-average life of 15 years. In connection with the SIS purchase in 2020, the Company recorded $13 million of intangible assets pertaining to technology and existing contract backlog, which is being amortized using the pattern of benefits method over a weighted-average life of ten years. In connection with the Hydroid purchase in 2020, the Company recorded $76 million of intangible assets pertaining to existing contract backlog, customer relationships, and technology, which is being amortized using the pattern of benefits method over a weighted-average life of nine years.

The Company's purchased intangible assets are being amortized on a straight-line basis or a method based on the pattern of benefits over their estimated useful lives. Net intangible assets consist primarily of amounts relating to customer relationships and existing contract backlog within Technical Solutions, as well as nuclear-powered aircraft carrier and submarine program intangible assets, with an aggregate weighted-average useful life of 29 years based on the long life cycle of the related programs. Aggregate amortization expense for the years ended December 31, 2021, 2020, and 2019, was $86 million, $56 million, and $47 million, respectively.

The Company expects amortization for purchased intangible assets of $141 million in 2022, $129 million in 2023, $108 million in 2024, $98 million in 2025, and $80 million in 2026.

12. INCOME TAXES

The Company's earnings are primarily domestic, and its effective tax rate on earnings from operations for the year ended December 31, 2021, was 12.5%, compared with 14.1% and 19.6% for 2020 and 2019, respectively.

For the year ended December 31, 2021, the Company's effective tax rate differed from the federal statutory tax rate primarily as a result of a tax loss associated with the sale of the Company's oil and gas business and estimated research and development tax credits for 2021 and prior years. For the year ended December 31, 2020, the Company's effective tax rate differed from the federal statutory tax rate primarily as a result of estimated research and development tax credits for prior years. For the year ended December 31, 2019, the Company’s effective tax rate differed from the federal statutory tax rate primarily as a result of estimated research and development tax credits for 2019 and prior years.

Non-current state income taxes include deferred state income taxes, which reflect the change in deferred state tax assets and liabilities, and the tax expense or benefit associated with changes in state unrecognized tax benefits in the relevant period. These amounts are recorded within operating income. Current period state income tax expense is charged to contract costs and included in cost of sales and service revenues in segment operating income.

Federal and foreign income tax expense for the years ended December 31, 2021, 2020, and 2019, consisted of the following:

	Year Ended December 31		
($ in millions)	**2021**	**2020**	**2019**
Income Taxes on Operations			
Federal and foreign income taxes currently payable (receivable)	**$ (12)**	$ 90	$ 50
Change in deferred federal and foreign income taxes	**90**	24	84
Total federal and foreign income taxes	**$ 78**	$ 114	$ 134

Earnings and income tax from foreign operations are not material for any periods presented.

Income tax expense differed from the amount based on the statutory federal income tax rate applied to earnings (loss) before income taxes due to the following:

	Year Ended December 31		
($ in millions)	**2021**	**2020**	**2019**
Income tax expense (benefit) on operations at statutory rate	**$ 131**	$ 170	$ 143
Tax benefit - sale of business	**(11)**	—	—
Stock compensation - net excess tax (benefits)/ shortfall	**—**	1	(3)
Unrecognized tax benefits	**30**	5	5
Research and development tax credit	**(78)**	(66)	(16)
Other, Net	**6**	4	5
Total federal and foreign income taxes	**$ 78**	$ 114	$ 134

Unrecognized Tax Benefits - Unrecognized tax benefits represent the gross value of the Company's uncertain tax positions that have not been reflected in the consolidated statements of operations. If the income tax benefits from federal tax positions are ultimately realized, such realization would affect the Company's income tax expense, while the realization of state tax benefits would be recorded in general and administrative expenses.

The changes in unrecognized tax benefits (exclusive of interest and penalties) for the years ended December 31, 2021, 2020, and 2019 are summarized in the following table:

	December 31		
($ in millions)	**2021**	**2020**	**2019**
Unrecognized tax benefits at beginning of the year	**$ 47**	$ 36	$ 25
Additions based on tax positions related to the current year	**7**	8	6
Additions based on tax positions related to prior years	**27**	17	5
Reductions based on tax positions related to prior years	**—**	(7)	—
Reductions based on settlement with taxing authorities	**—**	(7)	—
Net change in unrecognized tax benefits	**34**	11	11
Unrecognized tax benefits at end of the year	**$ 81**	$ 47	36

As of December 31, 2021 and 2020, the estimated amounts of the Company's uncertain tax positions, excluding interest and penalties, were liabilities of $81 million and $47 million, respectively. Assuming sustainment of these positions, as of December 31, 2021 and 2020, the reversal of $63 million and $34 million, respectively, of the amounts accrued would favorably affect the Company's effective federal income tax rate in future periods.

The Company recognizes interest and penalties related to unrecognized tax benefits as income tax expense. As a result of the unrecognized tax benefits noted above, income tax expense increased by $1 million in 2021 for interest and penalties, resulting in a liability of $3 million for interest and penalties as of December 31, 2021. In 2020, there was a net decrease in income tax expense of less than $1 million for interest and penalties, resulting in a liability of $2 million for interest and penalties as of December 31, 2020. The 2020 changes in interest expense related to a settlement with taxing authorities. In 2019, there was a net increase in income tax expense of $1 million for interest and penalties, resulting in a liability of $2 million for interest and penalties as of December 31, 2019.

The following table summarizes the tax years that are either currently under examination or remain open under the applicable statute of limitations and subject to examination by the major tax jurisdictions in which the Company operates:

Jurisdiction	Years		
United States - Federal[(1)]	2016	-	2020
Connecticut	2018	-	2020
Mississippi	2015	-	2020
Virginia[(2)]	2015	-	2020

(1) The 2016 tax year is closed except for the research and development tax credit, and the 2017 tax year is closed except for the manufacturing deduction and research and development tax credit.
(2) The 2016 and 2017 tax years have been closed in this jurisdiction.

Although the Company believes it has adequately provided for all unrecognized tax benefits, amounts asserted by tax authorities could be greater than the Company's accrued position. Accordingly, additional provisions for federal and state income tax related matters could be recorded in the future as revised estimates are made or the underlying matters are effectively settled or otherwise resolved. Conversely, the Company could settle positions with tax authorities for amounts lower than have been accrued. No material change to the Company's unrecognized tax benefits is reasonably expected in the next 12 months.

During 2013 the Company entered into the pre-Compliance Assurance Process with the IRS for years 2011 and 2012. Tax years 2014 and 2015 have been closed with the IRS. The Company is part of the IRS Compliance Assurance Process program for the 2014 through 2021 tax years. Open tax years related to state jurisdictions remain subject to examination.

Deferred Income Taxes - Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and for income tax purposes. As described above, deferred tax assets and liabilities are calculated as of the balance sheet date using current tax laws and rates expected to be in effect when the deferred tax items reverse in future periods. Net deferred tax liabilities are classified as long-term deferred tax liabilities in the consolidated statements of financial position.

The tax effects of significant temporary differences and carry-forwards that gave rise to year-end deferred tax balances, as presented in the consolidated statements of financial position, were as follows:

	December 31	
($ in millions)	**2021**	**2020**
Deferred Tax Assets		
Retirement benefits	**$ 170**	$ 389
Workers' compensation	**174**	167
Operating lease liabilities	**63**	52
Reserves not currently deductible for tax purposes	**75**	90
Stock compensation	**7**	6
Net operating losses, tax credit and other carry-forwards	**55**	26
Other	**6**	9
Gross deferred tax assets	**550**	739
Less valuation allowance	**22**	22
Net deferred tax assets	**528**	717
Deferred Tax Liabilities		
Depreciation and amortization	**423**	364
Contract accounting differences	**81**	77
Purchased intangibles	**275**	92
Operating lease assets	**62**	51
Gross deferred tax liabilities	**841**	584
Total net deferred tax assets (liabilities)	**$ (313)**	$ 133

As of December 31, 2021, the Company had state income tax credit carry-forwards of approximately $20 million, which expire from 2022 through 2025. A deferred tax asset of approximately $16 million (net of federal benefit) has been established related to these state income tax credit carry-forwards, with a valuation allowance of $10 million against such deferred tax asset as of December 31, 2021. The Company also had a federal net operating loss carry-forward of $27 million from the Alion acquisition, of which $19 million expires in 2034, $5 million expires in 2035, and $3 million expires in 2036. State net operating loss carry-forwards are individually and cumulatively immaterial to the Company's deferred tax balances.

13. DEBT

Long-term debt consisted of the following:

	December 31	
($ in millions)	**2021**	**2020**
Senior notes due December 1, 2027, 3.483%	**$ 600**	$ 600
Senior notes due May 1, 2025, 3.844%	**500**	500
Senior notes due May 1, 2030, 4.200%	**500**	500
Senior notes due August 16, 2023, 0.670%	**400**	—
Senior notes due August 16, 2028, 2.043%	**600**	—
Term loan due August 19, 2024	**625**	—
Mississippi economic development revenue bonds due May 1, 2024, 7.81%	**84**	84
Gulf opportunity zone industrial development revenue bonds due December 1, 2028, 4.55%	**21**	21
Less unamortized debt issuance costs	**(32)**	(19)
Total long-term debt	**$ 3,298**	$ 1,686

Credit Facility - In August 2021, the Company amended and restated its existing $1.25 billion credit facility, increasing the capacity thereunder to $1.5 billion and extending the maturity date to five years from signing (the "Revolving Credit Facility"). The Revolving Credit Facility includes a letter of credit subfacility of $300 million. The

Revolving Credit Facility has a variable interest rate on outstanding borrowings based on LIBOR, plus a spread based upon the Company's credit rating, which may vary between 1.125% and 2.000%. As of December 31, 2021, the interest rate spread on drawn amounts was 1.375% based on the Company's current credit rating. The revolving credit facility also has a commitment fee rate on the unutilized balance based on the Company’s credit rating. The commitment fee rate as of December 31, 2021 was 0.200% and may vary between 0.125% and 0.300%.

Term Loan - In August 2021, the Company entered into a $650 million 3-year delayed draw term loan (the “Term Loan”) to finance a portion of the purchase price for Alion. The Term Loan must be repaid prior to or at maturity, which is 36 months from the date of the initial draw. The Term Loan has a variable interest rate on outstanding borrowings based on LIBOR, plus a spread based upon the Company's credit rating, which may vary between 1.125% and 2.000%. As of December 31, 2021, the annual interest rate spread was 1.375% based on the Company's current credit rating, and the outstanding balance was $625 million.

As of December 31, 2021, the Company had $15 million in issued but undrawn letters of credit and $1,485 million unutilized under the Revolving Credit Facility. The Company had unamortized debt issuance costs associated with its credit facilities of $13 million and $5 million as of December 31, 2021 and 2020, respectively.

The Revolving Credit Facility and the Term Loan contain customary affirmative and negative covenants, as well as a financial covenant based on a maximum total leverage ratio. Each of the Company's existing and future material wholly owned domestic subsidiaries, except those that are specifically designated as unrestricted subsidiaries, are and will be guarantors under the Revolving Credit Facility and the Term Loan. See Note 19: Subsidiary Guarantors.

In 2019, the Company established an unsecured commercial paper note program, under which the Company may issue up to $1 billion of unsecured commercial paper notes. As of December 31, 2021, the Company had no outstanding debt under the commercial paper program.

Senior Notes - In August 2021, the Company issued $400 million aggregate principal amount of callable unregistered 0.670% senior notes due 2023 and $600 million aggregate principal amount of unregistered 2.043% senior notes due 2028, both with registration rights. The net proceeds were used to fund a portion of the purchase price for the acquisition of Alion. Interest on these senior notes is payable semiannually.

In 2020, the Company issued $500 million aggregate principal amount of 3.844% senior notes due 2025 and $500 million aggregate principal amount of 4.200% senior notes due 2030. The Company also has outstanding $600 million aggregate principal amount of 3.483% senior notes due December 2027. The net proceeds of these senior notes were intended to be used for general corporate purposes, including debt repayments and working capital. Interest on these senior notes is payable semiannually.

In 2020, the Company redeemed $600 million aggregate principal amount of 5.000% senior notes due 2025 in accordance with the terms of the indenture governing the notes.

The terms of the Company's senior notes limit the Company’s ability and the ability of certain of its subsidiaries to create liens, enter into sale and leaseback transactions, sell assets, and effect consolidations or mergers. The Company had unamortized debt issuance costs associated with the senior notes of $19 million and $14 million as of December 31, 2021 and 2020, respectively.

Early Extinguishment of Debt - Details of the loss on early extinguishment of debt related to the Company's redemption of senior notes, which was included in interest expense, were as follows:

($ in millions)		Year Ended December 31, 2020
Redemption and tender premiums and fees	$	15
Write-off of unamortized debt issuance costs		6
Total loss on early extinguishment of debt	$	21

Mississippi Economic Development Revenue Bonds - As of each of December 31, 2021 and 2020, the Company had $84 million outstanding under Industrial Revenue Bonds issued by the Mississippi Business Finance Corporation. These bonds accrue interest at a fixed rate of 7.81% per annum (payable semi-annually) and mature in 2024.

Gulf Opportunity Zone Industrial Development Revenue Bonds - As of each of December 31, 2021 and 2020, the Company had $21 million outstanding under Gulf Opportunity Zone Industrial Development Revenue Bonds issued by the Mississippi Business Finance Corporation. These bonds accrue interest at a fixed rate of 4.55% per annum (payable semi-annually) and mature in 2028.

The Company's debt arrangements contain customary affirmative and negative covenants. The Company was in compliance with all debt covenants during the year ended December 31, 2021.

The estimated fair values of the Company's total long-term debt as of December 31, 2021, and December 31, 2020, were $3,449 million and $1,943 million, respectively. The fair values of the Company's long-term debt were calculated based on recent trades of the Company's debt instruments in inactive markets, which fall within Level 2 under the fair value hierarchy.

As of December 31, 2021, the aggregate amounts of principal payments due on long-term debt within the next five years consisted of $400 million due in 2023, $709 million due in 2024, and $500 million due in 2025.

14. INVESTIGATIONS, CLAIMS, AND LITIGATION

The Company is involved in legal proceedings before various courts and administrative agencies, and is periodically subject to government examinations, inquiries and investigations. Pursuant to FASB Accounting Standards Codification 450 *Contingencies,* the Company has accrued for losses associated with investigations, claims, and litigation when, and to the extent that, loss amounts related to the investigations, claims, and litigation are probable and can be reasonably estimated. The actual losses that might be incurred to resolve such investigations, claims, and litigation may be higher or lower than the amounts accrued. For matters where a material loss is probable or reasonably possible and the amount of loss cannot be reasonably estimated, but the Company is able to reasonably estimate a range of possible losses, the Company will disclose such estimated range in these notes. This estimated range is based on information currently available to the Company and involves elements of judgment and significant uncertainties. Any estimated range of possible loss does not represent the Company's maximum possible loss exposure. For matters as to which the Company is not able to reasonably estimate a possible loss or range of loss, the Company will indicate the reasons why it is unable to estimate the possible loss or range of loss. For matters not specifically described in these notes, the Company does not believe, based on information currently available to it, that it is reasonably possible that the liabilities, if any, arising from such investigations, claims, and litigation will have a material effect on its consolidated financial position, results of operations, or cash flows. The Company has, in certain cases, provided disclosure regarding certain matters for which the Company believes at this time that the likelihood of material loss is remote.

False Claims Act Complaint - In 2016, the Company was made aware that it is a defendant in a *qui tam* False Claims Act lawsuit pending in the U.S. District Court for the Middle District of Florida related to the Company’s purchases of allegedly non-conforming parts from a supplier for use in connection with U.S. Government contracts. In August 2019, the Department of Justice (“DoJ”) declined to intervene in the lawsuit, and the lawsuit was unsealed. The court dismissed the complaint in September 2021, and the plaintiff has appealed the dismissal to the United States Court of Appeals for the 11th Circuit.

Insurance Claims - In September 2020, the Company filed a complaint in the Superior Court, State of Vermont, Franklin Unit, seeking a judgment declaring that the Company's business interruption and other losses associated with COVID-19 are covered by the Company's property insurance program. A total of 32 reinsurers are named as defendants in the complaint. The Company also has initiated arbitration proceedings against six other reinsurers seeking similar relief. Prior to filing the complaint and initiating the arbitration proceedings, the Company provided a notice of loss to the reinsurers, but, to date, none of the reinsurers have acknowledged coverage. The full extent of the Company's losses resulting from COVID-19 have not yet been determined. In July 2021, the Vermont court granted the reinsurers’ motion for judgment on the pleadings, finding that, because the Company continued to operate through the pandemic, the Company’s reduction of business not accompanied by a complete loss of use fell short of the required “direct physical loss or damage to property.” The Company has appealed the decision to the Vermont Supreme Court. Although the Company still believes its position is well-founded, no assurances can be provided regarding the ultimate resolution of this matter.

In September 2021, the Company filed a complaint in the Superior Court of Delaware, seeking a judgment against certain insurers for breach of contract and breach of the implied covenant of good faith and fair dealing under three representations and warranties insurance policies purchased in connection with the Company’s acquisition of Hydroid. The policies insure the Company against losses relating to the seller’s breach of certain representations and warranties in the Hydroid acquisition agreement. The coverage limit under the insurance policies is $70 million, and the Company believes it has incurred losses equal to at least that amount as a result of breaches of the acquisition agreement. No assurances can be provided regarding the ultimate resolution of this matter.

U.S. Government Investigations and Claims - Departments and agencies of the U.S. Government have the authority to investigate various transactions and operations of the Company, and the results of such investigations may lead to administrative, civil, or criminal proceedings, the ultimate outcome of which could be fines, penalties, repayments or compensatory, treble, or other damages. U.S. Government regulations provide that certain findings against a contractor may also lead to suspension or debarment from future U.S. Government contracts or the loss of export privileges. Any suspension or debarment would have a material effect on the Company because of its reliance on government contracts.

Asbestos Related Claims - HII and its predecessors-in-interest are defendants in a longstanding series of cases that have been and continue to be filed in various jurisdictions around the country, wherein former and current employees and various third parties allege exposure to asbestos containing materials while on or associated with HII premises or while working on vessels constructed or repaired by HII. The cases allege various injuries, including those associated with pleural plaque disease, asbestosis, cancer, mesothelioma, and other alleged asbestos related conditions. In some cases, several of HII's former executive officers are also named as defendants. In some instances, partial or full insurance coverage is available to the Company for its liability and that of its former executive officers. The costs to resolve cases during the years ended December 31, 2021, 2020, and 2019 were immaterial individually and in the aggregate. The Company’s estimate of asbestos-related liabilities is subject to uncertainty because liabilities are influenced by numerous variables that are inherently difficult to predict. Key variables include the number and type of new claims, the litigation process from jurisdiction to jurisdiction and from case to case, reforms made by state and federal courts, and the passage of state or federal tort reform legislation. Although the Company believes the ultimate resolution of current cases will not have a material effect on its consolidated financial position, results of operations, or cash flows, it cannot predict what new or revised claims or litigation might be asserted or what information might come to light and can, therefore, give no assurances regarding the ultimate outcome of asbestos related litigation.

Other Litigation - The Company and its predecessor-in-interest have been in litigation with the Bolivarian Republic of Venezuela (the "Republic") since 2002 over a contract for the repair, refurbishment, and modernization at Ingalls of two foreign-built frigates. In March 2014, the Company filed an arbitral statement of claim asserting breaches of the contract. The Republic denied the Company’s allegations and asserted counterclaims. In February 2018, the arbitral tribunal awarded the Company approximately $151 million on its claims and awarded the Republic approximately $22 million on its counterclaims. The Company is seeking to enforce and execute upon the award in multiple jurisdictions. No assurances can be provided regarding the ultimate resolution of this matter.

The Company is party to various other claims, legal proceedings, and investigations that arise in the ordinary course of business, including U.S. Government investigations that could result in administrative, civil, or criminal proceedings involving the Company. The Company is a contractor with the U.S. Government, and such proceedings can therefore include False Claims Act allegations against the Company. Although the Company believes that the resolution of these other claims, legal proceedings, and investigations will not have a material effect on its consolidated financial position, results of operations, or cash flows, the Company cannot predict what new or revised claims or litigation might be asserted or what information might come to light and can, therefore, give no assurances regarding the ultimate outcome of these matters.

15. LEASES

The Company leases certain land, warehouses, office space, and production, office, and technology equipment, among other items. Most equipment is leased on a monthly basis. Many land, warehouse, and office space leases include renewal terms that can extend the lease term. The exercise of lease renewal options is at our sole discretion. The depreciable life of assets and leasehold improvements is generally limited by the expected lease term. The Company's lease agreements do not generally contain material residual value guarantees, material restrictive covenants, or purchase options. The Company's lease portfolio consists primarily of operating leases.

Lease costs and related information were as follows:

($ in millions)	Year Ended December 31		
	2021	2020	2019
Operating lease costs	**$ 53**	$ 55	$ 47
Short-term operating lease costs	**$ 43**	$ 38	$ 44
Variable operating lease costs	**$ 4**	$ 4	$ 5
Operating cash flows from operating leases	**$ (52)**	$ (54)	$ (46)
Right-of-use assets obtained in exchange for new operating lease liabilities	**$ 97**	$ 61	$ 38
Weighted-average remaining lease term (years) - operating leases	**8 years**	10 years	10 years
Weighted-average discount rate - operating leases	**3.6 %**	4.1 %	4.2 %

The undiscounted future non-cancellable lease payments under the Company's operating leases as of December 31, 2021, were as follows:

($ in millions)	December 31, 2021
2022	**$ 59**
2023	**48**
2024	**41**
2025	**33**
2026	**24**
Thereafter	**90**
Total lease payments	**295**
Less: imputed interest	**49**
Present value of lease liabilities	**$ 246**

Lease liabilities included in the Company's consolidated statements of financial position as of December 31, 2021 and 2020, were as follows:

($ in millions)	December 31	
	2021	2020
Short-term operating lease liabilities	**$ 52**	$ 37
Lease liabilities included in liabilities held for sale	**—**	27
Long-term operating lease liabilities	**194**	157
Total operating lease liabilities	**$ 246**	$ 221

16. COMMITMENTS AND CONTINGENCIES

Contract Performance Contingencies - Contract profit margins may include estimates of revenues for matters on which the customer and the Company have not reached agreement, such as settlements in the process of negotiation, contract changes, claims, and requests for equitable adjustment for unanticipated contract costs. These estimates are based upon management's best assessment of the underlying causal events and circumstances and recognized to the extent of expected recovery based upon contractual entitlements and the probability of successful negotiation with the customer. As of December 31, 2021, amounts recognized in connection with claims and requests for equitable adjustment were not material individually or in the aggregate.

Guarantees of Performance Obligations - From time to time in the ordinary course of business, HII enters into joint ventures, teaming agreements, and other business arrangements in connection with the Company's products and services or to pursue strategic objectives. The Company attempts to limit its exposure under these arrangements to its investment or the extent of obligations under the applicable contract. In some cases, however, HII may be required to guarantee performance of the arrangement's obligations and, in such cases, generally obtains cross-indemnification from the other members of the arrangement.

In the ordinary course of business, the Company may guarantee obligations of its subsidiaries under certain contracts. Generally, the Company is liable under such guarantees only if its subsidiary is unable to perform its obligations. Historically, the Company has not incurred any substantial liabilities resulting from these guarantees. As of December 31, 2021, the Company was not aware of any existing event of default that would require it to satisfy any of these guarantees.

Environmental Matters - The estimated cost to complete environmental remediation has been accrued when it is probable that the Company will incur such costs in the future to address environmental conditions at currently or formerly owned or leased operating facilities, or at sites where it has been named a Potentially Responsible Party ("PRP") by the Environmental Protection Agency or similarly designated by another environmental agency, and the related costs can be estimated by management. These accruals do not include any litigation costs related to environmental matters, nor do they include amounts recorded as asset retirement obligations. To assess the potential impact on the Company's consolidated financial statements, management estimates the range of reasonably possible remediation costs that could be incurred by the Company, taking into account currently available facts on each site, as well as the current state of technology and prior experience remediating contaminated sites. These estimates are reviewed periodically and adjusted to reflect changes in facts and technical and legal circumstances. Management estimates that as of December 31, 2021, the probable estimable future cost for environmental remediation was immaterial. Factors that could result in changes to the Company's estimates include: modification of planned remedial actions, increases or decreases in the estimated time required to remediate, changes to the determination of legally responsible parties, discovery of more extensive contamination than anticipated, changes in laws and regulations affecting remediation requirements, and improvements in remediation technology. Should other PRPs not pay their allocable share of remediation costs, the Company may incur costs exceeding those already estimated and accrued. In addition, there are certain potential remediation sites where the costs of remediation cannot be reasonably estimated. Although management cannot predict whether new information gained as remediation progresses or the Company incurs additional remediation obligations will materially affect the estimated liability accrued, management does not believe that future remediation expenditures will have a material effect on the Company's consolidated financial position, results of operations, or cash flows.

Financial Arrangements - In the ordinary course of business, HII uses letters of credit issued by commercial banks to support certain leases, insurance policies, and contractual performance obligations, as well as surety bonds issued by insurance companies principally to support the Company's self-insured workers' compensation plans. As of December 31, 2021, the Company had $15 million in issued but undrawn letters of credit, as indicated in Note 13: Debt, and $276 million of surety bonds outstanding.

U.S. Government Claims - From time to time, the U.S. Government communicates to the Company potential claims, disallowed costs, and penalties concerning prior costs incurred by the Company with which the U.S. Government disagrees. When such preliminary findings are presented, the Company and U.S. Government representatives engage in discussions, from which the Company evaluates the merits of the claims and assesses the amounts being questioned. Although the Company believes that the resolution of any of these matters will not have a material effect on its consolidated financial position, results of operations, or cash flows, it cannot predict the ultimate outcome of these matters.

Other Matters - In 1985, the Company and the U.S. Navy entered into a settlement agreement to resolve disputes associated with billing and allocating to contracts the cost of workers' compensation self-insurance, among other matters. In 2016, the Defense Contract Audit Agency ("DCAA") opined that the 1985 settlement agreement did not comply with certain CAS standards and referred the matter to a U.S. Navy Contracting Officer. In December 2020, the Contracting Officer issued a determination that the 1985 settlement agreement did not comply with CAS and directed the Company to develop and implement a different process to bill and allocate the cost of workers' compensation self-insurance. Under the 1985 settlement agreement, the Company has not recognized as allowable cumulative billable costs of approximately $120 million resulting from the difference between CAS and U.S. GAAP Financial Accounting Standards ("FAS") treatment of workers' compensation cost. Under the 1985 settlement agreement, these costs would be recognized as allowable billable costs in future periods. Though the Company believes the 1985 settlement agreement is CAS-compliant and cannot be unilaterally terminated, the Company will seek to negotiate a resolution of the matter with the Contracting Officer. If a resolution results in the use of a different treatment or billing methodology that does not provide for the Company to recognize as allowable the CAS to FAS difference, the resolution could have a material effect on the Company's consolidated financial position, results of operations, or cash flows, including an inability to recover any or all of the $120 million of costs not yet billed to the customer.

In January 2022, the Navy Contracting Officer issued a written determination that the Ingalls Shipbuilding Material Management and Accounting System has three significant deficiencies, resulting in a 5% withhold of payments on certain invoices issued under one contract. Ingalls Shipbuilding will submit a corrective action plan, and the withhold will be reduced to 2% if the Contracting Officer determines the corrective action plan has been implemented and is effective. The withhold will terminate and withheld funds returned to the Company when the Contracting Officer determines that the significant deficiencies have been corrected. Although the Company believes the ultimate resolution of this matter will not have a material effect on its consolidated financial position, results of operations, or cash flows, it cannot predict or give assurances regarding the ultimate outcome of this matter.

Collective Bargaining Agreements - Of the Company's approximately 44,000 employees, approximately 45% are covered by a total of nine collective bargaining agreements and one site stabilization agreement. Newport News has two collective bargaining agreements covering represented employees, which expire in December 2022 and April 2024, and one that expired in November 2021, which covers approximately 50% of Newport News employees. Newport News craft workers employed at the Kesselring Site near Saratoga Springs, New York are represented under an indefinite Department of Energy ("DoE") site agreement. Ingalls has five collective bargaining agreements covering represented employees, all of which expire in March 2026. Approximately 15 Technical Solutions employees in Klamath Falls, Oregon are covered by one collective bargaining agreement that expires in June 2025.

The Company reached a tentative agreement with representatives of United Steelworkers ("USW") Local 8888 (Newport News) members on a new labor agreement in November 2021, but the members of the bargaining unit declined to ratify the contract. The Newport News and USW negotiation teams continued negotiations and reached a tentative agreement on another labor agreement in January 2022. The Company expects the members of the bargaining unit to vote on the new agreement in the near future. The USW Local 8888 members are continuing to work under the terms and conditions of the expired collective bargaining agreement, but the members may call for a strike, or the Company may declare a lock-out, upon 48 hours notice. In the event the Company and USW Local 8888 members fail to reach a collective bargaining agreement and the union calls for a strike or the Company declares a lock-out, the Company's consolidated results of operations could be negatively impacted on a material basis.

Collective bargaining agreements generally expire after three to five years and are subject to renegotiation at that time. The Company believes its relationship with its employees is satisfactory.

Purchase Obligations - Periodically the Company enters into agreements to purchase goods or services that are enforceable and legally binding on the Company and specify all significant terms, including: fixed or minimum quantities to be purchased; fixed, minimum, or variable price provisions; and the approximate timing of the transaction. These obligations are primarily comprised of open purchase order commitments to vendors and subcontractors pertaining to funded contracts.

17. EMPLOYEE PENSION AND OTHER POSTRETIREMENT BENEFITS

The Company provides eligible employees defined benefit pension plans, defined contribution benefit plans, and other postretirement benefit plans. Non-collectively bargained defined benefit pension benefits accruing under the traditional years of service and compensation formula were amended in 2009 to freeze future service accruals and were replaced with a cash balance benefit for all current non-collectively bargained employees. Except for the major collectively bargained plan at Ingalls, the Company's qualified defined benefit pension plans are frozen to new entrants. The Company's policy is to fund its qualified defined benefit pension plans at least to the minimum amounts required under U.S. Government regulations.

Plan obligations are measured based on the present value of projected future benefit payments to participants for services rendered to date. The measurement of projected future benefits is dependent on the terms of each individual plan, demographics, and valuation assumptions. No assumption is made regarding any potential changes to the benefit provisions beyond those to which the Company is currently committed, for example under existing collective bargaining agreements.

The Company also sponsors 401(k) defined contribution pension plans in which most employees are eligible to participate. Company contributions for most defined contribution pension plans are based on the matching of employee contributions up to 4% of eligible compensation. Certain hourly employees are covered under a target benefit plan. In addition to the 401(k) defined contribution pension benefit formula, non-collectively bargained employees hired after June 30, 2008, and certain collectively bargained employees hired after July 10, 2017, are eligible to participate in a defined contribution benefit program in lieu of a defined benefit pension plan. The Company's contributions to the qualified defined contribution pension plans for the years ended December 31, 2021, 2020, and 2019, were $140 million, $130 million, and $120 million, respectively.

The Company also sponsors defined benefit and defined contribution pension plans to provide benefits in excess of the tax-qualified limits. The liabilities related to these plans as of December 31, 2021, were $240 million and $45 million, respectively, and as of December 31, 2020, were $229 million and $38 million, respectively. Assets, primarily in the form of Level 1 marketable securities held in grantor trusts, are intended to fund certain of these obligations. The trusts' fair values supporting these liabilities as of December 31, 2021 and 2020, were $220 million and $182 million, respectively, of which $173 million and $142 million, respectively, were related to the non-qualified defined benefit pension plans.

The Company provides contributory postretirement health care and life insurance benefits to a dominantly closed group of eligible employees, retirees, and their qualifying dependents. Covered employees achieve eligibility to participate in these contributory plans upon retirement from active service if they meet specified age, years of service, and grandfathered requirements. Benefits are not guaranteed, and the Company reserves the right to amend or terminate coverage at any time. The Company's contributions for retiree health care benefits are subject to caps, which limit Company contributions when spending thresholds are reached.

The measurement date for all of the Company's retirement related plans is December 31. The costs of the Company's defined benefit pension plans and other postretirement benefit plans for the years ended December 31, 2021, 2020, and 2019, were as follows:

	Pension Benefits Year Ended December 31			**Other Benefits Year Ended December 31**		
($ in millions)	**2021**	**2020**	**2019**	**2021**	**2020**	**2019**
Components of Net Periodic Benefit Cost						
Service cost	**$ 199**	$ 180	$ 144	**$ 10**	$ 9	$ 7
Interest cost	**240**	258	277	**14**	17	20
Expected return on plan assets	**(553)**	(486)	(407)	**—**	—	—
Amortization of prior service cost (credit)	**15**	12	18	**(4)**	(22)	(22)
Amortization of net actuarial loss (gain)	**110**	109	113	**(3)**	(7)	(11)
Net periodic benefit cost	**$ 11**	$ 73	$ 145	**$ 17**	$ (3)	$ (6)

The funded status of these plans as of December 31, 2021 and 2020, was as follows:

($ in millions)	Pension Benefits December 31 2021	Pension Benefits December 31 2020	Other Benefits December 31 2021	Other Benefits December 31 2020
Change in Benefit Obligation				
Benefit obligation at beginning of year	**$ 8,706**	$ 7,742	**$ 534**	$ 510
Service cost	**199**	180	**10**	9
Interest cost	**240**	258	**14**	17
Plan participants' contributions	**7**	5	**11**	11
Plan amendments	**—**	26	**(14)**	—
Actuarial loss (gain)	**(292)**	764	**(2)**	31
Benefits paid	**(291)**	(269)	**(48)**	(44)
Benefit obligation at end of year	**8,569**	8,706	**505**	534
Change in Plan Assets				
Fair value of plan assets at beginning of year	**7,710**	6,733	**—**	—
Actual return on plan assets	**965**	1,028	**—**	—
Employer contributions	**69**	213	**37**	33
Plan participants' contributions	**7**	5	**11**	11
Benefits paid	**(291)**	(269)	**(48)**	(44)
Fair value of plan assets at end of year	**8,460**	7,710	**—**	—
Funded status	**$ (109)**	$ (996)	**$ (505)**	$ (534)
Amounts Recognized in the Consolidated Statements of Financial Position:				
Pension plan assets	**$ 281**	$ —	**$ —**	$ —
Current liability [1]	**(39)**	(36)	**(137)**	(133)
Non-current liability [2]	**(351)**	(960)	**(368)**	(401)
Accumulated other comprehensive loss (income) (pre-tax) related to:				
Prior service costs (credits)	**80**	95	**(20)**	(10)
Net actuarial loss (gain)	**1,197**	2,010	**(3)**	(3)

(1) Included in other current liabilities and current portion of postretirement plan liabilities, respectively.
(2) Included in pension plan liabilities and other postretirement plan liabilities, respectively.

The Projected Benefit Obligation ("PBO"), Accumulated Benefit Obligation ("ABO"), and asset values for the Company's qualified pension plans were $8,330 million, $7,898 million, and $8,460 million, respectively, as of December 31, 2021, and $8,478 million, $8,004 million, and $7,710 million, respectively, as of December 31, 2020. The PBO represents the present value of pension benefits earned through the end of the year, with allowance for future salary increases. The ABO is similar to the PBO, but does not provide for future salary increases.

The PBO and fair value of plan assets for all qualified and non-qualified pension plans with PBOs in excess of plan assets were $1,151 million and $761 million, respectively, as of December 31, 2021, and $8,706 million and $7,710 million, respectively, as of December 31, 2020.

There were no qualified or non–qualified pension plans with ABOs in excess of plan assets as of December 31, 2021. The ABO and fair value of plan assets for all qualified and non-qualified pension plans with ABOs in excess of plan assets were $6,590 million and $6,072 million, respectively, as of December 31, 2020. The ABO for all pension plans was $8,120 million and $8,221 million as of December 31, 2021 and 2020, respectively.

The changes in amounts recorded in accumulated other comprehensive income (loss) were as follows:

	Pension Benefits			Other Benefits		
	Year Ended December 31			Year Ended December 31		
($ in millions)	2021	2020	2019	2021	2020	2019
Prior service cost (credit)	**$ —**	$ (26)	$ —	**$ 14**	$ —	$ —
Amortization of prior service cost (credit)	**15**	12	18	**(4)**	(22)	(22)
Net actuarial loss (gain)	**704**	(222)	(230)	**2**	(31)	(35)
Amortization of net actuarial loss (gain)	**110**	109	113	**(3)**	(7)	(11)
Other	**(1)**	—	—	**1**	—	—
Total changes in accumulated other comprehensive income (loss)	**$ 828**	$ (127)	$ (99)	**$ 10**	$ (60)	$ (68)

The weighted average assumptions used to determine the net periodic benefit costs for each year ended December 31 were as follows:

	Pension Benefits		
	2021	2020	2019
Discount rate	**2.80 %**	3.39 %	4.34 %
Expected long-term rate on plan assets	**7.25 %**	7.25 %	7.25 %
Rate of compensation increase	**3.62 %**	3.61 %	3.67 %

	Other Benefits		
	2021	2020	2019
Discount rate	**2.75 %**	3.35 %	4.33 %
Initial health care cost trend rate assumed for next year	**5.50 %**	5.50 %	5.50 %
Gradually declining to a rate of	**4.50 %**	4.50 %	4.50 %
Year in which the rate reaches the ultimate rate	**2026**	2025	2024

The weighted average assumptions used to determine the benefit obligations as of December 31 of each year were as follows:

	Pension Benefits		Other Benefits	
	December 31		December 31	
	2021	2020	2021	2020
Discount rate	**3.00 %**	2.80 %	**2.94 %**	2.75 %
Weighted average interest crediting rate	**2.66 %**	2.74 %		
Rate of compensation increase	**3.58 %**	3.62 %		
Initial health care cost trend rate assumed for next year			**5.50 %**	5.50 %
Gradually declining to a rate of			**4.50 %**	4.50 %
Year in which the rate reaches the ultimate rate			**2027**	2026

Health Care Cost Trend Rate - The health care cost trend rate represents the annual rates of change in the cost of health care benefits based on estimates of health care inflation, changes in health care utilization or delivery patterns, technological advances, government mandated benefits, and other considerations. Using a combination of market expectations and economic projections as of December 31, 2021, the Company selected an expected initial health care cost trend rate of 5.50% and an ultimate health care cost trend rate of 4.50% to be reached in 2027. As of December 31, 2020, the Company assumed an expected initial health care cost trend rate of 5.50% and an ultimate health care cost trend rate of 4.50% to be reached in 2026.

The Employee Retirement Income Security Act of 1974 ("ERISA"), including amendments under pension relief, defines the minimum amount that must be contributed to the Company's qualified defined benefit pension plans. In determining whether to make discretionary contributions to these plans above the minimum required amounts, the Company considers various factors, including attainment of the funded percentage needed to avoid benefit restrictions and other adverse consequences, minimum CAS funding requirements, and the current and anticipated future funding levels of each plan. The Company's contributions to its qualified defined benefit pension plans are affected by a number of factors, including published IRS interest rates, the actual return on plan assets, actuarial assumptions, and demographic experience. These factors and the Company's resulting contributions also impact the funded status of each plan. The Company made the following contributions to its defined benefit pension plans and other postretirement benefit plans for the years ended December 31, 2021, 2020, and 2019:

	Year Ended December 31		
($ in millions)	**2021**	**2020**	**2019**
Pension plans			
Discretionary			
Qualified	**$ 60**	$ 205	$ 21
Non-qualified	**9**	8	7
Other benefit plans	**37**	33	31
Total contributions	**$ 106**	$ 246	$ 59

For the year ending December 31, 2022, the Company expects its cash contributions to its qualified defined benefit pension plans to be less than $1 million, all of which will be discretionary. For the year ending December 31, 2022, the Company expects its cash contributions to its other postretirement benefit plans to be approximately $34 million.

The following table presents estimated future benefit payments, using the same assumptions used in determining the Company's benefit obligations, as of December 31, 2021. Benefit payments depend on future employment and compensation levels, years of service, and mortality. Changes in any of these factors could significantly affect these estimated amounts.

($ in millions)	**Pension Benefits**	**Other Benefit Payments**
2022	$ 318	$ 34
2023	335	36
2024	355	37
2025	376	38
2026	395	37
Years 2027 to 2031	$ 2,194	$ 160

Pension Plan Assets

Pension assets include public equities, government and corporate bonds, cash and cash equivalents, private real estate funds, private partnerships, hedge funds, and other assets. Plan assets are held in a master trust and overseen by the Company's Investment Committee. All assets are externally managed through a combination of active and passive strategies. Managers may only invest in the asset classes for which they have been appointed.

The Investment Committee is responsible for setting the policy that provides the framework for management of the plan assets. The Investment Committee set the minimum and maximum permitted values for each asset class in the Company's pension plan master trust for the year ended December 31, 2021, as follows:

	Range
U.S. and international equities	35 - 60%
Fixed income securities	20 - 45%
Alternative investments	10 - 35%

The general objectives of the Company's pension asset strategy are to earn a rate of return over time to satisfy the benefit obligations of the plans, meet minimum ERISA funding requirements, and maintain sufficient liquidity to pay benefits and address other cash requirements within the master trust. Specific investment objectives include reducing the volatility of pension assets relative to benefit obligations, achieving a competitive total investment return, achieving diversification between and within asset classes, and managing other risks. Investment objectives for each asset class are determined based on specific risks and investment opportunities identified. Decisions regarding investment policies and asset allocations are made with the understanding of the historical and prospective return and risk characteristics of various asset classes, the effect of asset allocations on funded status, future Company contributions, and projected expenditures, including benefit payments. The Company updates its asset allocations periodically. The Company uses various analytics to determine the optimal asset mix and considers plan obligation characteristics, duration, liquidity characteristics, funding requirements, expected rates of return, regular rebalancing, and the distribution of returns. Actual allocations to each asset class could vary from target allocations due to periodic investment strategy changes, short-term market value fluctuations, the length of time it takes to fully implement investment allocation positions, such as real estate and other alternative investments, and the timing of benefit payments and Company contributions.

Taking into account the asset allocation ranges, the Company determines the specific allocation of the master trust's investments within various asset classes. The master trust utilizes select investment strategies, which are executed through separate account or fund structures with external investment managers who demonstrate experience and expertise in the appropriate asset classes and styles. The selection of investment managers is done with careful evaluation of all aspects of performance and risk, demonstrated fiduciary responsibility, investment management experience, and a review of the investment managers' policies and processes. Investment performance is monitored frequently against appropriate benchmarks and tracked to compliance guidelines with the assistance of third-party consultants and performance evaluation tools and metrics.

Plan assets are stated at fair value. The Company employs a variety of pricing sources to estimate the fair value of its pension plan assets, including independent pricing vendors, dealer or counterparty-supplied valuations, third-party appraisals, and appraisals prepared by the Company's investment managers or other experts.

Investments in equity securities, common and preferred, are valued at the last reported sales price when an active market exists. Securities for which official or last trade pricing on an active exchange is available are classified as Level 1. If closing prices are not available, securities are valued at the last trade price, if deemed reasonable, or a broker's quote in a non-active market, and are typically categorized as Level 2.

Investments in fixed-income securities are generally valued by independent pricing services or dealers who make markets in such securities. Pricing methods are based upon market transactions for comparable securities and various relationships between securities that are generally recognized by institutional traders, and fixed-income securities typically are categorized as Level 2.

Investments in collective trust funds and commingled funds that use Net Asset Values ("NAV") are valued based on the redemption price of units owned by the master trust, which is based on the current fair values of the funds' underlying assets, as reported by the investment manager.

Investments in hedge funds generally do not have readily available market quotations and are estimated at fair value, which primarily utilizes NAV or the equivalent, as a practical expedient, as reported by the investment manager. Hedge funds usually have restrictions on redemptions that might affect the ability to sell the investment at NAV in the short term.

Real estate funds are typically valued through updated independent third-party appraisals, which are adjusted for changes in cash flows, market conditions, property performance, and leasing status. Since real estate funds do not have readily available market quotations, they are generally valued at NAV or its equivalent, as a practical expedient, as reported by the asset manager. Redemptions from real estate funds are also subject to various restrictions.

Private partnership interests include debt and equity investments. These investments are valued based on NAVs or their equivalents, adjusted for capital calls and distributions, reported by the respective general partners. The terms of the partnerships range from seven to ten or more years, and investors do not have the option to redeem their interests in these partnerships. As of December 31, 2021, unfunded commitments to private partnerships were $563 million.

Management reviews independently appraised values, audited financial statements, and additional pricing information to evaluate the net asset values. For the very limited group of investments for which market quotations are not readily available or for which the above valuation procedures are deemed not to reflect fair value, additional information is obtained from the investment manager and evaluated internally to determine whether any adjustments are required to reflect fair value.

The Company might be unable to quickly liquidate some assets at amounts close or equal to fair value in order to meet plan liquidity requirements or respond to specific events, such as the creditworthiness of any particular issuer or counterparty. Illiquid assets are generally long-term investments that complement the long-term nature of the Company's pension obligations and are generally not used to fund benefit payments in the short term. Management monitors liquidity risk on an ongoing basis and has procedures designed to maintain adequate liquidity for plan requirements.

The master trust has considerable investments in fixed income securities for which changes in the relevant interest rate of a particular instrument might result in the inability to secure similar returns upon the maturity or sale of the instrument. Changes in prevailing interest rates might result in an increase or decrease in fair value of the instrument. Investment managers are permitted to use interest rate swaps and other financial derivatives to manage interest rate and credit risks.

Counterparty risk is the risk that a counterparty to a financial instrument held by the master trust will default on its commitment. Counterparty risk is generally related to over-the-counter derivative instruments used to manage risk exposure to interest rates on long-term debt securities. Certain agreements with counterparties employ set-off agreements, collateral support arrangements, and other risk mitigation practices designed to reduce the net credit risk exposure in the event of a counterparty default. The Company has credit policies and processes that manage concentrations of risk by seeking to undertake transactions with large well-capitalized counterparties and by monitoring the creditworthiness of these counterparties.

Certain investments that are measured at fair value using NAV per share (or its equivalent) as a practical expedient are not required to be categorized in the fair value hierarchy table. The total fair value of these investments is included in the table below to permit reconciliation of the fair value hierarchy to amounts presented in the funded status table above.

	December 31, 2021			
($ in millions)	**Total**	**Level 1**	**Level 2**	**Level 3**
Plan assets subject to leveling				
U.S. and international equities	$ 2,481	$ 2,481	$ —	$ —
Government and agency debt securities	477	—	477	—
Corporate and other debt securities	1,553	—	1,553	—
Group annuity contract	3	—	3	—
Cash and cash equivalents, net	47	47	—	—
Net plan assets subject to leveling	$ 4,561	$ 2,528	$ 2,033	$ —
Plan assets not subject to leveling				
U.S. and international equities (a)	1,994			
Corporate and other debt securities	327			
Real estate investments	467			
Private partnerships	518			
Hedge funds	361			
Cash and cash equivalents, net (b)	232			
Total plan assets not subject to leveling	3,899			
Net plan assets	$ 8,460			

(a) U.S. and international equity securities include investments in small, medium, and large capitalization stocks of public companies held in commingled trust funds.

(b) Cash and cash equivalents are liquid short-term investment funds and include net receivables and payables of the trust. These funds are available for immediate use to fund daily operations, execute investment policies, and serve as a temporary investment vehicle.

($ in millions)	December 31, 2020 Total	Level 1	Level 2	Level 3
Plan assets subject to leveling				
U.S. and international equities	$ 2,224	$ 2,224	$ —	$ —
Government and agency debt securities	466	—	466	—
Corporate and other debt securities	1,933	—	1,933	—
Group annuity contract	3	—	3	—
Cash and cash equivalents, net	37	37	—	—
Net plan assets subject to leveling	$ 4,663	$ 2,261	$ 2,402	$ —
Plan assets not subject to leveling				
U.S. and international equities (a)	1,881			
Corporate and other debt securities	240			
Real estate investments	317			
Private partnerships	202			
Hedge funds	329			
Cash and cash equivalents, net (b)	78			
Total plan assets not subject to leveling	3,047			
Net plan assets	$ 7,710			

(a) U.S. and international equity securities include investments in small, medium, and large capitalization stocks of public companies held in commingled trust funds.
(b) Cash and cash equivalents are liquid short-term investment funds and include net receivables and payables of the trust. These funds are available for immediate use to fund daily operations, execute investment policies, and serve as a temporary investment vehicle.

There was no activity attributable to Level 3 retirement plan assets during the years ended December 31, 2021 and 2020.

18. STOCK COMPENSATION PLANS

As of December 31, 2021, HII had stock-based compensation awards outstanding under the following plans: the Huntington Ingalls Industries, Inc. 2011 Long-Term Incentive Stock Plan (the "2011 Plan") and the Huntington Ingalls Industries, Inc. 2012 Long-Term Incentive Stock Plan (the "2012 Plan").

Stock Compensation Plans

On March 23, 2012, the Company's board of directors adopted the 2012 Plan, subject to stockholder approval, and the Company's stockholders approved the 2012 Plan on May 2, 2012. Award grants made on or after May 2, 2012, were made under the 2012 Plan. Award grants made prior to May 2, 2012, were made under the 2011 Plan. No future grants will be made under the 2011 Plan.

The 2012 Plan permits awards of stock options, stock appreciation rights, and other stock awards. Each stock option grant is made with an exercise price of not less than 100% of the closing price of HII's common stock on the date of grant. Stock awards, in the form of RPSRs, restricted stock rights ("RSRs"), and stock rights, are granted to key employees and members of the board of directors without payment to the Company. The 2012 Plan authorized (i) 3.4 million new shares; plus (ii) any shares subject to outstanding awards under the 2011 Plan that were subsequently forfeited to the Company; plus (iii) any shares subject to outstanding awards under the 2011 Plan that were subsequently exchanged by the participant as full or partial payment to the Company in connection with any such award or exchanged by a participant or withheld by the Company to satisfy the tax withholding obligations related to any such award. As of December 31, 2021, the remaining aggregate number of shares of the Company's common stock authorized for issuance under the 2012 Plan was 3.6 million.

The 2011 Plan permitted the awards of stock options and other stock awards. Stock awards, in the form of stock rights, were granted to members of the board of directors without payment to the Company.

Stock Awards

Stock awards include RPSRs, RSRs, and stock rights. The fair value of stock awards is determined based on the closing market price of the Company's common stock on the grant date. Compensation expense for stock awards is measured based on the grant date fair value and recognized over the vesting period, generally three years.

For purposes of measuring compensation expense, the amount of shares ultimately expected to vest is estimated at each reporting date based on management's expectations regarding the relevant service or performance criteria.

The Company issued the following stock awards in the years ended December 31, 2021, 2020, and 2019:

Restricted Performance Stock Rights - For the year ended December 31, 2021, the Company granted approximately 0.2 million RPSRs at a weighted average share price of $180.06. These rights are subject to cliff vesting on December 31, 2023. For the year ended December 31, 2020, the Company granted approximately 0.1 million RPSRs at a weighted average share price of $229.06. These rights are subject to cliff vesting on December 31, 2022. For the year ended December 31, 2019, the Company granted approximately 0.1 million RPSRs at a weighted average share price of $210.24. These rights were fully vested as of December 31, 2021. All of the RPSRs are subject to the achievement of performance-based targets at the end of the respective vesting periods and will ultimately vest between 0% and 200% of grant date value.

Restricted Stock Rights - Retention stock awards are granted to key employees primarily to ensure business continuity. In 2021, the Company granted approximately 31,400 RSRs at a weighted average share price of $187.59, with cliff vesting one to three years from the grant date. In 2020, the Company granted less than 1,000 RSRs at a weighted average share price of $192.26, with cliff vesting two to three years from the grant date. In 2019, no retention stock awards were granted. As of December 31, 2021, approximately 29,800 RSRs were outstanding.

For the year ended December 31, 2021, 0.1 million stock awards vested, of which less than 0.1 million were transferred to the Company from employees in satisfaction of minimum tax withholding obligations. For the year ended December 31, 2020, 0.1 million stock awards vested, of which less than 0.1 million were transferred to the Company from employees in satisfaction of minimum tax withholding obligations. For the year ended December 31, 2019, 0.3 million stock awards vested, of which approximately 0.1 million were transferred to the Company from employees in satisfaction of minimum tax withholding obligations.

Stock Rights and Stock Issuances - The Company granted stock rights to its non-employee directors on a quarterly basis in 2021, with each grant less than 10,000 shares. All stock rights granted to non-employee directors are fully vested on the grant date. If a non-employee director has met certain stock ownership guidelines, the non-employee director may elect under the terms of the Amended and Restated Directors’ Compensation Policy and Amended and Restated Board Deferred Compensation Policy to receive their annual equity award for the following calendar year in the form of either shares of the Company’s common stock or stock units that are payable in the fifth calendar year after the year in which the annual equity award is earned, or, if earlier, upon termination of the director’s board service.

Non-employee directors may also elect to receive their annual cash retainers in the form of stock units that become payable upon termination of the director’s board service. Non-employee directors who elect to receive their annual cash retainers in the form of stock units and have met their stock ownership guidelines may elect under the terms of the Amended and Restated Directors’ Compensation Policy and Amended and Restated Board Deferred Compensation Policy to receive stock units for the following calendar year that are payable in the fifth calendar year after the year in which the stock units are earned, or, if earlier, upon termination of the director’s board service.

Stock award activity for the years ended December 31, 2021, 2020, and 2019, was as follows:

	Stock Awards (in thousands)	Weighted-Average Grant Date Fair Value	Weighted Average Remaining Contractual Term
Outstanding as of December 31, 2018	399	$ 174.07	0.7 years
Granted	132	210.16	
Adjustment due to performance	114	135.86	
Vested	(265)	135.86	
Forfeited	(6)	232.60	
Outstanding as of December 31, 2019	374	201.92	0.9 years
Granted	132	225.80	
Adjustment due to performance	48	199.58	
Vested	(157)	199.58	
Forfeited	(16)	231.06	
Outstanding as of December 31, 2020	381	211.77	1.0 year
Granted	**213**	**181.66**	
Adjustment due to performance	**19**	**259.03**	
Vested	**(100)**	**259.03**	
Forfeited	**(28)**	**202.81**	
Outstanding as of December 31, 2021	**485**	**$ 190.36**	**1.0 year**

Vested awards include stock awards that fully vested during the year based on the level of achievement of the relevant performance goals. The performance goals for outstanding RPSRs granted in 2021, 2020, and 2019 were based on three metrics as defined in the grant agreements: earnings before interest, taxes, depreciation, amortization, and pension ("EBITDAP"), weighted at 40%, pension-adjusted return on invested capital ("ROIC"), weighted at 40%, and relative EBITDAP growth, weighted at 20%. The Company's EBITDAP growth will be measured against EBITDAP growth of the S&P Aerospace and Defense Select Index.

Compensation Expense

The Company recorded $33 million, $23 million, and $30 million of expense related to stock awards for the years ended December 31, 2021, 2020, and 2019, respectively. The Company recorded $8 million, $6 million, and $6 million as tax benefits related to stock awards for the years ended December 31, 2021, 2020, and 2019, respectively.

The Company recognized tax benefits for the years ended December 31, 2021, 2020, and 2019, of $4 million, $5 million, and $11 million, respectively, from the issuance of stock in settlement of stock awards.

Unrecognized Compensation Expense

As of December 31, 2021, the Company had $4 million of unrecognized compensation expense associated with RSRs granted in 2021 and 2020, which will be recognized over a weighted average period of 1.6 years, and $28 million of unrecognized expense associated with RPSRs granted in 2021 and 2020, which will be recognized over a weighted average period of 1.1 years.

19. SUBSIDIARY GUARANTORS

As described in Note 13: Debt, the Company issued senior notes through the consolidating parent company, HII. Performance of the Company's obligations under its senior notes outstanding as of December 31, 2021, including any repurchase obligations resulting from a change of control, is fully and unconditionally guaranteed, jointly and severally, on an unsecured basis, by each of HII's existing and future material domestic subsidiaries ("Subsidiary Guarantors"). The Subsidiary Guarantors are 100% owned by HII. Each HII subsidiary that did not provide a guarantee ("Non-Guarantors") is not material and HII, as the parent company issuer, did not have independent assets or operations. There are no significant restrictions on the ability of the parent company and the Subsidiary

Guarantors to obtain funds from their respective subsidiaries by dividend or loan, except those imposed by applicable law.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

The Company's management, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) as of December 31, 2021. Based on that evaluation, the Company's Chief Executive Officer (principal executive officer) and Chief Financial Officer (principal financial officer) concluded that, as of December 31, 2021, the Company's disclosure controls and procedures were effective to ensure that information required to be disclosed in reports the Company files or submits under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and (ii) accumulated and communicated to management to allow their timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

On August 19, 2021, the Company completed the acquisition of Alion. In accordance with the general guidance issued by the staff of the SEC, Alion is excluded from the scope of management’s report on internal control over financial reporting for the year ended December 31, 2021. Alion's financial statement amounts constitute 5% of total assets, 5% of revenues, and 2% of net income of the consolidated financial statement amounts as of and for the year ended December 31, 2021. The Company is integrating Alion’s processes into its financial reporting framework, which may result in additions or changes to its internal control over financial reporting (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act).

MANAGEMENT’S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. In order to evaluate the effectiveness of internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act, management has conducted an assessment, including testing, using the criteria in *Internal Control – Integrated Framework* (*2013*), issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). The Company’s system of internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. 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.

Based on its assessment, management has concluded that the Company maintained effective internal control over financial reporting as of December 31, 2021, based on criteria in *Internal Control – Integrated Framework* (*2013*), issued by the COSO. The effectiveness of the Company’s internal control over financial reporting as of December 31, 2021, has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is included in Item 8.

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

Directors

Information regarding our directors will be incorporated herein by reference to the Proxy Statement for our 2022 Annual Meeting of Stockholders, to be filed with the SEC within 120 days after the end of the Company's fiscal year.

Information about our Executive Officers

The following table sets forth certain information as of February 4, 2022, concerning our executive officers, including a five-year employment history.

Name	Age	Position(s)
C. Michael Petters	62	President and Chief Executive Officer
Christopher D. Kastner	58	Executive Vice President and Chief Operating Officer
Bharat B. Amin	67	Executive Vice President and Chief Information Officer
Chad N. Boudreaux	48	Executive Vice President and Chief Legal Officer
Jennifer R. Boykin	57	Executive Vice President and President, Newport News Shipbuilding
William R. Ermatinger	58	Executive Vice President and Chief Human Resources Officer
Edgar A. Green III	56	Executive Vice President and President, Technical Solutions
Brooke A. Hart	51	Executive Vice President, Communications
Stewart H. Holmes	60	Executive Vice President, Government and Customer Relations
Nicolas G. Schuck	48	Corporate Vice President, Controller and Chief Accounting Officer
Thomas E. Stiehle	56	Executive Vice President and Chief Financial Officer
Kara R. Wilkinson	47	Executive Vice President and President, Ingalls Shipbuilding
D. R. Wyatt	63	Corporate Vice President and Treasurer

C. Michael Petters, President and Chief Executive Officer - Mr. Petters has been our President and Chief Executive Officer since March 2011. Prior to that and from 2008, Mr. Petters was President of Northrop Grumman Shipbuilding ("NGSB"). Before that and from 2004, he was President of Northrop Grumman Newport News. Since joining Newport News Shipbuilding and Dry Dock Company in 1987, Mr. Petters' responsibilities have included oversight of the *Virginia*-class submarine program, the nuclear-powered aircraft carrier programs, aircraft carrier refueling and overhaul, submarine fleet maintenance, commercial and naval ship repair, human resources, and business and technology development. Mr. Petters holds a B.S. in Physics from the U.S. Naval Academy and an M.B.A. from the College of William and Mary.

Christopher D. Kastner, *Executive Vice President and Chief Operating Officer* - Mr. Kastner was elected Executive Vice President and Chief Operating Officer effective February 12, 2021. From March 2016 until he assumed his current position, he served as Executive Vice President and Chief Financial Officer. From August 2012 until March 2016, Mr. Kastner served as Corporate Vice President and General Manager, Corporate Development. Prior to that and from March 2011, he served as Vice President and Chief Financial Officer of our Ingalls Shipbuilding segment. Before that and from 2008, Mr. Kastner served as Vice President, Business Management and Chief Financial Officer of NGSB, Gulf Coast, and served as Vice President, Contracts and Risk Management of Northrop Grumman Ship Systems from 2006 to 2008. Prior to that, he held several positions at other Northrop Grumman businesses, including Corporate Director of Strategic Transactions. Mr. Kastner holds a B.A. in Political Science from the University of California at Santa Barbara and an M.B.A from Pepperdine University.

Bharat B. Amin, Executive Vice President and Chief Information Officer - Mr. Amin was appointed Executive Vice President and Chief Information Officer in January 2020. Prior to that and from December 2014, he was Vice President and Chief Information Officer for Newport News Shipbuilding. Prior to that, he held various leadership positions at BAE Systems Inc., including Business Technology Officer and Vice President and CIO of the Global Land and Armament Sector. Mr. Amin also held leadership positions in IT and Engineering as Corporate Director--Computer Integrated Manufacturing, IT Director and Senior Industrial Engineer. He holds a B.S in Mechanical

Engineering from Maharaja Sayajirao University, India, as well as a M.S. in Industrial Engineering and an Executive M.B.A. in International Business and Finance from Rutgers University.

Chad N. Boudreaux, Executive Vice President and Chief Legal Officer - Mr. Boudreaux was appointed Executive Vice President and Chief Legal Officer effective April 1, 2020. In this position, he has overall leadership responsibility for our law department and outside counsel. Prior to that appointment, Mr. Boudreaux managed HII's litigation docket and oversaw our compliance program as the company's first chief compliance officer. He joined HII in 2011 as Corporate Vice President for Litigation, Investigations and Compliance. Before joining us, Mr. Boudreaux practiced law at Baker Botts LLP, where he established the law firm's Global Security and Corporate Risk Counseling practice group. Prior to that, he held various high-ranking positions in the U.S. government, including deputy chief of staff of the U.S. Department of Homeland Security and leadership positions at the U.S. Department of Justice. Mr. Boudreaux earned a B.A. from Baylor University and a J.D. from the University of Memphis School of Law.

Jennifer R. Boykin, Executive Vice President and President, Newport News Shipbuilding - Ms. Boykin was elected Executive Vice President and President, Newport News Shipbuilding effective July 2017. From 2012 until she assumed her current position, Ms. Boykin was Vice President, Engineering and Design for Newport News Shipbuilding. Since joining Newport News Shipbuilding in the Nuclear Division in 1987, Ms. Boykin has had a variety of responsibilities, including serving as Vice President of Quality and Process Excellence, Director of Facilities and Waterfront Support, and program manager for the Nuclear Engineering Division. Ms. Boykin also served as a construction superintendent for the aircraft carrier program during construction of USS *John C. Stennis* and USS *Harry S. Truman*. Ms. Boykin holds a B.S. in Marine Engineering from the U.S. Merchant Marine Academy and a Master's Degree in Engineering Management from The George Washington University.

William R. Ermatinger, Executive Vice President and Chief Human Resources Officer - Mr. Ermatinger has been Executive Vice President and Chief Human Resources Officer since March 2011. Prior to that and from 2008, Mr. Ermatinger was Sector Vice President of Human Resources and Administration for NGSB. In that position, he was responsible for all NGSB human resources and administration activities. Since joining a predecessor of Northrop Grumman in 1987, Mr. Ermatinger has held several human resources management positions with increasing responsibility, including Vice President of Human Resources and Administration of Northrop Grumman Newport News. Mr. Ermatinger holds a B.A. in Political Science from the University of Maryland Baltimore County.

Edgar A. Green III, Executive Vice President and President, Technical Solutions - Mr. Green was appointed Executive Vice President and President, Technical Solutions in December 2016. Prior to that and from January 2015, he served as Corporate Vice President, Corporate Development. From January 2013 to January 2015, Mr. Green served as Vice President, Component Manufacturing, for Newport News Shipbuilding, and, from March 2011 to January 2013, he served as Corporate Vice President, Investor Relations, of HII. Prior to joining HII in 2011, Mr. Green served as Vice President of Investor Relations at Celanese Corp. Before that he was a Managing Director and research analyst at Wells Fargo Securities, where he covered the defense and aerospace industry, and a manufacturing plant engineer at Eaton Corp.'s Truck Components Division. Mr. Green also served as a U.S. Navy nuclear submarine officer on board USS *Tecumseh* (SSBN-628). He holds a B.S. in Systems Engineering from the U.S. Naval Academy and an M.B.A. from Duke University.

Brooke A. Hart, Executive Vice President, Communications – Ms. Hart was appointed Executive Vice President, Communications effective September 27, 2021, upon joining HII. From August 2015 until she joined HII, she served as Vice President of Communications and Brand at Sierra Nevada Corporation, a defense contractor, where she oversaw the company's internal and external communications efforts in promoting and protecting the corporate brand. Prior to that, Ms. Hart was Venture Partner and Vice President at Disruption Corporation and Crystal Tech Fund, and prior to that served as Senior Communications Officer at The Pew Charitable Trusts. She spent 16 years as an on-air television reporter, including serving as national correspondent for NBC News from June 1999 to June 2010. Ms. Hart received a B.A. from Stanford University and a M.A. from Georgetown University.

Stewart H. Holmes, Executive Vice President, Government and Customer Relations – Mr. Holmes was appointed Executive Vice President, Government and Customer Relations effective September 27, 2021, upon joining HII. From April 2017 until he joined HII, he served as Senior Vice President of Washington Operations for Textron Inc., where he was responsible for leading Textron's government affairs activities and engaging with the legislative and executive branches, federal agencies, and industry associations. From January 2015 until March 2017, he served as Vice President of Washington Operations for Textron, where he was primarily responsible for leading lobbying efforts. Prior to joining Textron in January 2015, Mr. Holmes served as the staff director/minority clerk for the Senate

Appropriations Subcommittee on Defense and, prior to that, worked as a staff member for the Senate Appropriations Committee and as an aide to Sen. Thad Cochran of Mississippi. Mr. Holmes served in the U.S. Marine Corps for more than two decades and is a graduate of The Citadel and the Naval Postgraduate School.

Nicolas G. Schuck, Corporate Vice President, Controller and Chief Accounting Officer - Mr. Schuck was appointed Corporate Vice President, Controller and Chief Accounting Officer effective August 2015. Prior to that, he was Assistant Controller at our Newport News Shipbuilding division. Prior to that and since joining us in January 2012, he served as Corporate Assistant Controller. From December 2009 until December 2011, Mr. Schuck served as Director, Finance at ManTech International Corporation, a provider of technologies and solutions for national security programs for the intelligence community and other U.S. federal government customers. Prior to that, he worked for PricewaterhouseCoopers and Arthur Andersen. Mr. Schuck attended the National Institute of Economics and Accounting in Paris. He holds a Bachelor's Degree and a Master's Degree in Accounting and Finance and is a certified public accountant.

Thomas E. Stiehle, Executive Vice President and Chief Financial Officer - Mr. Stiehle was elected Executive Vice President and Chief Financial Officer effective February 12, 2021. From October 2012 until he assumed his current position, he served as Vice President and Chief Financial Officer of our Ingalls Shipbuilding segment. Prior to that, Mr. Stiehle served as Vice President, Contracts and Pricing, for Ingalls Shipbuilding. Prior to joining HII in 2011, he worked for Northrop Grumman, Aerospace Sector, for 24 years. Mr. Stiehle holds a B.S. in Mechanical Engineering from Hofstra University and an M.B.A. from Adelphi University and Master’s Degree in Acquisition and Contract Management from Florida Institute of Technology.

Kara R. Wilkinson, Executive Vice President and President, Ingalls Shipbuilding - Ms. Wilkinson was elected Executive Vice President and President, Ingalls Shipbuilding effective April 1, 2021. From May 2016 until she assumed her current position, she served as Vice President of Program Management at Ingalls Shipbuilding. Prior to that, Ms. Wilkinson held various positions in Business Development and Engineering at Ingalls Shipbuilding and began her career at Ingalls Shipbuilding in 1996 as a naval architect. She holds a B.S. in Naval Architecture and Marine Engineering from the University of Michigan and an M.B.A. from Temple University.

D. R. Wyatt, Corporate Vice President and Treasurer - Mr. Wyatt has been Corporate Vice President and Treasurer since March 2011. Prior to that, he was Director of Business Management at NGSB where he was responsible for aircraft carriers, carrier fleet support, and energy business. Prior to his appointment as Director of Business Management, Mr. Wyatt served as Treasurer of Newport News Shipbuilding Inc., Assistant Treasurer and Manager of Finance, and has held various positions in the financial area, including cost estimating, cost control, accounting, financial analysis, and government accounting. He has extensive Treasury experience, including responsibility for corporate finance, cash management, risk management and all financings, capital structure, capital market interface, rating agency relationships, cash and financial forecasting, working capital management, short-term investments, strategic transactions, pension asset management, and insurance and loss control. Mr. Wyatt holds a B.S. in Economics from Hampden-Sydney College and an M.B.A. from Old Dominion University.

Audit Committee Financial Expert

Information as to the Audit Committee and the Audit Committee Financial Expert will be incorporated herein by reference to the Proxy Statement for our 2022 Annual Meeting of Stockholders, to be filed within 120 days after the end of the Company’s fiscal year.

Code of Ethics

We have adopted a Code of Ethics and Business Conduct for all of our employees, including the principal executive officer, principal financial officer, and principal accounting officer. The Code of Ethics and Business Conduct can be found on our internet website at www.huntingtoningalls.com under "Investor Relations—Company Information—Leadership and Governance." A copy of the Code of Ethics and Business Conduct is available to any stockholder who requests it by writing to: Huntington Ingalls Industries, Inc., c/o Office of the Secretary, 4101 Washington Avenue, Newport News, VA 23607. If we make any substantive amendments to the Code of Ethics and Business Conduct or grant any waivers, including any implicit waiver, from a provision of the Code of Ethics and Business Conduct, in each case as it relates to any provision of the Code of Ethics and Business Conduct specified in applicable SEC rules or stock exchange rules, to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, we will disclose the nature of the amendment or waiver on our website.

Our website and information contained on our website or incorporated into our website are not intended to be incorporated into this report on Form 10-K or other filings with the SEC.

Other Disclosures

Other disclosures required by this Item will be incorporated herein by reference to the Proxy Statement for our 2022 Annual Meeting of Stockholders, to be filed within 120 days after the end of the Company's fiscal year.

ITEM 11. EXECUTIVE COMPENSATION

Information concerning executive compensation, including information concerning compensation committee interlocks, insider participation, and the compensation committee report, will be incorporated herein by reference to the Proxy Statement for our 2022 Annual Meeting of Stockholders, to be filed within 120 days after the end of the Company's fiscal year.

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

Information as to security ownership of certain beneficial owners and management and related stockholder matters will be incorporated herein by reference to the Proxy Statement for our 2022 Annual Meeting of Stockholders, to be filed within 120 days after the end of the Company's fiscal year.

Equity Compensation Plan Information

The following table provides information regarding the equity securities available for issuance under our equity compensation plans as of December 31, 2021:

Equity Compensation Plan Information

Plan category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights[1]	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a))
	(a)	(b)	(c)
Equity compensation plans approved by security holders	485,182	$0.00	3,591,091
Equity compensation plans not approved by security holders[2]	—	—	—
Total	485,182	$0.00	3,591,091

(1) Includes grants made under the Huntington Ingalls Industries, Inc. 2012 Long-Term Incentive Stock Plan (the "2012 Plan"), which was approved by our stockholders on May 2, 2012, and the Huntington Ingalls Industries, Inc. 2011 Long-Term Incentive Stock Plan (the "2011 Plan"), which was approved by the sole stockholder of HII prior to its spin-off from Northrop Grumman Corporation. Of these shares, 14,972 were stock rights granted under the 2011 Plan. In addition, this number includes 45,791 stock rights, 29,822 restricted stock rights, and 394,597 restricted performance stock rights granted under the 2012 Plan, assuming target performance achievement.

(2) There are no awards made under plans not approved by security holders.

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

Information as to certain relationships and related transactions and director independence will be incorporated herein by reference to the Proxy Statement for our 2022 Annual Meeting of Stockholders, to be filed within 120 days after the end of the Company's fiscal year.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information as to principal accountant fees and services will be incorporated herein by reference to the Proxy Statement for our 2022 Annual Meeting of Stockholders, to be filed within 120 days after the end of the Company’s fiscal year.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) 1. Report of Independent Registered Public Accounting Firm (PCAOB ID No. 34)

Financial Statements

Consolidated Statements of Operations and Comprehensive Income

Consolidated Statements of Financial Position

Consolidated Statements of Cash Flows

Consolidated Statements of Changes in Equity

Notes to Consolidated Financial Statements

2. Financial Statement Schedules

Schedule II - Valuation and Qualifying Accounts

All other schedules have been omitted because they are not applicable, not required, or the information has been otherwise supplied in the financial statements or notes to the financial statements.

SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS

	Balance at Beginning of Period	(Benefits)/Charges to Income	Other	Balance at End of Period
Year Ended December 31, 2019				
Valuation allowance for deferred tax assets	$ 12	$ 3	$ —	$ 15
Year Ended December 31, 2020				
Valuation allowance for deferred tax assets	15	7	—	22
Year Ended December 31, 2021				
Valuation allowance for deferred tax assets	**$ 22**	**$ —**	**$ —**	**$ 22**

3. Exhibits

2.1 Separation and Distribution Agreement, dated as of March 29, 2011, among Titan II Inc. (formerly Northrop Grumman Corporation), Northrop Grumman Corporation (formerly New P, Inc.), Huntington Ingalls Industries, Inc., Northrop Grumman Shipbuilding, Inc. and Northrop Grumman Systems Corporation (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 4, 2011).

2.2 Stock Purchase Agreement by and among Alion Holdings LLC, Alion Holding Corp. and Huntington Ingalls Industries, Inc. dated July 4, 2021 (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on July 9, 2021).

3.1 Restated Certificate of Incorporation of Huntington Ingalls Industries, Inc., filed March 30, 2011 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on April 4, 2011).

3.2 Certificate of Amendment to the Restated Certificate of Incorporation of Huntington Ingalls Industries, Inc., dated May 28, 2014 (incorporated by reference to Exhibit 3.2 to the Company’s Quarterly Report on Form 10-Q filed on August 7, 2014).

3.3 Certificate of Amendment to the Restated Certificate of Incorporation of Huntington Ingalls Industries, Inc., dated May 21, 2015 (incorporated by reference to Exhibit 3.3 to the Company’s Quarterly Report on Form 10-Q filed on August 6, 2015).

3.4	Certificate of Amendment to the Restated Certificate of Incorporation of Huntington Ingalls Industries, Inc., dated May 12, 2021 (incorporated by reference to Annex B to the Proxy Statement filed on March 19, 2021).
3.5	Restated Bylaws of Huntington Ingalls Industries, Inc. (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on March 30, 2021).
4.1	Indenture, dated as of December 1, 2017, by and among Huntington Ingalls Industries, Inc., the guarantors party thereto, and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on December 4, 2017).
4.2	First Supplemental Indenture, dated as of August 27, 2019, to the Indenture, dated as of December 1, 2017, among Huntington Ingalls Industries, Inc., the guarantors party thereto, and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Company's Quarterly Report on Form 10-Q filed on November 7, 2019).
4.3	Second Supplemental Indenture, dated as of June 30, 2020, to the Indenture, dated as of December 1, 2017, among Huntington Ingalls Industries, Inc., the guarantors party thereto, and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.3 to the Company's Annual Report on Form 10-K filed on February 11, 2021).
4.4	Third Supplemental Indenture, dated as of December 14, 2021, to the Indenture, dated as of December 1, 2017, among Huntington Ingalls Industries, Inc., the guarantors party thereto, and Wells Fargo Bank, National Association, as trustee.
4.5	Indenture, dated March 30, 2020, by and among Huntington Ingalls Industries, Inc., the guarantors party thereto, and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on March 30, 2020).
4.6	First Supplemental Indenture, dated as of June 30, 2020, to the Indenture, dated as of March 30, 2020, among Huntington Ingalls Industries, Inc., the guarantors party thereto, and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.5 to the Company's Annual Report on Form 10-K filed on February 11, 2021).
4.7	Second Supplemental Indenture, dated as of December 14, 2021, to the Indenture, dated as of March 30, 2020, among Huntington Ingalls Industries, Inc., the guarantors party thereto, and Wells Fargo Bank, National Association, as trustee.
4.8	Indenture, dated as of August 16, 2021, by and among Huntington Ingalls Industries, Inc., certain subsidiaries of Huntington Ingalls Industries, Inc., and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8–K filed on August 16, 2021).
4.9	First Supplemental Indenture, dated as of December 14, 2021, to the Indenture, dated as of August 16, 2021, by and among Huntington Ingalls Industries, Inc., certain subsidiaries of Huntington Ingalls Industries, Inc. and U.S. Bank National Association, as trustee.
4.10	Registration Rights Agreement, dated as of August 16, 2021, by and among Huntington Ingalls Industries, Inc., certain subsidiaries of Huntington Ingalls Industries, Inc., and J.P. Morgan Securities LLC, BofA Securities, Inc., Mizuho Securities USA LLC, MUFG Securities Americas Inc., Scotia Capital (USA) Inc. and U.S. Bancorp Investments, Inc., as representatives of the initial purchasers (incorporated by reference to Exhibit 4.4 to the Company's Current Report on Form 8-K filed on August 16, 2021).
4.11	Description of Securities

10.1 Amended and Restated Revolving Credit Agreement, dated as of August 2, 2021, among Huntington Ingalls Industries, Inc., the lenders party thereto, and JPMorgan Chase Bank, N.A., as Administrative Agent and an Issuing Bank (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on August 5, 2021).

10.2 Credit Agreement, dated as of August 2, 2021, among Huntington Ingalls Industries, Inc., the lenders party thereto, and JPMorgan Chase Bank, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed on August 5, 2021).

10.3 Form of Amended and Restated Indemnification Agreement and Schedule of directors and officers who have entered into such agreement (incorporated by reference to Exhibit 10.2 to the Company's Annual Report on Form 10-K filed on February 19, 2015).

10.4 Intellectual Property License Agreement, dated as of March 29, 2011, between Northrop Grumman Systems Corporation and Northrop Grumman Shipbuilding, Inc. (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed on April 4, 2011).

10.5 Tax Matters Agreement, dated as of March 29, 2011, among Northrop Grumman Corporation (formerly New P, Inc.), Huntington Ingalls Industries, Inc. and Titan II Inc. (formerly Northrop Grumman Corporation) (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed on April 4, 2011).

10.6 Loan Agreement, dated as of May 1, 1999, between Ingalls Shipbuilding, Inc. and the Mississippi Business Finance Corporation relating to the Economic Development Revenue Bonds (Ingalls Shipbuilding, Inc. Project) Taxable Series 1999A due 2024 (incorporated by reference to Exhibit 10.6 to the Company's Amendment No. 1 to Registration Statement on Form 10 filed on November 24, 2010).

10.7 Indenture of Trust, dated as of May 1, 1999, between the Mississippi Business Finance Corporation and the First National Bank of Chicago, as Trustee, relating to the Economic Development Revenue Bonds (Ingalls Shipbuilding, Inc. Project) Taxable Series 1999A due 2024 (incorporated by reference to Exhibit 10.7 to the Company's Amendment No. 1 to Registration Statement on Form 10 filed on November 24, 2010).

10.8 Loan Agreement, dated as of December 1, 2006, between Northrop Grumman Ship Systems, Inc. and the Mississippi Business Finance Corporation relating to the Gulf Opportunity Zone Industrial Development Revenue Bonds (Northrop Grumman Ship Systems, Inc. Project), Series 2006 due 2028 (incorporated by reference to Exhibit 10.8 to the Company's Amendment No. 1 to Registration Statement on Form 10 filed on November 24, 2010).

10.9 Trust Indenture, dated as of December 1, 2006, between the Mississippi Business Finance Corporation and The Bank of New York Trust Company, N.A., as Trustee, relating to the Gulf Opportunity Zone Industrial Development Revenue Bonds (Northrop Grumman Ship Systems, Inc. Project), Series 2006 due 2028 (incorporated by reference to Exhibit 10.9 to the Company's Amendment No. 1 to Registration Statement on Form 10 filed on November 24, 2010).

10.10 Guaranty Agreement, dated as of May 1, 1999, between Litton Industries, Inc. and The First National Bank of Chicago, as Trustee (incorporated by reference to Exhibit 10.10 to the Company's Amendment No. 2 to Registration Statement on Form 10 filed on December 21, 2010).

10.11 Assumption of Guaranty of Litton Industries, Inc., dated as of January 1, 2003, by Northrop Grumman Systems Corporation (incorporated by reference to Exhibit 10.11 to the Company's Amendment No. 2 to Registration Statement on Form 10 filed on December 21, 2010).

10.12 Guaranty Agreement, dated as of December 1, 2006, between Northrop Grumman Corporation and The Bank of New York Trust Company, N.A., as Trustee (incorporated by reference to Exhibit 10.12 to the Company's Amendment No. 2 to Registration Statement on Form 10 filed on December 21, 2010).

10.13	Performance and Indemnity Agreement, dated as of March 30, 2011, between Huntington Ingalls Industries, Inc. and Titan II Inc. (formerly Northrop Grumman Corporation) relating to the Gulf Opportunity Zone Industrial Development Revenue Bonds (incorporated by reference to Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q filed on May 11, 2011).
10.14	Performance and Indemnity Agreement, dated as of March 30, 2011, between Huntington Ingalls Industries, Inc. and Titan II Inc. (formerly Northrop Grumman Corporation) relating to certain performance guarantees associated with certain U.S. Navy shipbuilding contracts (incorporated by reference to Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q filed on May 11, 2011).
10.15	Ingalls Guaranty Performance, Indemnity and Termination Agreement, dated as of March 29, 2011, among Huntington Ingalls Industries, Inc., Northrop Grumman Systems Corporation and Northrop Grumman Shipbuilding, Inc. (incorporated by reference to Exhibit 10.8 to the Company's Quarterly Report on Form 10-Q filed on May 11, 2011).
10.16*	Huntington Ingalls Industries Supplemental Plan 2 (incorporated by reference to Exhibit 10.16 to the Company's Amendment No. 4 to Registration Statement on Form 10 filed on January 18, 2011) and Amendment to Appendix G to the plan.
10.17*	Second Amendment to Appendix G to Huntington Ingalls Industries Supplemental Plan 2-Officers Supplemental Executive Retirement Plan, as amended January 7, 2015 (incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on December 19, 2018).
10.18*	Huntington Ingalls Industries ERISA Supplemental Plan (incorporated by reference to Exhibit 10.17 to the Company's Amendment No. 4 to Registration Statement on Form 10 filed on January 18, 2011).
10.19*	Severance Plan for Elected and Appointed Officers of Huntington Ingalls Industries, as amended and restated effective January 1, 2019 (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on December 19, 2018).
10.20*	Huntington Ingalls Industries Deferred Compensation Plan (incorporated by reference to Exhibit 10.19 to the Company's Amendment No. 4 to Registration Statement on Form 10 filed on January 18, 2011).
10.21*	Huntington Ingalls Industries Savings Excess Plan (incorporated by reference to Exhibit 10.20 to the Company's Amendment No. 4 to Registration Statement on Form 10 filed on January 18, 2011).
10.22*	First Amendment to the Huntington Ingalls Industries Savings Excess Plan (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on August 3, 2017).
10.23*	Huntington Ingalls Industries Officers Retirement Account Contribution Plan (incorporated by reference to Exhibit 10.21 to the Company's Amendment No. 4 to Registration Statement on Form 10 filed on January 18, 2011).
10.24*	HII Newport News Shipbuilding Inc. Retirement Benefit Restoration Plan (incorporated by reference to Exhibit 10.22 to the Company's Amendment No. 4 to Registration Statement on Form 10 filed on January 18, 2011).
10.25*	Huntington Ingalls Industries Electronic Systems Executive Pension Plan (incorporated by reference to Exhibit 10.23 to the Company's Amendment No. 4 to Registration Statement on Form 10 filed on January 18, 2011).
10.26*	Huntington Ingalls Industries, Inc. Special Officer Retiree Medical Plan (incorporated by reference to Exhibit 10.24 to the Company's Amendment No. 4 to Registration Statement on Form 10 filed on January 18, 2011).
10.27*	Huntington Ingalls Industries, Inc. 2011 Long-Term Incentive Stock Plan (incorporated by reference to Exhibit 10.25 to the Company's Amendment No. 8 to Registration Statement on Form 10 filed on March 15, 2011).

10.28* Huntington Ingalls Industries, Inc. Annual Incentive Plan, as amended and restated December 13, 2018 (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on December 19, 2018).

10.29* Form of Award Certificate applicable to Non-Employee Director Stock Units Granted Under the 2011 and 2012 Long-Term Incentive Stock Plans (incorporated by reference to Exhibit 10.30 to the Company's Annual Report on Form 10-K filed on February 27, 2013).

10.30* Form of Award Certificate applicable to Restricted Performance Stock Rights Granted Under the 2011 and 2012 Long-Term Incentive Stock Plans (incorporated by reference to Exhibit 10.31 to the Company's Annual Report on Form 10-K filed on February 27, 2014).

10.31* Form of Award Certificate applicable to Restricted Stock Rights Granted Under the 2011 and 2012 Long-Term Incentive Stock Plans (incorporated by reference to Exhibit 10.32 to the Company's Annual Report on Form 10-K filed on February 27, 2014).

10.32* Form of Award Certificate applicable to Stock Options Granted Under the 2011 and 2012 Long-Term Incentive Stock Plans (incorporated by reference to Exhibit 10.33 to the Company's Annual Report on Form 10-K filed on February 27, 2014).

10.33* Huntington Ingalls Industries, Inc. 2012 Long-Term Incentive Stock Plan (incorporated by reference to Annex A to the Proxy Statement filed on April 3, 2012).

10.34* Performance-Based Compensation Policy of Huntington Ingalls Industries, Inc (incorporated by reference to Annex B to the Proxy Statement filed on April 3, 2012).

10.35* Huntington Ingalls Industries, Inc. Amended and Restated Directors' Compensation Policy.

10.36* Huntington Ingalls Industries, Inc. Directors Compensation Policy--Amended and Restated Board Deferred Compensation Policy (incorporated by reference to Exhibit 10.5 to the Company’s Current Report on Form 8-K filed on December 19, 2018).

21.1 List of subsidiaries of Huntington Ingalls Industries, Inc.

22 List of subsidiary guarantors of registered securities of Huntington Ingalls Industries, Inc.

23.1 Consent of Deloitte & Touche LLP.

31.1 Certification of the Chief Executive Officer Pursuant to Exchange Act Rule 13a-14(a)/15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

31.2 Certification of the Chief Financial Officer Pursuant to Exchange Act Rule 13a-14(a)/15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

32.1 Certificate of the Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

32.2 Certificate of the Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

101 The following financial information for the company, formatted in XBRL (Extensible Business Reporting Language): (i) the Consolidated Statements of Operations and Comprehensive Income (Loss), (ii) the Consolidated Statements of Financial Position, (iii) the Consolidated Statements of Cash Flows, (iv) the Consolidated Statements of Changes in Equity, and (v) the Notes to Consolidated Financial Statements.

104	The cover page from the Company's Annual Report on form 10-K, formatted in Inline XBRL and contained in Exhibit 101.

*Indicates management contract or compensatory plan or arrangement.

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, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on the 10th day of February, 2022.

Huntington Ingalls Industries, Inc.

/s/ C. Michael Petters

C. Michael Petters

President and Chief Executive Officer

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

Signature	Title	Date
/s/ C. Michael Petters C. Michael Petters	President, Chief Executive Officer and Director (Principal Executive Officer)	February 10, 2022
/s/ Thomas E. Stiehle Thomas E. Stiehle	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 10, 2022
/s/ Nicolas Schuck Nicolas Schuck	Corporate Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer)	February 10, 2022
/s/ Kirkland H. Donald Kirkland H. Donald	Chairman	February 10, 2022
/s/ Philip M. Bilden Philip M. Bilden	Director	February 10, 2022
/s/ Augustus L. Collins Augustus L. Collins	Director	February 10, 2022
/s/ Victoria D. Harker Victoria D. Harker	Director	February 10, 2022
/s/ Frank R. Jimenez Frank R. Jimenez	Director	February 10, 2022
/s/ Anastasia D. Kelly Anastasia D. Kelly	Director	February 10, 2022
/s/ Tracy B. McKibben Tracy B. McKibben	Director	February 10, 2022
/s/ Stephanie L. O'Sullivan Stephanie L. O'Sullivan	Director	February 10, 2022

/s/ Thomas C. Schievelbein Thomas C. Schievelbein	Director	February 10, 2022
/s/ John K. Welch John K. Welch	Director	February 10, 2022
/s/ Stephen R. Wilson Stephen R. Wilson	Director	February 10, 2022

Corporate Information

Corporate Headquarters
Huntington Ingalls Industries, Inc.
4101 Washington Avenue
Newport News, VA 23607
Tel: 757-380-2000

Stock Exchange Listing
Huntington Ingalls Industries Common Stock
is listed on the New York Stock Exchange
Ticker Symbol: HII

HII
LISTED
NYSE

Transfer Agent/Stockholder Inquiries
Computershare Trust Company
P.O. Box 505000
Louisville, KY 40233
Tel: 888-665-9610
www.computershare.com/investor

Investor Relations
757-380-2104 or 757-380-7911
e-mail: investor.relations@hii-co.com

Independent Registered Public Accounting Firm
Deloitte & Touche LLP
901 East Byrd Street
Suite 820
Richmond, VA 23219
Tel: 804-697-1500
Fax: 804-697-1825

For reporting complaints about Huntington Ingalls Industries accounting, internal accounting controls or auditing matters or any other concerns to the Board of Directors or the Audit Committee, you may write to:

Board of Directors
Huntington Ingalls Industries, Inc.
c/o Charles R. Monroe, Jr., Corporate Secretary
4101 Washington Avenue
Newport News, VA 23607
e-mail: OfficeoftheGeneralCounsel@hii-co.com

Segment Operating Income, Adjusted Segment Operating Income, Adjusted Segment Operating Margin, Adjusted Net Earnings and Adjusted Diluted EPS Reconciliation

	Year Ended December 31				
($ in millions, except per share amounts)	**2021**	**2020**	2019	2018	2017
Sales and Service Revenues	**$ 9,524**	**$ 9,361**	$ 8,899	$ 8,176	$ 7,441
Operating Income	**513**	**799**	736	951	881
Operating Margin	**5.4%**	**8.5%**	8.3%	11.6%	11.8%
Non-segment factors affecting operating income:					
Operating FAS/CAS adjustment	**157**	**(248)**	(124)	(290)	(205)
Non-current state income taxes	**13**	**4**	19	2	12
Segment Operating Income	**683**	**555**	631	663	688
Adjustment for non-cash goodwill impairment [1]	**—**	**—**	29	—	—
Adjusted Segment Operating Income	**683**	**555**	660	663	688
Adjusted Segment Operating Margin	**7.2%**	**5.9%**	7.4%	8.1%	9.2%
Net Earnings	**544**	**696**	549	836	479
After-tax adjustment for FAS/CAS adjustment[2,3]	**(19)**	**(290)**	(107)	(288)	(123)
After-tax adjustment for non-cash goodwill impairment[1,2,4]	**—**	**—**	26	—	—
After-tax adjustment for non-cash long-lived asset impairments[2,5,6]	**—**	**10**	5	—	—
After-tax adjustment for loss on early extinguishment of debt[2,7]	**—**	**17**	—	—	14
Adjustment for tax expense related to the 2017 Tax Act	**—**	**—**	—	—	56
Adjustment for tax expense related to discretionary pension contributions	**—**	**—**	—	—	7
Adjusted Net Earnings	**525**	**433**	473	548	433
Diluted Earnings Per Share	**13.50**	**17.14**	13.26	19.09	10.46
After-tax adjustment for FAS/CAS adjustment per share[2,3,8]	**(0.47)**	**(7.14)**	(2.58)	(6.58)	(2.69)
After-tax adjustment for non-cash goodwill impairment per share[1,2,4,8]	**—**	**—**	0.63	—	—
After-tax adjustment for long-lived asset impairments per share[2,5,6,8]	**—**	**0.25**	0.12	—	—
After-tax adjustment on loss on early extinguishment of debt per share[2,7,8]	**—**	**0.42**	—	—	0.31
Adjustment for tax expense related to the 2017 Tax Act per share[8]	**—**	**—**	—	—	1.22
Adjustment for tax expense related to discretionary pension contributions per share [8]	**—**	**—**	—	—	0.15
Adjusted Diluted Earnings Per Share	**13.03**	**10.67**	11.43	12.51	9.45

(1) Non-cash goodwill impairment charges recorded at the Technical Solutions segment in 2019.
(2) The income tax impact is calculated using the tax rate in effect for the relevant non-GAAP adjustment.
(3) The income tax impact, calculated using the tax rate in effect for the relevant non-GAAP adjustment, was equal to $5 million in 2021, $77 million in 2020, $29 million in 2019, $76 million in 2018, and $66 million in 2017.
(4) The income tax impact, calculated using the tax rate in effect for the relevant non-GAAP adjustment, was equal to $3 million in 2019.
(5) Non-cash long-lived asset impairment recorded at Corporate in 2020 and at the Technical Solutions segment in 2020 and 2019.
(6) The income tax impact, calculated using the tax rate in effect for the relevant non-GAAP adjustment, was equal to $3 million in 2020 and $1 million in 2019.
(7) The income tax impact, calculated using the tax rate in effect for the relevant non-GAAP adjustment, was equal to $4 million in 2020 and $8 million in 2017.
(8) The weighted-average diluted shares outstanding were 40.3 million, 40.6 million, 41.4 million, 43.8 million and 45.8 million in 2021, 2020, 2019, 2018 and 2017, respectively.

Segment Operating Income, Adjusted Segment Operating Income, Adjusted Segment Operating Margin, Adjusted Net Earnings and Adjusted Diluted EPS are not measures recognized under GAAP. They should be considered supplemental to and not a substitute for financial information prepared in accordance with GAAP. We believe these measures are useful to investors because they exclude items that do not reflect our core operating performance. They may not be comparable to similarly titled measures of other companies.

Forward-Looking Statements

Statements in this annual report, other than statements of historical fact, constitute “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements involve important risks and uncertainties that could cause our actual results to differ materially from those expressed in these statements. Factors that may cause such differences include: changes in government and customer priorities and requirements (including government budgetary constraints, shifts in defense spending, and changes in customer short-range and long-range plans); our ability to estimate our future contract costs and perform our contracts effectively; changes in procurement processes and government regulations and our ability to comply with such requirements; our ability to deliver our products and services at an affordable life cycle cost and compete within our markets; natural and environmental disasters and political instability; our ability to execute our strategic plan, including with respect to share repurchases, dividends, capital expenditures and strategic acquisitions; adverse economic conditions in the United States and globally; health epidemics, pandemics and similar outbreaks, including the COVID-19 pandemic, and the impacts of vaccination mandates on our workforce; our ability to integrate the operations of Alion Science and Technology into our business; changes in key estimates and assumptions regarding our pension and retiree health care costs; security threats, including cyber security threats, and related disruptions; and other risk factors discussed in our filings with the U.S. Securities and Exchange Commission. There may be other risks and uncertainties that we are unable to predict at this time or that we currently do not expect to have a material adverse effect on our business, and we undertake no obligation to update any forward-looking statements. You should not place undue reliance on any forward-looking statements that we may make. This annual report also contains non-GAAP financial measures and includes a GAAP reconciliation of these financial measures. Non-GAAP financial measures should not be construed as being more important than comparable GAAP measures.

Our Annual Report on Form 10-K for the year ended December 31, 2021 forms a part of this 2021 Annual Report. If you would like an additional copy of our Form 10-K, you can access it through the Investor Relations page of our website (www.hii.com) or at the Securities and Exchange Commission website (www.sec.gov). The Form 10-K is also available free of charge by writing to us at: Corporate Secretary, Huntington Ingalls Industries, Inc., 4101 Washington Avenue, Newport News, Virginia 23607. Exhibits to the Form 10-K are also available if requested

Board of Directors

Philip M. Bilden, Chairman & Managing Partner, Shield Capital, LLC, Chair of Cybersecurity Committee; Stephen R. Wilson, Independent Business Consultant, Retired Executive Vice President and Chief Financial Officer, RJR Nabisco, Inc., Chair of Audit Committee; John K. Welch, Retired President and CEO, Centrus Energy Corp., Chair of Governance and Policy Committee; Mike Petters, President and CEO, HII; Thomas C. Schievelbein, Retired Chairman and CEO, The Brink's Company, Chair of Finance Committee; Augustus L. Collins, CEO, MINACT, Inc., Major General, U.S. Army (Ret.); Anastasia D. Kelly, Senior Advisor to the Chair and Executive Director of Client Relations of DLA Piper; Tracy B. McKibben, CEO, MAC Energy Advisors LLC; Kirkland H. Donald, Chairman of the Board, HII, Admiral, U.S. Navy (Ret.); Victoria D. Harker, Executive Vice President and Chief Financial Officer, Tegna, Inc., Chair of Compensation Committee; Stephanie O'Sullivan, Independent Business Consultant (As of 12/31/2021)

Senior Executive Team

Michael Petters
President and CEO

Christopher D. Kastner
Executive Vice President and Chief Operating Officer

Bharat Amin
Executive Vice President and Chief Information Officer

Chad Boudreaux
Executive Vice President and Chief Legal Officer

Jennifer Boykin
Executive Vice President and President, Newport News Shipbuilding

Bill Ermatinger
Executive Vice President and Chief Human Resources Officer

Andy Green
Executive Vice President and President, Technical Solutions

Brooke Hart
Executive Vice President of Communications

Stewart Holmes
Executive Vice President, Government and Customer Relations

Tom Stiehle
Executive Vice President and Chief Financial Officer

Kari Wilkinson
Executive Vice President and President, Ingalls Shipbuilding

Charles R. Monroe, Jr.
Corporate Vice President, Associate General Counsel and Secretary

Nicolas G. Schuck
Corporate Vice President, Controller and Chief Accounting Officer

D.R. Wyatt
Corporate Vice President and Treasurer

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