

**BEST PRACTICES AT PUBLIC AND PRIVATE  
SHIPYARDS**

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**HEARING**  
BEFORE THE  
SUBCOMMITTEE ON READINESS AND MANAGEMENT  
SUPPORT  
OF THE  
COMMITTEE ON ARMED SERVICES  
UNITED STATES SENATE  
ONE HUNDRED FOURTEENTH CONGRESS  
FIRST SESSION

—————  
JULY 29, 2015  
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## **BEST PRACTICES AT PUBLIC AND PRIVATE SHIPYARDS**

**WEDNESDAY, JULY 29, 2015**

U.S. SENATE  
SUBCOMMITTEE ON READINESS  
AND MANAGEMENT SUPPORT  
COMMITTEE ON ARMED SERVICES  
*Washington, D.C.*

The subcommittee met, pursuant to notice, at 2:34 p.m. in room SR-232A, Russell Senate Office Building, Senator Kelly Ayotte (chairman of the subcommittee) presiding.

Committee members present: Senators Ayotte, Rounds, Ernst, Shaheen, Hirono, Kaine, and King.

### **OPENING STATEMENT OF SENATOR KELLY AYOTTE**

Senator AYOTTE [presiding]. Good afternoon. This hearing of the Subcommittee on Readiness and Management Support will come to order. It's a pleasure to convene this hearing with Senator Kaine, the Ranking Member of this Subcommittee.

I want to welcome Mr. Bagley and Mr. O'Connor, who I—whom I will both introduce in a moment. Thank you both for being here.

The topic of today's hearing is Best Practices at Our Shipyards. Our Nation's private and public shipyards manufacture and maintain the Navy's ships and submarines. While the workers at these shipyards are largely civilians, they play a critical role in protecting and defending our country. Combatant commanders and the men and women of the United States Navy look to the workers at our shipyards to provide them technologically advanced, reliable, safe, and combat-ready ships and submarines. To fulfill this essential function, shipyards must constantly reassess practices to promote efficiency, performance, and responsible stewardship of our tax dollars. This requires identifying best practices, assessing their impact on performance, and ensuring those best practices are institutionalized and shared.

In addition to private shipyards, like Newport News, our Nation has four public shipyards. Each of these public shipyards plays an indispensable role in sustaining our Nation's naval readiness, but I'm particularly proud of the Portsmouth Naval Shipyard. Portsmouth Naval Shipyard is the Navy's Center of Excellence for fast-attack nuclear-powered submarine maintenance, modernization, and repair. That is more than just words. The skilled and dedicated workers at Portsmouth have proven with their performance and their consistent track record of completing projects ahead of schedule and under budget. Here are just a few examples:

In April of last year, the workers at Portsmouth Naval Shipyard safely undocked the USS *Topeka* 20 days ahead of schedule, following an engineered overhaul.

In June, following a maintenance availability, the workers at Portsmouth Naval Shipyard returned the USS *California* to the fleet 14 days ahead of schedule.

In September, Portsmouth Naval Shipyard delivered the USS *Springfield* back to the fleet ahead of schedule and under budget.

The excellent performance by the workers at Portsmouth continues with their current work on the USS *Alexandria*, which is on track to meet its scheduled completion date. The workers at Portsmouth have continued to perform at this high level while already hiring approximately 680 new workers this fiscal year. This amazing track record of accomplishment is due, in large part, to the labor/management collaboration at Portsmouth, the Renewal of Shipyards Values and Pride, or RSVP Program, and the Declaration of Excellence. At their root, as our witnesses know well, programs like these are successful because they promote labor/management collaboration, empower the workforce, and create a culture that values high standards and continuous learning. These efforts have resulted in tangible best practices that have improved performance and saved time and money, getting submarines back to the fleet sooner.

The Navy has recognized this topnotch performance at Portsmouth and the long-term need for the shipyard, as evidenced by the Navy's strong investment in recent years in infrastructure at the shipyard, including its continued commitment to project P-266, the Structural Workshops Consolidation.

In order to understand and share best practices at our public and private shipyards, we are joined this afternoon by two distinguished and incredibly experienced witnesses.

Mr. Ray Bagley is the Vice President of Trades Operations for Newport News Shipbuilding. He is responsible for production labor resources and processes, plant engineering and maintenance, waterfront support services, training in structural design, and the Apprentice School. Mr. Bagley has worked at Newport News Shipbuilding since 1974.

Mr. Paul O'Connor is President of the Metal Trades Council at Portsmouth Naval Shipyard, representing 2500 tradesmen and women at the shipyard. His career spans 40 years at Portsmouth Naval Shipyard, including work as a journeyman electrician, performing maintenance and modernization work on the Navy's nuclear-powered submarines. Mr. O'Connor is an active member of the Naval Sea Systems Command, or NAVSEA, Labor Management Partnership. I deeply appreciate having the opportunity to meet with and work with Mr. O'Connor for many years now, his leadership at the shipyard.

I deeply appreciate both witnesses' willingness to come and appear before our committee today. I would also note that Mr. Steven Fahey, a nuclear production manager at Portsmouth Naval Shipyard, was scheduled to testify, and was eager to be here. Unfortunately, at the last minute, he was called away on an assignment. But, in a tangible demonstration of the labor/management collaboration at Portsmouth Naval Shipyard that has resulted in such

strong performance, Mr. Fahey has submitted a written statement for the record.

If there are no objections, I request that this statement be submitted for the record. Thank you.

[The prepared statement of Mr. Fahey follows:]

PREPARED STATEMENT BY MR. STEPHEN B. FAHEY, NUCLEAR PRODUCTION MANAGER  
AT PORTSMOUTH NAVAL SHIPYARD

Chair Ayotte and Ranking Member Kaine, thank you for calling this hearing on shipyard best practices. I regret that my responsibilities preclude me from testifying, but I am honored to provide this testimony regarding the practices we have recently applied at the Portsmouth Naval Shipyard to improve our performance.

Portsmouth Naval Shipyard has been supporting our Navy and our Nation for over two hundred and fifteen years. In the periods of greatest challenge, we have provided leadership and innovation necessary to overcome obstacles and provide impeccable excellence and quality. For example, in 1944, the shipyard built 32 fleet submarines to support our war efforts for World War II. For perspective, the most submarines the shipyard had produced in one year were four in the pre-war years.

Building on this proud history, management and labor at Portsmouth Naval Shipyard have been collaborating for years in support of productivity improvements, process innovations and development of our people. As with any relationship, there are challenges for the management and labor team to face every day, but through commitment, transparency, courage and confidence, trust develops. This trust is the currency leading to shared success.

As the Declaration of Independence provided the ideals that drove the development of this great nation, management and labor developed and signed a Declaration of Excellence on July 4th, 2012. This document established our shared vision and “marked the beginning of our next two hundred years of continued outstanding service to the citizens of our Nation.” It established our values, beliefs, attitudes, and behaviors in pursuit of the perfect “shipyard worker” and “shipyard workday”. We learned that when we could look past our differences and our individual self-interests, and focused on our common shared interests in support of our people, our Ships Force partners, and our Nation, we achieve great things.

Every day our Declaration of Excellence serves as our compass to ensure we focus on the continuous pursuit of excellence. We are utilizing state of the art Learning Centers to develop our people and continue to work on creative ways to engage our workers hearts and minds in achieving mastery of our craft.

Thank you again for calling this hearing and for the opportunity to provide this written testimony.

Senator AYOTTE. I would now like to call on our Ranking Member, Senator Kaine, for his opening remarks. I would like to thank Senator Kaine for collaborating with me on this important hearing.

**STATEMENT OF SENATOR TIM Kaine**

Senator Kaine. Absolutely. Well, thank you, Madam Chair. Thanks, to Senator Rounds, for being here, and to our witnesses. I’m very excited about this.

Sometimes, you’ll run into people who will say that they worry that American manufacturing is dead or declining. Whenever I hear that, I say, “Come with me to see American workers who build and manufacture the largest items on the planet, a nuclear aircraft carrier. Come and talk to our shipbuilders and ship-repairers,” and you’re going to be convinced, not only is American manufacturing not dead, but you’re going to be convinced that these shipbuilders and repairers are really doing amazing work.

It’s amazing work. It’s important to recognize it. It’s also important not to take it for granted. We live in an environment with budget sequester and all kinds of other uncertainties, where, if we’re not careful, we can impact the current, and especially the future, workforce that we need to do this important work.

I'm so glad that Senator Ayotte wanted to have this hearing, you know, readiness on public and private shipyards. But, it's not about the yard, it's about the builders and the repairers.

In Virginia, we have a great public shipyard in Norfolk. We have the spectacular private shipyard in Newport News. We have ship-repairers, large and very small. You know, the Ship Repairers Association of Virginia, hundreds of members. Senator Ayotte is facing the same kind of reality on the ground in her State. This is a huge and important task to do this important work to keep our country safe. What we want to learn today is best practices, things that we should do more of, and things that we should be—if there are warning signs or things we should be aware of and—we need to know that, too.

The reason I'm so happy to have Mr. Bagley here is not only because of the great work that is done, in terms of the shipbuilding and submarine-building at the shipyard. This Saturday is a big day, the launch of the USS *John Warner*, which was a *Virginia*-class sub that's ready to be launched out of the Norfolk base this Saturday. It seems like there's always something being christened, or a keel being laid, or a launch.

But, in addition to the end product, I think what the Huntington-Ingalls Shipyard at Newport News has done very, very well, that we can take a lesson on within shipbuilding more broadly, is the spectacular apprenticeship program that has been in place for a century. Mr. Bagley, as part of his responsibilities, has that apprentice program as one of his areas of—I mean, he came through the apprenticeship program as a painter, beginning in 1974, but now has it as one of his areas of supervision.

This is an—a remarkably important thing for us to understand. The more we understand about it—New York Times recently had an article about apprenticeship programs, and focused on the apprenticeship program in Newport News—it offers some lessons, more broadly—to keep this industry strong, but, more broadly, in terms of how we should do education work in the country, how we should look at the spectrum of educational opportunities.

So, I'm interested to learn today what we need to do to keep our shipbuilder and -repair industry strong, but also the techniques that are used in the apprenticeship school, and how we might apply them to others.

The last thing I'll do is, I'll tell one story. I went with Senator King, last October, to India. We asked—I guess not a lot of folks ask to do this—we wanted to go visit their shipyard. Now, they have a shipyard that builds carriers. They have a shipyard in Mumbai that builds surfer ships that are not carriers and subs. Senator King, obviously, is very familiar with the Portsmouth Shipyard, very familiar with Bath Iron Works. I'm very familiar with the Virginia operations. We wanted to see how an ally did it. We went to the Mazagon Docks Shipyard in Mumbai, and the degree of pride of the workers there, and how excited they were to show us what they were doing, it's just hard to put it into words. They were so excited that a delegation from the United States Senate wanted to come and see what they had. We were really impressed with that pride. But, boy, the more we saw, the more we were even more impressed with what we see and what we do here. I actually

think a delegation from the Indian shipbuilding industry is coming to visit some American shipyards in about 2 and a half weeks, which is great, because I think that partnerships is strong. We do it better than anybody in the world. Of course people want to come and learn how we do it. But, we shouldn't take it for granted, and we need to learn what we can do to keep this industry strong.

So, Madam Chair, very, very happy to be here today with these witnesses.

Senator AYOTTE: Thank you so much, Senator Kaine.

I would like to now call on our first witness, Mr. Ray Bagley, who is Vice President of Trade Operations for Newport News Shipbuilding, for your opening remarks.

Mr. Bagley.

**STATEMENT OF RAY BAGLEY, VICE PRESIDENT OF TRADES OPERATIONS FOR NEWPORT NEWS SHIPBUILDING**

Mr. BAGLEY. First, I'd like to start by saying good afternoon and thank you, Madam Chair Ayotte, Senator Kaine, and to the other distinguished members of the Subcommittee on Readiness and Management Support.

You know, I've got to say that, for me, it is truly beyond my expression, so I'll just use words that I can best describe it. I'm delighted, excited just to be able to sit before you today and just to talk about some of the things that our industry is doing, specifically—down to the Apprentice School, specifically.

My name is Ray Bagley. Again, I am the Vice President of Trades Operations at Newport News Shipbuilding, which is a division of Huntington-Ingalls based in Newport News, Virginia. Part of my job as—has already been fore stated, and I consider it to be the most critical part of my job, is to provide and prepare a capable production and maintenance workforce to perform all the critical work that we do to serve our U.S. Navy. So, that is a tremendous pleasure and a privilege. With that comes another important element to be able to perform that, is training.

So, I would like to ask—I do have a written statement that, if it's appropriate, Madam Chair, to have permission to just read my statement.

Senator AYOTTE. Yes.

Mr. BAGLEY. Thank you.

Forgive this, what I will call, I will say, a umbrella approach, if I may. I want to just talk about our Huntington-Ingalls Industries. If you bear with me, I'll try to get through this as fast as I can. But, I want to talk about the industry, because it's appropriate, just to put it in perspective, to say that we are grateful for our country because we're able to be able to provide jobs by way of having what I call a revenue—yearly revenue of 6.8 million and, of course, a current backlog of around 24 billion. Between all of our, I will say, subsidiaries, we actually employ around 38,000 people. Of that 38,000, greater than 50 percent are our craftsmen and women who actually turn the wrench on the job. That's the way we like to say it. Not to belittle or make small of it, but it lets them know that people like myself, we truly work for our workers who are on the deck plate. We stretch from States like Virginia, of course, Mississippi, California, Louisiana, Texas, and Colorado. Of

course, you know, we are a—in our employment of our people, we put a lot of emphasis on hiring our veterans. I think, currently, man total, we are up to around better than 5,000 veterans.

So, we also provide a wide variety of products and services to the commercial, I will say, energy industry—this is some of our new endeavors—and other Government customers, including Department of Energy. So, we are looking for other avenues to continue to grow our business. I'll elaborate, as I get to my closing, why this is so important to us.

As you can see, we have a corporate slogan—I think it's pretty widely known—"Hard stuff done right." When you think about everything that, Senator Kaine, you have actually stated about the products that we build and the magnitude of their size, that is truly what we believe, and it is committed to our goal. It's a commitment to our people, our communities, and, more importantly, our country.

So, today I want to talk about Newport News Shipbuilding as the sole designer and builder and refueler of U.S. Navy aircraft carriers. We are one of two providers of the U.S. nuclear-power submarines. The ships we build, they do some of our country most important work, from, you know, taking on a fight, wherever we need to take on one, to the point of providing humanitarian efforts throughout this great world. Nothing—you know, I will say, when I see a carrier come on television, I grab all of my family in the house—I'm at the age now where I'm into my grandchildren stage—I become like a kid. I start shouting, jumping up and down. They look at granddad, like, "What is going on?" I say, "You've got to get in here, you've got to get in here," because it's only, like, 3 minutes when they play that clip on the news. We see one of our products giving humanitarian efforts, flying in supplies to places that have suffered, you know, a catastrophe or something like that, nothing makes me feel any more prouder to be a shipbuilder.

So, with that, I want to speak about the importance—the reason why I'm here—of a fully developed and productive workforce. Two things I want to highlight is, we invest heavily in workforce development. Just to give you the idea of the magnitude, yearly we spend in excess of \$80 million in our training. That training covers a variety of things that we do. Apprentice School is one of them. But, also, in that, we invest in our capital funds. We take our capital funds, invest in things like new technology. We look at, How can we get better products in, markups, anything that would help our craftsmen and women, that, when they go out to execute their work, they ready to execute to give us the best quality, to operate in the most safe way, and to give us a product that we can be the best for the taxpayers' money, under cost, and certainly on schedule.

So, the workforce community that we're talking about, we do look at the workforce investment boards. We coordinate with school districts, community colleges, certainly in the area of Virginia, and we are focused on bringing world-class CTE [career and technical education] high schools to our region.

We annually perform 75,000 training events on the waterfront. That number excludes the Apprentice School. As ship technologies have advanced, as with the *Ford*-class carriers, our internal train-

ing has also had to advance. For the *Ford*, we had to develop 50 new production training courses to provide the needed skills and knowledge to our workforce. We are up to the task and the challenges that lie ahead.

As a company, we believe so strongly in our technical training and capabilities that we are actively exploring and offering these training services to commercial non-shipbuilding clients to assist with their workforce development, as well.

Now, let's talk about the Apprentice School. I am very proud to say that I am responsible for overseeing the Apprentice School at Newport News Shipbuilding. In addition, I'm very proud to say that I am a graduate of the Apprentice School, some 36 years ago. The Apprentice School provided me an education and opened doors to experiences and opportunities, as I look back, that I don't think I would have otherwise gotten. So, today it serves as an excellent example of how intense career and technical education can prepare students for high skilled, in-demand careers through a combination of rigorous academic and real-world experiences with the potential to change the course of lives of the people who actually have this experience. In fact, it actually changed my life.

In less than 4 years, the Apprentice School will have the opportunity to celebrate centennial celebration of 100 years. So, when you think about how Newport News feel about the Apprentice School, that's an investment we started back in 1919. Even though we've seen the company go through various ups and downs, various, you know, valley experiences and back up the mountains, we've never forsaken the value of the Apprentice School to be there to help train our men and women to be excellent in what they do.

So, the Apprentice School for Newport News, we have three pillars that we love to bring students in and perfect them in. Those three pillars are craftsmanship, scholarship, and leadership.

In respect to craftsmanship, each apprentice follows a specifically designed and preapproved work rotation that ensures that experience and competence in relevant aspects of their chosen trade. The apprentices are evaluated by their craft instructors, and they receive a shop grade based on their quality, their safety, their work habits, initiatives, and their demonstrated leadership abilities. As apprentices mature through their apprenticeship, they advance from being an entry-level helper to a full-fledged mechanic. That's pretty phenomenal, to be—to turn out that product in approximately 4 years.

The second pillar: scholarship. One-hundred percent of academic courses of our curriculum, which we call the "world-class shipbuilding," are taught by our own faculty, who holds the same academic credentials as those required by colleges and universities. We currently have articulations agreement with 10 colleges and universities, and regularly work collaboratively with centers of learning. One example, Webb Institute, Old Dominion University, Thomas Nelson Community College, and certainly Tidewater Community College. We now have apprentices that offer an associate's degree. Now, with Old Dominion, we have the opportunity to offer a bachelor's degree in engineering, which has been one of my—our most recent programs that we have stood up. These relationships that remain—or, excuse me, that the integrity and quality of edu-

cation at the Apprentice School remain excellent and provides a seamless transfer of credits, which ensures a continuing education that, if the student wanted to pursue their education beyond Apprentice School, all of those credits will go along with them, and count.

All graduates will complete a Certificate of Apprenticeship in their specific trade. Those who advance to one of eight optional advanced programs will graduate with an associate's degree and, in some cases, as I stated, a bachelor's degree in engineering. One-hundred percent of our programs are registered with the Virginia Apprenticeship Council and recognized by the U.S. Department of Labor. We also are accredited, and have been for the past 32 years.

The last pillar is leadership. Shipbuilding leadership is learned through increasingly challenging assignments and opportunities. So, we create opportunity through leadership. We develop professional societies. We have student organizations. We have intercollegiate athletic programs.

One of our premier leadership program is what we call iLead. That program was based off of the United States Naval Academy. There are nine leadership principles. We team those principles up with successful leaders in Newport News. Students are challenged academically and vocationally to master those principles.

A second one of our leadership programs is what we call Front line FAST. FAST is the acronym for Foreman Accelerated Skills Training. The reason why this one is so important to us is, we had people coming out of the Apprentice School, and, instead of wanting to stay on the waterfront, they were taking jobs that would take them off the waterfront. So, we target a specific program that will train our apprentices with specific skills that, when they come out, they would be ready to hit the deck plate as a first-line foreman. That has been very successful for us.

Opportunities. Within the past 10 years, we reestablished apprenticeships in patternmaking and molder, and we introduced new programs, such as dimensional control, nuclear tests, marine engineering, and modeling and simulization. The Apprentice School is responsive, not only to meet the demands of Newport News, but what we try to do is anticipate what their future demands will be. We realize that the world is changing. It has changed a lot for Newport News. Certainly we are active business partners with the Senate CTE Caucus in fostering technical education needs for American workers. At Newport News, we have graduated 10,000 apprentices, and that is a testament to our career in technical education. Forty-four percent of our graduated apprentice are in production management. Well, let me just change that. Our production management consists of 44 percent of apprentices. So, therefore, when we look at it, we have 4,000 people each year—4,000 plus, in fact—that submit applications to enter into our apprenticeship program. Out of that 4,000, or 4,500 plus, we end up only hiring 230. So, we get the chance to really take some very, very good students that are coming in. The Apprentice School, for one reason, can be an alternative for people who may not—for students who may not want to go to college, and they want to choose another path. Also, we are able to pick up students that have gone to college and have gotten their bachelor's, and when they—they are

looking for a job, jobs are hard to find. So, we target those particular students, as well, and they come in with a different skill set. At least they have gone through that experience, so there's a certain level of maturity that they bring into the company with. So, again, we are able to pick what I'll call the cream of the crop.

Of the 800 current students that we have in the program, you would notice that we've actually had interviews with FOX News, articles were written on Apprentice School. Most recently, there was an article written about the Apprentice School in the New York Times. I've got to tell you, when we see those articles, it is very humbling for the craft instructors, for the apprentices that come in. Instead of the pride that rises up in a negative way, it's a very humble pride that we are very proud of what we are able to do.

The Apprentice School is an investment. As I shared with you, we spend a lot of money. But, it's an investment that we have to make. It's an investment in our people. It's an investment in our company. It's an investment in our local regional area. It's an investment in our State. Of course, as you go up, it's an investment in our Nation. So, there is a tie with the Apprentice School and what we do in Newport News that stretches across this United States of America.

Workload challenges. I'll conclude with this one. The best way to develop shipbuilders is to continually allow them to build ships; meaning, provide them the workload to continue to learn and exercise their craft. This is also the best and most efficient way to build ships. Unfortunately—and this is no news—Newport News Shipbuilding will be facing what we call a multiyear workload gap that's coming up in the near future. We get concerned, because we need those non-apprentices to be able to complement our apprentices so both of them get the benefit to grow and learn, and to give our Nation the best product ever.

But, I want to say, by—I'll conclude by saying, even though we are facing this valley, I want to let everyone know that the Apprentice School has a commitment to remain strong. We have a commitment to keep our accreditation high, to be reputable. We have a commitment that, when we ride through this valley and come out on the other side, we will have produced the leaders that are ready to lead us into the next future.

So, thank you very much, and thank you for your time.

[The prepared statement of Mr. Bagley follows:]

PREPARED STATEMENT BY MR. RAY BAGLEY

INTRODUCTION

Good afternoon and thank you. Chairwoman Ayotte, Ranking member Kaine and distinguished members of the subcommittee on Readiness and Management Support. I am delighted to represent Newport News Shipbuilding in today's discussion. I want to thank the subcommittee for the invitation to share my thoughts with you today.

My name is Ray Bagley. I am the Vice President of Trades Operations at Newport News Shipbuilding which is a division of Huntington Ingalls Industries based in Newport News, Virginia. Part of my job is to provide and prepare a capable production and maintenance workforce to perform our work—that includes training them.

## GENERAL INFORMATION ABOUT HII/NNS

Huntington Ingalls Industries is an American Fortune 500 company with \$6.8 billion in annual revenues and a work backlog of more than \$24 billion.

We employ almost 38,000 workers at our facilities in Virginia, Mississippi, California, Louisiana, Texas, and Colorado. Among these are more than 15,000 craftsmen. We employ more than 5,500 veterans. Many of our employees are third, fourth, and fifth-generation shipbuilders, and we have more than 1,000 “Master Shipbuilders” employees with 40 or more years of continuous service to the company. Of which I am one.

We also provide a wide variety of products and services to the commercial energy industry and other Government customers, including the Department of Energy. We continuously grow our business in similar marketplaces.

As you can see, we do difficult work. Our corporate slogan is “Hard Stuff Done Right”—and we’re committed to that goal and to our people, our communities and our country.

## GENERAL INFORMATION ABOUT NNS

Today, Newport News Shipbuilding is the sole designer, builder and refueler of U.S. Navy aircraft carriers and one of two providers of U.S. Navy nuclear powered submarines. The ships we build do some of our country’s most important work. Simply put, there is no other place in the world capable of doing the work we do. It is my privilege and honor to call myself a Newport News Shipbuilder and alumnus of the Apprentice School, and to work alongside the finest group of shipbuilders in the world where I still learn something new and exciting every day.

## HII/NNS WORKFORCE DEVELOPMENT

I want to speak about the importance of a fully developed, productive workforce. We invest heavily in workforce development, expending over \$80 million annually in various types of training, Apprentice School, Night School, and Tuition Reimbursement programs that prepare our workforce to be effective in the important job of building and repairing our Country’s Navy ships. We continue to invest precious capital funds to modernize our training facilities with state-of-the-art technology, and with real world, Production mock-ups that allow our workers to learn production crafts in a safe, controlled environment. Especially through The Apprentice School, we partner with State and local officials and education providers to jointly build a workforce and a community. We are actively involved with the Workforce Investment Boards, School Districts and Community Colleges in our area of Virginia. We are focused on bringing world-class CTE High Schools to the region.

We annually perform 75,000 training events on the waterfront, and that number excludes the Apprentice School. Welding is a critical skill for America and for Shipbuilding. We maintain 130 welding booths that facilitates the instruction of hundreds of Welders on the precise, intricate processes needed for our ships. As ship’s Technologies have advanced, as with FORD class aircraft carriers, our internal training has also had to advance. For the FORD, we had to develop over 50 new production training courses to provide the needed skills and knowledge to our workforce. We are up to the tasks and challenges that lie ahead.

As a company we believe so strongly in our technical training strengths and capabilities that we are actively exploring offering these training services to commercial, non-shipbuilding clients to assist with their workforce development.

All of the above is done with safety and safety training in mind. We value our employees above all else and will not compromise on maintaining a safe and healthy work environment for them.

## THE NNS APPRENTICE SCHOOL

I am proud to say that I am also responsible for overseeing The Apprentice School at Newport News Shipbuilding. I’m especially proud given that I graduated from the school some 36 years ago. The Apprentice School provided me an education and opened doors to experiences and opportunities. Today, it serves as an excellent example of how intense Career and Technical Education can prepare students for highly skilled, in demand careers through a combination of rigorous academics, and real world experiences with a potential to change the course of their lives, as it has done for me.

In less than four years, The Apprentice School will celebrate its Centennial Celebration of 100 years. From the first week as an apprentice, students begin on-the-job training under the watchful eye of a Craft Instructor. Soon thereafter, apprentices also begin a rigorous academic curriculum as well as trade related education

related to their specific trade. To round out each apprentice, they are offered additional opportunities to develop and mature their leadership skills through extracurricular activities including intercollegiate athletics, professional societies, and student organizations. Their experiences vary and can take from four to eight years, but during that duration The Apprentice School relentlessly focuses on developing students in “Craftsmanship, Scholarship and Leadership”. Those pillars contribute to the success of Newport News Shipbuilding by providing a continuous supply of graduates who are prepared to lead the industry in their chosen field of specialization.

#### CRAFTSMANSHIP

In respect to Craftsmanship, we believe this to be a core requirement of every apprentice. At Newport News, all apprentices begin their careers in one of 19 individual trades. Each apprentice follows a specifically designed and pre-approved work rotation plan that ensures experience and competence in relevant aspects of their chosen trade. Apprentices are evaluated monthly by their craft Instructors and receive a shop grade based on their quality of work, safety, work habits, initiative and demonstrated leadership. As apprentices mature through their apprenticeship, they advance from entry level helper to lead mechanic. It is this journey where apprentices transform from a willing follower to a humble leader.

#### SCHOLARSHIP

In respect to Scholarship, it too serves as an important pillar of The Apprentice School. One hundred percent of academic courses of our Core Curriculum, World Class Shipbuilding, are taught by our own faculty members who hold the same academic credentials as those required by colleges and universities. Our academic faculty has graduate degrees including mathematics, physics, naval architecture or marine engineering and currently include four PhD's and three doctoral candidates. They bring a wealth of life experiences coming from various branches of the United States military, the business community or education. We currently have articulation agreements with 10 colleges and universities and regularly work collaboratively with centers of learning including Webb Institute, The College of William and Mary, Old Dominion University, Thomas Nelson Community College located in Hampton Va., and Tidewater Community College located in Virginia Beach Va. We now have Apprenticeships that offer an Associate's degree and now with Old Dominion University, a Bachelor's Degree in Engineering. These relationships ensure that the integrity and quality of education at The Apprentice School remains excellent and provides a seamless transfer of credit and continuing education opportunities for apprentices as they continue to pursue their academic interests.

All graduates will complete with a certificate of apprenticeship in their trade and those who advance to one of eight optional advance programs, including cost estimator, designer, modeling and simulation and production planning, will graduate with an associate's degree and in some cases, a bachelor degree in Engineering. One hundred percent of our programs are registered with The Virginia Apprenticeship Council and recognized by the US Department of Labor. We are also accredited and have been for the past 32 years by the Accrediting Commission of the Council of Occupational Education, a national accrediting agency based in Atlanta, Georgia.

#### LEADERSHIP

We also hold Leadership as a core competency, a pillar of The Apprentice School. Shipbuilding leadership is learned through increasingly challenging assignments and opportunity. So we create opportunity through leadership development programs, professional societies, student organizations and intercollegiate athletics.

Our premier leadership program is iLead which was benchmarked at the United States Naval Academy. Based on nine leadership principles and highly successful leaders at Newport News, students are challenged academically and vocationally to master those principles. Frontline FAST, short for Foreman Accelerated Skills Training, has also become ingrained in the development of successful leaders at the school. This program develops high performing apprentices for frontline supervisor positions through blended approach of craft competencies, leadership practices and coaching.

Our philosophy at The Apprentice School is we create opportunities for apprentices to grow and polish their leadership skills outside of the shipbuilding production environment. Student government, professional societies and community service are all important components of growth and maturity. So student chapters of professional societies: Society of Naval Architects and Marine Engineers, Society of Manu-

facturing Engineers and a student Chapter of Jaycees, the first collegiate chapter formed in the United States, are examples of that investment.

Intercollegiate athletics have been a part of The Apprentice School since it formally began in 1919. Today, we field six varsity programs including golf, football, wrestling, men's and women's basketball and baseball. By the way, we just won the USCAA National Small College Championship in baseball.

#### OPPORTUNITIES

Within the past 10 years, we re-established apprenticeships in patternmaker and molder and introduced new programs in dimensional control or precise measurement, nuclear test, marine engineering and modeling and simulation. The Apprentice School is responsive not only to meet the demands of Newport News Shipbuilding but to anticipate them.

The world is changing and Newport News Shipbuilding is active with other businesses, as supported by the Senate's CTE Caucus in fostering technical education needs for American workers. At Newport News Shipbuilding, some 10,000 graduates of The Apprentice School are a testament to career and technical education. Forty four percent of the entire production management team are graduates of The Apprentice School. Annually, some 4,000 people inquire about attending The Apprentice School and being selected for one of the approximately 230 openings. Of our 800 students, over half of those selected today have attended college. FOX News recently ran a segment about the school titled "Beyond The Dream" and The New York Times also recently highlighted The Apprentice School in an article titled A new Look at Apprenticeships. As Mr. Mike Petters, President of Huntington Ingalls Industries says, "Do you take someone to the end of the pier and push them off to see if they can swim, or do you give them swimming lessons?" We prefer swimming lessons and The Apprentice School is that investment. An investment in our people; an investment in our company; and an investment in our country.

#### WORKLOAD CHALLENGES AHEAD

The best way to develop Shipbuilders is continually allow them to build ships, meaning, provide them the workload to continue to learn and exercise their craft. This is also the best and most efficient way to build ships. Unfortunately, we are quickly approaching a multi-year workload gap that will likely impact the continued learning of workers in several crafts. It is important that the potential impacts or workload valleys need to be fully understood, as we communicated to Deputy Assistant Secretary of the Navy for Ship Programs in the November Shipbuilding Industrial Base Report. Perhaps this is a topic at a different hearing or setting. We are committed to keep our Apprentice program strong and develop leaders for the challenges ahead.

Thank you for the opportunity to address you here today and I look forward to any questions you may have.

Senator AYOTTE. Thank you, Mr. Bagley.

I would now like to introduce our second witness, Mr. Paul O'Connor, President of the Metal Trades Council at the Portsmouth Naval Shipyard.

Mr. O'Connor.

#### **STATEMENT OF PAUL R. O'CONNOR, PRESIDENT OF THE METAL TRADES COUNCIL AT PORTSMOUTH NAVAL SHIPYARD**

Mr. O'CONNOR. Thank you. Chair Ayotte and Ranking Member Kaine and other distinguished members, thank you for this opportunity to speak, to give testimony at this subcommittee today.

I have submitted a longer written statement, so I can speak a shorter statement to open. I would ask that my written statement be submitted for the official record.

Senator AYOTTE. Absolutely.

Mr. O'CONNOR. Thank you.

Before I begin, I need to say a couple of things. First of all, if Steve Fahey was here beside me, he'd say the same things I'm saying, because, at our shipyard, we value our labor/management rela-

tionship, we value collaboration, we value working together, because you can accomplish so much more when we work together.

I also want to say that I had to chuckle when Mr. Bagley was talking about aircraft carriers—seeing an aircraft carrier, and how he feels about that, and bringing his family, “There’s an aircraft carrier.” Well, I was at the movies last month with my daughter, and, before the movie started, there was a commercial that came on, on the screen, a Navy commercial, and a submarine breached. So, I yell out, “Submarines.” My daughter was embarrassed, but I thought it was awesome.

[Laughter.]

Mr. O’CONNOR. So, what you will be hearing from me today—there’ll be a few recurring themes. One is, men and women at the jobsite have the best ideas on creating efficiencies at the jobsite. One of the things to do at the shipyard is, we want to spread our philosophies of workforce engagement throughout the entire Federal sector. We have a lot of dignitaries come to the shipyard. Senators—many Senators come to our shipyard. The Secretary of Labor was at our shipyard. Vice President Biden has been there. Many admirals. Many, many dignitaries come to our shipyard to see how we do business. I tell them all, we—men and women at the jobsite have the best ideas on creating efficiencies at the jobsite. They all nod their heads, like we all did when I said it in this room. The fact of the matter is, in too many industries, that isn’t the reality. The reality is, a handful of individuals are the idea people, and kind of what they say goes. So, what we’re doing at Portsmouth is truly listening to our workforce. We want their ideas—the men and women at the jobsite.

I’ll also talk more than once about our performance. Maximum performance requires maximum workforce engagement. We want—at our shipyard, there are about 6,000 men and women—we want 6,000 men and women engaged at our shipyard in the daily operations of our business. For each man and woman who feels disenfranchised, we further reduce the likelihood that we will reach our fullest potential. So, we want everyone engaged.

Finally, I’ve already said it, we can accomplish so much more when we all work together. Again, it sounds so simple, but it’s so easy to find reasons or excuses to not work together, to not listen to someone. We’re trying to work past that at the Portsmouth Naval Shipyard.

I will talk with some granularity about specific initiatives that we have ongoing at Portsmouth that are really having a positive impact on our performance and our engagement of the workforce. But, more than the individual initiatives, the most important thing we’ve done at our shipyard since we’ve begun these initiatives in 2010 is listen to our workforce. I mean, that is absolutely the most important thing we’ve done, because all of the initiatives that we will talk about came from the men and women doing the work. None of what you will hear today would have happened had we not listened to the workforce. It’s that important to us. You want to engage your workforce, you listen to them. You listen to their ideas. You act on their ideas. You create positive feedback, quality feedback. That’s what it’s all about for us.

So, like I said, our shipyard has about 6,000 men and women. Imagine 6,000 men and women coming to work in the morning, knowing their voices will be heard, and what that means for each one of them, you know, and what that means for our shipyard. For each of them on their way in to work, you know, how does it feel, right through to the end of the day, when they go back to bed? You know, it's a whole new environment when you wake up and you know your voice is going to be heard. Beyond that, imagine embedding those same philosophies throughout the DOD [Department of Defense]. Imagine 800,000 men and women coming to work, knowing their voices will be heard, and the positive impact that can have on performance.

So, we begin our workforce engagement initiatives in 2010 after a few years of flat performance. None of the performance enhancement initiatives that we implemented in those few years were having any major effect, or really no effect at all. So, in 2010, a handful of shipyard leaders—there were six labor leaders and six management leaders—got together and we tried to figure out what we could do to maybe get performance going a little bit faster, a little bit better.

We came up with a program called RSVP, Renewal of Shipyard Values and Pride. We thought that if we could align values, that might improve performance. Our business model was heavily focused on schedule, which you'd think that would be the way to run the business, but, quite frankly, when the focus is only the schedule, bad behaviors can infiltrate, and it becomes a negative element. We thought, you know, align our values, and let's see where that takes us.

So, we began these RSVP sessions with our workforce. We bring them in, like, maybe 100 at a time into our auditorium, and we talk about shipyard history. Mostly we wanted to listen to the workforce, hear what they had to say. We offered a scenario: "Today is a perfect shipyard day, and you are the perfect shipyard employee. What does that look like to you? What does it mean when you get up in the morning, when you're coming to work, when you get your job and you're briefed from your supervisor? What does it look like when you get your tooling, your materials, and you go to the boat to do your job? What does it look like when you interact with other mechanics, other tradesmen and women or managers?" The comments were amazing, they were eye-opening. There was very little focus on schedule and process. Our workforce talked about values, beliefs, attitudes, behaviors. They wanted a greater sense of ownership in the day-to-day operations of our shipyard. They talked about integrity, trust, respect, and dignity at the jobsite. You know, and we were hoping to be able to align values. What our workforce showed us was that they had their values aligned, they knew what they wanted, and we hadn't been listening.

So, now we're listening. It's making a huge difference. What began in 2010 as a vision between a handful of shipyard leaders has grown in 5 years to the initiatives that have grasped the hearts and minds of our workforce. We have American leaders in industry turning their heads, paying attention to what we're doing in Ports-

mouth. You know, we're doing incredible things. Quite frankly, in the process, our performance has vaulted.

So, I will save the rest of my statements, probably as I answer questions.

Again, I want to thank you, Madam Chair and Senator Kaine, and thank you for being here and letting me testify today.

[The prepared statement of Mr. O'Connor follows:]

PREPARED STATEMENT BY MR. PAUL R. O'CONNOR

Chair Ayotte and Ranking Member Kaine, as well as other distinguished members of the subcommittee, thank you for the opportunity to testify on shipyard best practices.

I admire this subcommittee's goals of identifying public and private shipyard best practices, assessing the impact of those practices on performance, and encouraging their dissemination across the Department of Defense.

I believe Portsmouth Naval Shipyard has pioneered several best practices that have improved performance there and can do the same elsewhere.

In 2010, in order to improve performance at Portsmouth Naval Shipyard, a joint Labor/Management (L/M) team initiated the Renewal of Shipyard Values and Pride (RSVP) program. Up until that point, our shipyard business model focused primarily on schedule and process. Our collective goal was to reinvigorate our workforce by focusing on values. Of course, we did not ignore schedule and process. We simply believed aligning values creates the greatest opportunity for success.

Through a series of RSVP sessions, our L/M team introduced most of our workforce to our value-based construct with the understanding that our values form our beliefs which drive our attitudes, behaviors, and actions. We believe if we get the values "right," we will ultimately improve performance.

In these RSVP sessions we offered one basic premise: Today is the perfect shipyard day and you are the perfect shipyard employee ... what does that look like to you? We logged every comment, every idea, and every frustration. The message from our workforce was loud and clear. Their driving concerns were value-based not schedule/process-based. They wanted their voices heard. They also wanted a greater understanding of how their individual pieces fit into the greater shipyard picture. It was not enough to know, myopically, what their specific job was for the day. They wanted to know how that job fit into the general overhaul and how the overhaul fit into the shipyard's larger maintenance program. The more we understand of the 'big picture,' the more likely we are to catch inconsistencies at the jobsite and within our purview. Our workforce wanted more ownership in the shipyard. Up until now, we had made them responsible and accountable without ownership (responsibility and accountability with no buy-in). Our workforce wanted a greater sense of trust, respect, dignity, and integrity.

With all this information, the volumes of comments and ideas expressed by our workforce through RSVP, our L/M team began drafting the document, a collective shipyard vision which became known as our Declaration of Excellence (DoE). The DoE was truly inspired, drafted, and, ultimately, validated by our shipyard workforce. Our DoE focuses on values, beliefs, attitudes, and behaviors. It speaks of teaching and learning. I can learn as much from a new employee as that employee can learn from me. Our DoE speaks of respect, trust, integrity, and dignity, both personally and as teams. Our DoE empowers our workforce to stand-up and speak-up while focusing on professionalism and civility. Our DoE is our shipyard vision, as well as the foundation of a collaborative, value-based business model.

As a result of our shipyard's RSVP sessions, our L/M team developed two primary tenets to guide our way forward:

1. *Men and women at the jobsite have the best ideas on creating efficiency at the jobsite.* Although everyone nods in agreement, historically, throughout industry, only a handful of senior managers are considered the 'idea folks.' If you want to engage a workforce quickly and effectively, listen to their ideas, act on them, and provide quality feedback. Our shipyard employs approximately 6,000 men and women. Imagine 6,000 men and women coming to work every day knowing their voices will be heard and what that means for each of them and our shipyard from the moment they get up in the morning, to when they go to bed at night. Now, embed that philosophy throughout DOD. Imagine 800,000 men and women coming to work knowing their voices will be heard.
2. *Maximum performance requires maximum workforce engagement.* For each employee not engaged, for each employee we leave behind, we limit our perform-

ance potential. When we engage a workforce, we engage their hearts, as well as their minds.

During the RSVP sessions, our workforce came up with some amazing ideas. Here are two examples:

1. *Learning Centers*—Our workforce has developed elaborate Learning Centers (mock-ups) which allow new employees the opportunity to learn their trade and experienced employees the opportunity to ‘brush-up’ on a job in a safe environment. These Learning Centers are actual submarine components removed from de-commissioned submarines and assembled in our trade’s shops. These Learning Centers allow trades and assist-trades to work together in coordination, preparing for specific jobs on our submarines. These Learning Centers are helping create a synergy between trades and support codes (i.e. engineers, sailors, inspectors, etc.). Our structural shop has built a Learning Center, which is a full scale replica of a section of a lower-level 688 Class submarine machinery space. Our Painter/Blasters have put together a Learning Center consisting of a series of enclosed tanks cut from decommissioned submarines. Learning Centers are popping-up all around our shipyard helping to create camaraderie, as well as efficiency. Prior to the concept of Learning Centers, our new employees’ first experience on actual submarine components and/or submarine compartments was on the submarine. When a new employee makes a mistake in a Learning Center, it is a learning moment. When a new employee makes that same learning mistake on a submarine, it is re-work, resulting in delays and cost growth. Up until the wide-spread inception of our Learning Centers, we could train employees only when jobs were scheduled on submarines and only on those submarines needing that specific work. Our Learning Centers have reduced training time, in some cases, from years down to weeks. The Learning Centers have created an engaged, collaborative, skilled, and productive workforce, while reducing training time and re-work.
2. *Material Control Mechanics*—A Material Control Mechanic (MCM) will locate, procure, and pre-stage tooling and material for numerous jobs within the trades. As a trades mechanic, once I brief my job with my supervisor, I walk 50 feet to my shop’s MCM staging area, locate the bin associated with my job, take the tooling and material, and proceed to my jobsite. Prior to the inception of the MCM, each trades mechanic was responsible for finding their own tooling and material throughout the shipyard before heading to the jobsite—this was time-consuming and frustrating.

These two ideas—Learning Centers and MCM’s—are estimated at saving our shipyard \$5 million annually. That is the value of an engaged workforce. These ideas only exist because we listened to our workforce. This point cannot be overstated and must not be undervalued. The most important aspect of all our workforce engagement initiatives is this: We listen to our workforce.

Our L/M team has developed a robust, employee-focused Ideas Program. This Ideas Program is a joint L/M initiative with labor and management co-leads in all trades shops. We have Idea Boards throughout the shipyard. If you have an idea, you put it on the board. As the idea originator, you are kept actively engaged with the idea throughout the process. This program is proving to be quite successful. Our L/M team sees the actual ideas as a secondary benefit. The primary benefit is this: once an employee engages in ideas, he or she will most likely be engaged in all aspects of our shipyard organization.

Prior to the inception of our shipyard’s RSVP Program, our performance was flat with many projects, our submarine overhauls over budget or behind schedule. Since 2012, and since our RSVP initiatives have gained traction, all our projects have been ‘In-The-Green’, which means on budget and on schedule. In that timeframe, most of our projects have been under budget, ahead of schedule, or both. The only significant change in that timeframe has been our workforce engagement initiatives. Coupling the Learning Centers and the MCM program with a newly designed Ideas Program has helped to re-invigorate our shipyard workforce. Our focus on collaboration and inclusion is helping to break down barriers which have existed for decades, barriers built by perpetuating archaic stereotypes and barriers built into our work processes and practices.

We are not talking about a few process changes. We are talking about a significant cultural shift, a shift which fosters creativity and collaboration where we are all empowered to stand-up and speak-up, to think out-of-the-box, to teach-and-learn with intent, to be reliable, respectful, civil, and professional.

## WHAT'S NEXT?

Our current initiative, Portsmouth Pride, Respect, and Ownership (PRO), is designed to further engage our workforce by connecting-the-dots since our initial roll-out of RSVP. It also introduces our newest employees to our collaborative process, our focus on trust, respect, integrity, and dignity at the jobsite, and our expectation of teaching and learning with intent. This initiative will be ongoing, continually striving to reach the ideals and vision of our DoE.

We are currently working with the Naval Sea Systems Command (NAVSEA) Labor/Management Partnership Forum to promote our DoE philosophies throughout the NAVSEA maintenance community. As co-chairs of this partnership forum, Admiral Hilarides (Commander of NAVSEA) and Ron Ault (Metal Trades Dept, AFL-CIO) continue to work with our shipyard, introducing and fostering our vision enterprise-wide.

A parallel initiative (New Beginnings) exists within DOD, an unprecedented collaboration of Labor and Management. In 2011, thirty federal sector labor leaders joined thirty federal sector managers to create, develop, and recommend improvements within three arenas of DOD's federal personnel system: Performance Management, Hiring Flexibilities, and Awards. These sixty men and women represented a cultural and professional cross-section of DOD's organizational structure. Our desire and intent to collaborate drove a value-based focus within the three arenas. As a member of this initiative, I could not help but realize the obvious; our value-based focus was in concert with our Portsmouth Naval Shipyard workforce engagement initiatives. Both initiatives require, promote, and embed philosophical elements to achieve the necessary cultural shift in order to maximize their greatest potential.

At this point, we are less than one year away from our initial roll-out of DOD's adopted changes recommended by our New Beginnings joint L/M teams. Our guiding body, the DOD Roundtable (the highest level L/M partnership forum in DOD), has been involved from the start and has matured into a highly functional, highly collaborative, working forum.

I see this initiative as a means of advancing an overdue and much-needed cultural shift in DOD.

## CONCLUSION

While we have made tremendous progress at Portsmouth Naval Shipyard and our performance has been strong, our work continues. Cultural change does not occur overnight. Yet, what began as a vision for a handful of shipyard leaders (both Labor and Management) back in 2010 has grown in five years to grasp the hearts and minds of our workforce and has turned the heads of America's leaders of industry, both Labor and Management in both the public and private sectors. The success of our workforce engagement initiatives can be measured by our performance. We are shifting from a fear-based business model to a value-based business model and that transition is making all the difference. Working collaboratively compels individuals to develop relationships breaking down those self-created, self-imposed barriers. The Portsmouth Naval Shipyard is the U.S. Naval Maintenance Enterprise Performance Standard-Bearer. Imagine where our shipyard will lead our Navy when all 6,000 of us at the Portsmouth Naval Shipyard understand, exemplify, and promote the values of our DoE. Further, I envision our DoE philosophies spread across all of DOD and throughout the entire Federal Sector. Through collaboration, with vision, our initiatives will transform the way our Government does business.

It will take a lot of hard work but let me be very clear. Our shipyard is a federal, nuclear, military facility. It is difficult to find a more rigid, hierarchal-managerial construct than that. If we can do it, everyone can do it. We can accomplish so much more when we all work together. The Portsmouth Naval Shipyard will lead our Nation as we lead our Navy towards a more successful future.

Thank you again for the opportunity to testify before this subcommittee.

Senator AYOTTE. Well, thank you, Mr. O'Connor.

I want to thank both of you for being here. Now I think we'll all ask you questions.

I wanted to start, Mr. O'Connor, with—I know that each member at—at your desk, you have what's called the "Declaration of Excellence." Can you tell us what the Declaration of Excellence is and how you put this together, between labor and management, and how it translates into the everyday work done at the shipyard?

Mr. O'CONNOR. I can. The Declaration of Excellence—all that information we got from the workforce in RSVP sessions, the—you know, the values and all the mountains of data they supplied us—the 12 of us who began this process, we went off-yard with all this information, and we spent a week organizing the information from the workforce. We ended up putting it into a document, our Declaration of Excellence. All the words, all the thoughts and the values in the Declaration of Excellence came from our workforce through RSVP. You may—you might think that this document bears some resemblance to another famous Declaration. That was done with intent. You know, we focus on history—our shipyard history, our national history. Right down to—we had the same number of delegates sign our Declaration that signed the Declaration of Independence.

Senator AYOTTE. You have it posted at the shipyard.

Mr. O'CONNOR. We have it posted all over the shipyard, yeah. It is a vision for our shipyard that—if you really—you'll notice there are—there is no current today's lingo, buzzwords, on—business models. It's all value-based language. We talk about trust, respect, dignity, integrity. We talk about teaching and learning. That's really important. The—you think about it. I can learn as much from a first-year apprentice as that apprentice can learn from me. It's all about diversity, open-mindedness, working together. The document itself, the 56 signatures, some of them are senior managers, some of them are senior labor, and many of them are tradesmen and engineers—tradesmen and women and engineers. Our shipyard commander signed the Declaration, as well.

So, it truly is a document that was inspired, drafted, and validated by our workforce. It's not just a document. You know, it could just be a piece of paper up on the wall if that's what we wanted, but that's not the case. We have a three-pronged philosophy with our Declaration:

Prong number one is to embed the philosophies of our Declaration into our existing work documents, our shipyard strategic plan, and even into our technical work documents. You know, talk about teaching and learning and trust, respect, professionalism, civility, all of it. Embed it into our documents to institutionalize the language.

The second prong is to turn ideas and thoughts into action. That's critical. I talked about that with our workforce's ideas—you know, listen to what they say, act on those ideas, and give them positive feedback. Because ideas and thoughts without action are just ideas and thoughts.

The third prong is, spread the philosophies of our Declaration beyond the gates of our shipyard. I'm here. Wherever I go, I talk about the Declaration of Excellence, I talk about RSVP, I talk about workforce engagement, collaboration. Wherever I go, I get rave reviews, because it just makes sense. It's hard. You know, it's an easy concept, but it's really hard work. It's relationships. It's the hard stuff.

I've already said, you know, my personal vision is, we can spread our philosophies beyond the gates of our shipyard. We can do that. I want to do that. I want to help do that. Not just in NAVSEA, not just in DOD, but throughout the entire Federal sector. I mean,

imagine if we could embed philosophies of trust, respect, dignity, integrity, teaching and learning, civility, professionalism throughout the entire Federal sector. Imagine how many people are in the Federal sector. I don't know. But, imagine that they all get up in the morning and come to work knowing their voices will be heard. What an impact that will have. We can transform the way our Government does business. We're doing it at the shipyard at a small scale, relatively speak. Our performance has vaulted because of our engagement initiatives, because we're listening to our workforce, we're valuing their knowledge and their understanding, and we're utilizing their skills in a way that we haven't in the past. It's making all the difference. I sincerely believe that we can transform our Government. We want to help. We want to be a part of that.

Senator AYOTTE. Thank you for sharing that. As I hear you speak here, I think about—these are—would be very good values in the Congress, as well. So—

Mr. O'CONNOR. Oh, I was—

Senator AYOTTE.—thank you—

Mr. O'CONNOR.—going to mention that.

Senator AYOTTE.—thank you for sharing—

[Laughter.]

Senator AYOTTE. Thank you for sharing that.

I now want to turn it over for an opportunity for Senator Kaine to ask questions. Thank you.

Senator KAINE. Thank you, Madam Chair. I'd like to put in the record, first—we've talked about this New York Times piece. Mr. Bagley testified to it. July 13, 2015, title, "A New Look at Apprenticeships as a Path to the Middle Class," and it really focuses upon this apprenticeship program that was founded in 1919, and others. But, if we could put that in the record, I would appreciate it.

Senator AYOTTE. Absolutely.

[The information referred to follows:]

A NEW LOOK AT APPRENTICESHIPS AS A PATH TO THE MIDDLE CLASS

New York Times, July 13, 2015

Nelson D. Schwartz

NEWPORT NEWS, VA—With its gleaming classrooms, sports teams and even a pep squad, the Apprentice School that serves the enormous Navy shipyard here bears little resemblance to a traditional vocational education program.

And that is exactly the point. While the cheerleaders may double as trainee pipe fitters, electricians and insulators, on weekends they're no different from college students anywhere as they shout for the Apprentice School Builders on the sidelines.

But instead of accumulating tens of thousands of dollars in student debt, Apprentice School students are paid an annual salary of \$54,000 by the final year of the four-year program, and upon graduation are guaranteed a job with Huntington Ingalls Industries, the military contractor that owns Newport News Shipbuilding.

"There's a hunger among young people for good, well-paying jobs that don't require an expensive four-year degree," said Sarah Steinberg, vice president for global philanthropy at JPMorgan Chase. "The Apprentice School is the gold standard of what a high-quality apprenticeship program can be."

Long regarded by parents, students and many educators as an off ramp from the college track, apprenticeships are getting a fresh look in many quarters. The idea has recently captured the attention of several presidential candidates from both parties, with employer-oriented apprentice programs increasingly seen as a way to appeal to anxious Americans looking for an alternative route to a secure middle-income job.

Last month, Hillary Rodham Clinton proposed a plan that would offer companies a \$1,500 tax credit for each apprenticeship slot they fill. In a speech laying out his economic plan on Tuesday, Senator Marco Rubio of Florida, a Republican primary

contender, vowed to expand apprenticeships and vocational training if he makes it to the White House.

Wisconsin's Republican governor, Scott Walker, who formally entered the presidential primary race on Monday, has promoted apprenticeships in his state and increased funding for them even as he has cut aid to Wisconsin's vaunted university system.

"We know this works," said Thomas E. Perez, the labor secretary, describing how big companies have long trained young people in Germany, which has 40 apprentices per 1,000 workers, compared to about three per 1,000 in the United States. "It's not hard to figure out why the Germans have a youth unemployment rate that is half what it is here."

But there is a downside to the innovative approach used at the Apprentice School in combining skills-based education, a college-like experience and a virtually free ride for its nearly 800 students (even class rings and textbooks are covered): This approach has been rarely duplicated elsewhere.

Despite prominent mentions by President Obama in several State of the Union addresses and bipartisan support in Congress, apprenticeship programs have struggled to gain a foothold among employers.

Furthermore, the programs were devastated by the sharp losses in manufacturing and construction jobs that started with the last recession.

Between 2007 and 2013, the number of active apprentices in the United States fell by over one-third, from about 451,000 to just under 288,000, according to Labor Department data. In 2014, that number increased for the first time since the recession, rising by 27,000.

Now, Mr. Perez has set a goal of doubling enrollment by 2018.

In late June, he traveled to North Carolina, where he was joined by two local Republican members of Congress, to spotlight Washington's efforts to expand apprenticeships, including \$100 million in new grants to be awarded this autumn.

In Mooresville, touring the factory floor and giving a speech at Ameritech Die & Mold, which has teamed with local high schools and a nearby community college to recruit and train its apprentices, Mr. Perez said what was needed was not simply more Government financing or new private-sector programs.

"At the educational level, we need a comprehensive strategy to change the hearts and minds of parents," Mr. Perez told the audience, which included several parents of current Ameritech apprentices. "There are highly selective, four-year colleges that are easier to get into than many apprenticeship programs."

The Apprentice School gets more than 4,000 applicants for about 230 spots annually, giving it an admission rate about equivalent to that of Harvard.

Perhaps the greatest reason that students and their parents are showing more interest in apprenticeships is the financial equation. While the typical graduate from a four-year private college in 2014 left campus with a debt load of \$31,000 and started work earning about \$45,000 a year, Apprentice School students emerge debt free and can make nearly \$10,000 more in their first job.

Other programs are equally promising. For Ameritech workers like Shane Harmon, who completed an apprenticeship there in 2012 and earned an associate degree at Central Piedmont Community College as part of the program, a middle-class lifestyle is already within reach.

Many of his high school friends who have graduated from college are back home living with their parents, Mr. Harmon said. By contrast, at age 23, he already owns a home, has no student debt and is paid \$18 an hour.

"I didn't want to sit in a classroom for four years, not knowing if I'd have a job," he said. "I'm a hands-on guy."

The trade-offs between college and an apprenticeship inevitably raise one of the thorniest educational and economic issues today: Who should or should not go to college.

When the former Pennsylvania senator Rick Santorum, a Republican presidential contender in 2012 who has begun a long-shot campaign again, brought up the question during his last primary bid, he was mocked in some quarters.

And economic data clearly shows that most holders of bachelor's degrees will earn far more over the course of their working lives than typical high school graduates with technical training, and more than recipients of associate's degrees.

But that's not the real issue for many young people, said Mike Petters, chief executive of Huntington Ingalls, which owns and financially supports the Apprentice School.

"If you're in the two-thirds of Americans that don't have a college degree, how do you feel if someone says to be a success, you have to have it?" Mr. Petters said. "It shouldn't be a requirement for a middle-class life. We have people in our organization who don't and are great, who've raised families and had great lives."

It is not necessarily an either-or proposition, according to the director of the Apprentice School, Everett Jordan. A new partnership between the Apprentice School and Old Dominion University in nearby Norfolk, Va., allows apprentices to earn a bachelor's degree in five to eight years, paid for by Huntington Ingalls.

Mr. Jordan, himself a 1977 graduate of the Apprentice School, notes that other alumni have gone on to earn degrees in medicine, business and other fields, or served as top executives at Huntington Ingalls. Of the current crop, he estimates about 85 percent will eventually take on more senior salaried positions at the company.

But however much Mr. Everett and other administrators try to make the Apprentice School resemble a traditional college, its connection to a military contractor means that in some ways it resembles a top military academy like West Point more than a typical university. For many people, that is a plus.

For example, students receive training in dining etiquette, how to buy a house and how to prepare for job interviews.

Similarly, having a dedicated customer with very deep pockets—the Pentagon—enables Huntington Ingalls to cover the \$270,000 cost of training each apprentice.

“The skilled worker is a public good,” said Mr. Petters, who occasionally sounds more like Mayor Bill de Blasio of New York City and other liberal politicians than an otherwise conservative corporate executive. “Do you give kids swimming lessons or do you take them and throw them off the end of pier and see if they can swim? We believe in swimming lessons.”

He added: “The Apprentice School has been and will forever be the centerpiece of what we do here. I know there’s a red-state view and a blue-state view. This is a shipbuilder’s view.”

*A version of this article appears in print on July 14, 2015, on page B1 of the New York edition with the headline: Rising Appeal of Apprenticeship.*

Senator Kaine. I was struck, Mr. Bagley, in your testimony, about the investment that your company makes. The New York Times article said, for somebody to go through the apprenticeship program, start to finish, \$270,000 of training. That’s what that program costs. If I—if my staff correctly did the quick math, you indicated about 80 million a year in training in the company. You said 38,000 employees. I think that’s about \$2,100 a year of training per employee. So, that’s a big investment in training—\$270,000 to train an apprentice, and then, thereafter, for as long as you’re there, \$2,100 a year to train.

Do you think this is pretty common in the industry, on the private-sector side? I’m sure you’ll say you guys are the best at it, but is this a pretty common thing, to focus this much resources on training?

Mr. BAGLEY. Senator Kaine, most humbly, I’m not going to refrain from saying that we’re the best.

[Laughter.]

Mr. BAGLEY. But, I will say that—I will say that all industry are under the pressure for costs—to reduce costs. But, for us, it goes without saying, we’ve had many conversations about how we spend our money. The apprenticeship program, and the amount of money we invest in our students, it comes on the table. But, because of the passion that I have in being around or a member of the table or the staff that this conversation takes place, it’s one of those conversations where I stand, if it’s by myself standing, and say that we have to do this. I believe—and this is what I tell my peers—is that it is a return on the investment. What I spend today, I may not see that return until a couple, three, or four years down the road, but I have to be so committed to that investment, and, instead of a product, I’m investing in human capital.

So, if I do that investment correctly—and I like what Mr. O’Connor say—and bring along this employee as an engaged employee,

when this employee comes out of the apprenticeship program at a minimum of 4 years—and this is where the \$270,000 came up—when you consider their wages and all of their benefits and the 2—you know, the books and things that we purchase, the only thing it costs them is just 2 percent—just what we call association fees. That’s a small price to pay with the investment that we’re making.

Some would say, “Why will you put that much into a person, when they could leave you?” Because we don’t put any restraints or—there is no back end, say, that you have to give us 5 years of employment after we make this investment in you. But, because we believe in the individual and we invest in the intellect and inspiration of the heart of that person, we’re willing to take that risk. As such, I can look back 10 years of apprentices graduating, and we are up into 80 percent. If I will go even deeper, say 15 years back, we still in the high-70s percent.

Senator KAINÉ. Master—at the shipyard, master shipbuilders are those with 40-plus, and there’s a lot of master shipbuilders—

Mr. BAGLEY. Yes, sir.

Senator KAINÉ.—who have come out of the school. If—well, let’s see, you started in 1974, so you’re getting pretty close.

Mr. BAGLEY. I am one.

Senator KAINÉ. Yeah.

The thing—I think it’s interesting, the last point you make about the apprenticeship program. Apprentices are on the waterfront, 44 percent of your management is apprentices, but, because you don’t have a requirement that you stay, a lot of the apprentice graduates are working in the public shipyard over in Norfolk, or working in private ship repairs all over the Hampton Roads area. So, this training program and the investment that the company is really populating the entire shipbuilding industry, which is of benefit to the Navy and to the mission that we’re performing.

Mr. BAGLEY. So, when you think about—I think the earlier comment, Madam Chair, she talked about the cooperation between private and public sector. So, even this investment—it’s not said a whole lot, but it helps us even in that area, because, when we dispatch people to these other—just, say, a public shipyard, there is some benefit, because it comes back. We have a face that we can relate to. We have somebody who understands our business. They can help us with the dialogue, the language. It’s just a win-win.

Senator KAINÉ. Last thing I’ll ask real quickly is the consistency point. You talked about Newport News has been describing—Senator Wicker and I were visiting, early last week—about sort of a work valley that’s coming up. You know, you’re doing new construction, you’re doing refuels on the carriers, you kind of schedule them all in and try to have as, you know, minimal amount of downtime. You know, this is a—I’m preaching to the choir, among everybody here—but, sequester and budgetary uncertainty makes that much more challenging. The more certainty that we provide to our public and private shipyards, the more you can then structure the work so that you’re not peaking and valleying and hiring people and having to lay them off.

Mr. BAGLEY. That is so important.

Senator KAINÉ. I know that that—as you’re looking at that valley, the good news is, a few years out, you’ve got another mountain

that you're going to climb. That's great. But, that does impose a challenge on this workforce, and you hope that they don't just completely leave and move to another area or something when we're in this valley period. We will do our best to provide as much certainty as we can.

Mr. BAGLEY. Thank you, sir.

Senator AYOTTE. Senator Ernst.

Senator ERNST. Thank you, Madam Chair, Senator Kaine, very much.

Thank you, gentlemen, for being here today. I really do appreciate it.

As you may know, we don't have any shipyards in Iowa, so—  
[Laughter.]

Senator ERNST.—so, I appreciate all of you that do. It—as Senator Kaine said, that we need to make sure that we have a viable workforce that is there supporting our men and women in uniform. So, your mission is extremely important, and we do need to find ways that we can keep that workforce engaged. We may not have a shipyard, but, between Iowa and Illinois, we have Rock Island Arsenal, which goes through some of these difficulties, as well, as we look at up-armament for different types of vehicles and so forth. So, some similarities there. That's about where it ends. But, thank you again for being here.

I do want to commend Senator Ayotte for holding this hearing, because it is an important issue, and one that we don't typically talk about as being so vital to our national security. So, thank you for doing that. She has been very active as an advocate for our military men and women and for the issues that you have been facing.

She's talked to me a lot, off the side, about some construction projects that have been ongoing—the unmanned underwater vehicles, which are very vital to national security—and also in taking care of servicemembers. There had been an issue at Portsmouth with the young sailors that were housed there at one point, and they had, I think it was—with their housing—it was substandard. So, they were moved into better facilities after her attention to that issue. So, again, just want to commend her for doing that.

But, I was—thank you for your Declaration of Excellence and your discussion about the qualities that your workers are bringing to these Navy shipyards. I think that's important. It's fascinating for someone like me that has not spent time near ships. But, if you could expound a little bit on your Declaration of Excellence. Mr. Bagley, if you could talk about this, as well. But, what are some of the most important shipyard best practices—the best practices—what can you take away from what you've learned which may be helpful to arsenals, such as I said—you know, our Rock Island Arsenal—and ammunition plants? So, if you would just share some best practices, please.

Mr. O'CONNOR. Well, there's—we're doing a lot, so—the most important thing, like I said, is listening to the workforce and getting their ideas. We have three initiatives ongoing right now that are really making a huge difference in our performance. One is learning centers. Learning centers, they're mockups, but they're sophis-

ticated mockups, sophisticated learning centers. I'm not really sure how that would apply—

Senator ERNST. Is that for building of ships and—

Mr. O'CONNOR. It's for—

Senator ERNST.—learning different techniques, or is it more for—

Mr. O'CONNOR. It's—

Senator ERNST.—civilian workforces—

Mr. O'CONNOR. Well, for us, it's our workforce getting trained—our new folks being trained on a, like, simulation submarine component or location. We have—like, one of our learning centers is an actual full-scale replica of a lower-level machinery space, the 688-class submarine. Our new employees can go down onto this learning center, and, in actual sub conditions, they can work on components, and they can learn the trade. That's—all trades can do that.

The value is, you know, if you make a mistake in that learning center, it's a learning moment. But, before we had these learning centers, the only way to actually get the—that experience of submarine work was on submarines. You make that same learning mistake on a submarine, it's rework. Very expensive. So, the value is, you can learn, you can make mistakes in a safe environment, so you don't make those mistakes on the boat. It also works for teamwork, collaborating on larger jobs.

Senator ERNST. I think that's fantastic. Actually, I think that can be applied to any workforce, probably—

Mr. O'CONNOR. It can.

Senator ERNST.—in any situation.

Mr. O'CONNOR. It absolutely can, yeah.

Senator ERNST. Yeah.

Mr. Bagley, did you have any thoughts?

Mr. BAGLEY. Yeah. I would like to start by saying that I was thinking about what Mr. O'Connor said earlier. You know, it sounds simple, but I will say, the greatest thing that both public and private is learning is, when it comes to our people, for years we've had a paradigm where all the thinking comes from the top, and it flows down, versus going to the deck plate, the people who actually produce the product, and allow them to have that environment where they feel comfortable with sharing their opinion; and then, once they share their opinion, leaders act on their opinion, they provide them feedback. We do not, per se, have what's called a "Declaration," but what we do have in common is, we both believe, I will say, equally about engagement and the power of having an engaged team. We have, certainly for the last—I will say, since 2006—approached this area, and we've been growing every year with having a way to be able to measure the engagement of our people. But, again, we have—I'm going to say we've left the gate, but we are no—we do not see the finish line in sight yet. But, it's a path that we must travel, and I think, equally, that we can bring value, you know, to our taxpayer and also to the product that we're building.

The other thing that I would say is, I think about sharing. We do have a methodology where we share between shipyards, mostly from, I will say, the nuclear-type work. When things happen in various yards, there is a sharing of information. We take that informa-

tion and we take a look at how we run our business, and, based on that information, we look at what type of lessons learned we can gain from it, and then we implement in—that into our training. Quite the same thing happened on our end.

So, from that standpoint, it's a lot of good sharing. Bill De Karlovich, who's sitting in the back of me, he's my training director, and he has the opportunity to go to various public yards, whether it be Portsmouth, Norfolk Naval, or Puget, and get a chance to speak with people of—you know, in his field. We've already started a lot of changing of information with training gaps. So, we, again—we are actually dispatching people through what we call fleet support work, people to Norfolk Naval, people out to Puget. Sometimes we speak different languages. So, his job has been to go before us and find out how do we fill that gap, so, when those people go out to the West Coast, they can hit the ground running and be able to produce a product.

Senator ERNST. That's fantastic.

Thank you, gentlemen, very much.

Thank you, Ms. Chair.

Senator AYOTTE. Thank you.

I wanted to call on Senator Hirono. As you know, Hawaii has an important shipyard, as well, that often cooperates with our shipyard. So, thank you, Senator Hirono.

Senator HIRONO. Thank you, Madam Chair and Ranking Member Kaine, for this hearing.

As the Ranking Member on the Seapower Subcommittee, I have a deep appreciation of the importance of shipbuilding and our shipyards to what we do in the Armed Services area. So, it was great to have the two of you. Listening to you, Mr. Bagley, thank you very much, to your company, for the investment that you make in your people. Mr. O'Connor, it was great to know that you've implemented, listening to the people at the—the men and women at the jobsite, to really enable them to be invested in what they're doing.

Yes, we do have a very important shipyard in Hawaii. So, Madam Chair, I would like to take a part of my 5 minutes to make a statement about our shipyard and what we're doing there.

I mean, clearly, our shipyards are essential to sustaining our fleets and ensuring the readiness of our forces to meet the challenges that our Nation faces around the world. The men and women and servicemembers who work in all four of our public shipyards—that would be Pearl Harbor Naval Shipyard, Portsmouth Naval Shipyard, the Puget Sound Naval Shipyard, Norfolk Naval Shipyard—as well as our private shipyards, are invaluable to the success of our sea services. I want to extend my heartfelt thanks and aloha to all of them.

Like a lot of our military communities, they have to cope with doing more with less. They have to worry about whether the budget resources will be there next year, or not. Yet, through all of these disruptions and issues, the shipyards must continue to be capable of providing the services our fleets require. I have visited with the men and women at the Pearl Harbor Naval Shipyard numerous times. It's always a good reminder of why eliminating sequester is so important.

I know that we traditionally try to squeeze more efficiency out of organizations as resources decline. The shipyards are no different. Best practices, cost-effective operations are of vital importance. An ever-dangerous world and competition for limited resources demand it.

I would like to share with the committee some of the great results that we are experiencing at the Pearl Harbor Shipyard. The team at our shipyard is on track to complete the largest quantity of work since the late 1980s, when the shipyard had about 30 percent more employees. The workload is expected to top over 738,000 resource days. In comparison, their workload from 2012, 2013, and 2014 were 706,000, 679,000, and 690,000 resource days, respectively. So, they are doing so much more with fewer people. In fact, the shipyard has reached the highest workload, as well as produced the greatest output in the past 25 years. The shipyard has become a learning organization. They have developed high competency levels, trust, a shared vision, teamwork, and problem-solving skills to create an outstanding and efficient work environment.

The results of our shipyard's learning organization journey is a tremendous increase in productive capacity or the ability to create increased output with the existing resources in the mission of repairing the Navy vessels.

Their success in working as a team has resulted in the recent on-line delivery of the USS *Greenville* while continuing to work the lowest injury rate amongst the four public shipyards. I know, Mr. O'Connor, that you are probably seeing these kinds of results at your shipyard because of the things that you are doing, but I commend you for what you're doing. In fact, you said that the—you want to share the experiences at your shipyard. One of the ways in doing that is to be here to testify, but are there some other things that you're doing to enable other shipyards to gain from your best-practices model?

Mr. O'CONNOR. Yes. Let me first say that we are not in competition with the other public shipyards.

Senator HIRONO. That's good, because we're all in it together.

Mr. O'CONNOR. That's correct. That's absolutely right.

Senator HIRONO. Yes.

Mr. O'CONNOR. That's how we look at it.

Senator HIRONO. Exactly.

Mr. O'CONNOR. We—I think the most effective labor/management partnership forum that I'm involved with is the NAVSEA Labor/Management Forum. That partnership actually turns ideas into action. We began the initiative back in 2010, and we called it "Take Back an Hour of the Workday." All four public shipyards went off and did different things. That's good, that we've all done things.

I've also said, you know, part of our Declaration talks about learning and teaching. We can teach other shipyards. They can teach us just as well. We need to share information. The NAVSEA labor partnership is a means to that end. We use that—well, we don't use—we utilize that partnership to spread information among the four shipyards. That's one of the ways that we get information out. And—

Senator HIRONO. Do you think the communication and the sharing of best practices is occurring in the way you'd like it—

Mr. O'CONNOR. No.

Senator HIRONO.—among the four shipyards?

Mr. O'CONNOR. Not as efficiently, no, it is not. And—

Senator HIRONO. So, what—how do you think we can improve that capacity—capability?

Mr. O'CONNOR. Boy. More emphasis, more focus. If we meet more often, set up some means of communication, you know, for the four public shipyards. One thing that happens at those forums sometimes is, there will be a labor rep, but maybe not a manager rep.

What we do at Portsmouth is, whenever we go to the partnership meetings to talk about our initiatives, I insist that we do it, labor and management together. Steve Fahey, who would have been here today, goes to these partnership meetings with me, and, together, we brief our initiatives. I would like to see more collaboration, from all public shipyards, between labor and management. You know, that would go a long way, I think. Even—but, it's has to—it has to begin there. You know? You have to develop the relationships before you start developing the workforce, really.

We have initiatives ongoing that, if we just took those initiatives and plopped them into another shipyard, there would be a benefit, but not as big a benefit as if the workforce came up with them on their own, and had their own ideas, their own thoughts, and their own way of doing their business. That's what it's all about. You know, and—

Senator HIRONO. Thank—

Mr. O'CONNOR.—that's really a hard thing to try to spread, but that's what we want to do.

Senator HIRONO. Thank you, Mr. O'Connor, for being so clear as to where the initiatives really should start, is listening to your people. So—

Mr. O'CONNOR. Yeah.

Senator HIRONO. Thank you, Madam Chair.

Mr. O'CONNOR. Thank you.

Senator AYOTTE. Thank you.

I also wanted to call on Senator King and Senator Shaheen, both of whom are tremendous fans of the Portsmouth Naval Shipyard.

If I could call on Senator King.

Senator KING. Thank you, Madam Chair. Thank you for inviting me to this hearing, although I'm on Armed Services, not on this subcommittee.

Mr. O'Connor, I'll start with a question that I figure I have a 50–50 chance of getting a—the right answer to. Do you live in New Hampshire or Maine?

[Laughter.]

Mr. O'CONNOR. The right answer is New Hampshire, sir.

Senator KING. My condolences.

[Laughter.]

Senator KING. I figured it was—I had a shot on it, didn't I? But—

I love this Declaration of Excellence. That is an extraordinary document. I note that your signature is right in the same place that John Hancock's signature is, on the other—I don't know whether that was on purpose, but—

Mr. O'CONNOR. I signed first.

Senator KING. I——

Mr. O'CONNOR. I signed first, so——

Senator KING. I compliment you. You're the John Hancock of this agreement.

Let me ask about how this came about. Was there always a culture of cooperation and collaboration at the Portsmouth Naval Shipyard, or is that something that has evolved in recent years?

Mr. O'CONNOR. Well, it's actually, in earnest, I would say 18–19 years. Back in the mid-'90s, or early '90s, we went through three rounds of base closures and three subsequent rounds of layoffs. Our workforce went from 9,000 down to 3,000. We really weren't doing a very good job. How could we? We had a workload for 9,000 people, but a workforce of 3,000.

So, back then, a handful of, again, labor and management leaders got together and said, "If we can't find a better way to do business"—because, back then, you know, it was confrontational, it was adversarial—"If we can't find a better way, then we will not survive as a shipyard."

Senator KING. So, this was a joint realization.

Mr. O'CONNOR. Yes.

Senator KING. Did you go off somewhere and meet at a hotel or—how did this happen? This is unusual.

Mr. O'CONNOR. It is, yeah. We just started talking at the shipyard. Early on, it was really difficult. You know, we were mocked. Openly mocked. But, as more and more people saw the value in what we were doing, and our persistence in what we were doing, more people kind of—you know.

Senator KING. But, I take it that your union is still a union and still negotiates and still has differences and grievances. It's not like you've become part of management.

Mr. O'CONNOR. That is correct.

[Laughter.]

Mr. O'CONNOR. For the record, that is correct.

[Laughter.]

Senator KING. I thought I'd get you—give you a chance to get that on the record.

Mr. O'CONNOR. Yeah.

But, that—can I——

Senator KING. Yeah, please.

Mr. O'CONNOR.—respond to that? That's a very good point.

I refer to that as a business maturity. We do not let the smaller issues interfere with the bigger picture. We—you know, we don't lock out on meetings, we don't throw the baby out with the bath water. We can deal with grievances as grievances, and not as a complete failure of our vision as a shipyard.

Senator KING. Would you say you have buy-in from your members? Is this a leadership-led initiative, or do you have rank-and-file—do the rank-and-file at the yard buy into this concept?

Mr. O'CONNOR. Yes. But, like I said earlier, our—the RSVP program, from where we got all the information for the Declaration, was a volunteer program. We didn't force anybody to go to those sessions. Yet, we got three-quarters of our workforce through those sessions. So, the document itself, the information came from the

workforce. The signatures on the document are labor, management, and the workforce.

So, everybody—I need to make this really clear. We don't have 6,000 men and women on our shipyard right now who have bought into the Declaration, who believe in workforce engagement. But, we have the lion's share of the workforce right now. You know, our vision is to have everyone involved.

Senator KING. I can testify to the effectiveness of the learning centers. I—on the mockup, I learned how hard it is to weld.

Mr. O'CONNOR. Oh, yeah?

Senator KING. Fortunately, I wasn't welding a real submarine.

[Laughter.]

Senator KING. So, I—

Mr. O'CONNOR. I concur.

Senator KING.—I admire what you're doing.

Well, I want to thank both of you for coming, because what you're doing is what we have to do. You talked to Senator Kaine about budgets and sequester. We hope to relieve the sequester, but, long-term, we're going to be in tight budget situations, and we have to be able to meet the country's needs, given the resources that we have. Productivity is really—is—that's going to be the whole answer, it seems to me.

So, thank you, gentlemen, both, for joining us.

Thank you, Madam Chair.

Senator Ayotte: Thank you, Senator King.

Senator Shaheen.

Senator SHAHEEN. Well, thank you, Madam Chair and Senator Kaine, for holding this hearing.

Mr. Bagley, you will excuse Senator King, Senator Ayotte, and I for focusing on the Portsmouth Naval Shipyard, but it's our shipyard, and we are very proud of it.

It's so nice to be able to welcome Paul O'Connor to the committee today.

Senator KING. It's in Maine, by the way, Mr. Bagley.

[Laughter.]

Senator SHAHEEN. It is in Maine, but it has tremendous workers from both New Hampshire and Maine.

[Laughter.]

Senator SHAHEEN. A few from Massachusetts, too, so we're happy to have all of them.

I want to follow up on Senator King's point about the Declaration of Excellence, because, as you pointed out, it is really unique, I think, and serves as a model, not just for the shipyard, but, I think, for all of Federal agencies. If we could get everybody to buy into this kind of a Declaration of Excellence for what we want to accomplish in each of our agencies, I think it would—we would be more successful as a Federal Government.

I also think it's important to point out, as you did, that this is one of the reasons that the shipyard was on the last BRAC [Base Realignment and Closure] closing list, and then was taken off. Because, when people actually went in and looked at what you were doing, the productivity at the yard, the importance of your contribution to national security, it was—there was a recognition that this was a shipyard we needed to keep open. So, I congratulate you

and everybody at the yard, not just for the Declaration of Excellence, but, also, one of the other things that I've been very interested in are the energy efficiency efforts within the Navy. The shipyard has also been recognized as—for its innovation and energy efficiency measures.

But, I want to go to the issue that we're all concerned about, and that is what happens with sequestration. Not only what happens at our public shipyards, but our private shipyards. One of the challenges we're facing—I know we're facing in Portsmouth, and I would guess you might be facing it too, Mr. Bagley, is, "How do we keep talented people working at our shipyards?" We need a higher percentage of engineers of STEM [science, technology, engineering, and math] graduates. It's one of the challenges we face in the workforce throughout the country. As people are looking at the uncertainty that sequestration presents, can you talk, Mr. O'Connor and then Mr. Bagley, about the impact that that's having on the workforce and what you're seeing, and the need for us to address sequestration?

So, Paul, would you begin?

Mr. O'CONNOR. Okay. Boy, oh, boy, it's a big question.

We have seven separate chains of command on our shipyard, and not all seven were impacted equally with sequestration. The Navy, DOD, ruled that the shipyard, the NAVSEA portion of Portsmouth Naval Shipyard, the island, would not be impacted by sequestration. So, we all came to work.

The other chains of command, they were still impacted by sequestration. We had men and women who worked side by side; some, the other chains of command, were forced to stay home, under sequestration, and lost their pay. Others were coming to work because they're a different chain of command. You know, the morale, the damage to the morale of our workforce when, for no apparent reason other than a super-committee couldn't reach decisions, they're out of work. That's really difficult. The impact—it's not as severe, but it does have an impact on the people who don't get furloughed, you know, because, "Are we next? Will we be furloughed, you know, when sequestration is reenacted in"—on October 1st, I believe, right? Yeah. Take away the whole national security aspect of it, take away all of that, and you're left with—in the middle of trying to engage our workforce and create this synergy, this collaboration, this unprecedented desire for our workforce to work together, we have to deal with the threat of being kicked off the job, sent home, for no real good reason. That's hard to deal with.

Now, we're hard workers, like anybody else. I—we get a bad rap. Federal employees get a bad rap. We don't deserve it. We are the most efficient, proficient workforce in our Nation in the business of nuclear submarine maintenance and modernization. We're the best there is. It's painful to—quite frankly, to listen to the wrangling and the rhetoric that is behind the decision to furlough our workforce.

Senator SHAHEEN. Thank you.

I'm out of time.

Senator Ayotte: I wanted to follow up on the issue of hiring that we heard from both of you, but thinking about this workforce issue

that Senator Shaheen talked about, making sure that we have, you know, the best workforce. I certainly share the concerns about sequester as a negative morale force in many ways, and not good way to do business. But, I know the shipyard right now is—has already hired 680 new workers, and is hiring some more. Because of the log that you have and the work that you need to do, in terms of the important work on our attack submarine fleet—and we heard a lot from Mr. Bagley about the—their apprentice program—How is the shipyard doing, in terms of recruiting people? How do you get that many new people trained up and also bought into what you're doing with the Declaration of Excellence?

Mr. O'CONNOR. Well, we hire between 1- and 200 apprentices every year. This year, we're hiring a lot of other tradesmen and women and engineers. We will have hired almost 800 new employees this fiscal year alone by the end of September. That's a huge number. That's almost one-fifth of our wage-creating workforce, of our trades workforce.

So, we didn't begin these learning centers, which are actually increasing our proficiency and efficiency, and shrinking the time it takes to bring a new employee up to speed in the trades—we didn't do that because we knew we were going to be hiring 800 people in fiscal year 2015. We did it because it was the right thing to do. The timing couldn't be better. You know, we're getting these new employees up to speed, and that's a result of men and women with vision doing what is the right thing to do, not because of an immediate need but because of a long-term goal. That's a big—the learning centers—again, they came from the workforce. It was their ideas. They're the ones who are helping to shape the new workforce. We are getting those new folks up to speed, qualified more quickly with just—you know, just at high a skill level now as back, you know, years ago. So, that's the—that's pretty exciting.

Senator Ayotte: Thank you.

I'm going to allow others, if they have followup questions.

Senator Kaine.

Senator KAINE. Just one. This will be kind of a comment, really, by—maybe more of a closing comment. I just want to go back to Mr. Bagley.

Your stats, about 4,500 applications for 240 apprenticeships, almost 20-to-1. I went to the University of Missouri. I tell you, it wasn't 20-to-1. I mean, I think the—it was a lot less competitive to get into University of Missouri when I was going than your shipyard today. That's what points out, I think, a real disharmony in the way we do education.

We had a Budget Committee hearing a couple of years back, and Secretary Duncan, Arne Duncan, Education Secretary, was there, and he was—he mentioned in his testimony that our higher education attainment as a Nation is slipping, that the number of Americans with postsecondary degrees was number one in the world 20 years ago, now we're number 15 in the world. So, I asked him this question. I used you as an example. I said, "Here's a question. I don't know if it's terminology or policy. It might be both. If someone graduates from high school, and they're one of the 4,500 who apply and one of the 240 who get in, and they do an apprenticeship program at the shipyard, and, when they finish, they go

to work, and they have a fantastic career.” This path to middle-class success that the New York Times is talking about. “Do we count that person as somebody who has a postsecondary degree, or not?” Secretary Duncan said, “I don’t think we do. I said, “Then you’ve got a terminology problem and a policy problem.”

We still don’t treat career and technical education as if it’s valued. If you’re in the military now, you get a tuition-assistance benefit, with the approval of your CO [commanding officer]. It can be up to \$4,500 a year. You can use it for a community college course, you can use it at a 4-year college. You can’t use it to take the American Welding Society Certification Exam. Three-hundred dollars. We’ll give you \$4,500 to get a sociology degree. We will not give you \$300 to pass the American Welding Society Certification Exam.

Pell Grants. We were just talking about a bill we’ve got going in today. Pell Grants, higher-ed institutions, but not short-term career and technical programs that are highly qualified, verified, fully accredited, that are going to help somebody have a great middle-class lifestyle. We still treat, in the educational world, career and technical education and apprenticeships as if it’s not equally valuable to a college degree, when your program equips your people to have an earnings potential over the life that is, in many instances, much higher than what somebody with a college degree has.

So, I really value what you do for our Nation’s security, but I really think the model—and it’s not like you guys are some new-fangled thing; you’re celebrating your 100th anniversary in 2019—the model that you have, which has been right there before us, right in front our face for 100 years, we still don’t fully account for it in the spectrum of what American educational success is. I do—I love things like this New York Times article, and I love the fact that you’re able to come testify, because I hope we broaden our view a little bit about what educational success is. You’re helping us do that by being here today. I appreciate it.

Senator AYOTTE. Senator Shaheen.

Senator SHAHEEN. Well, thank you. I’m—I wanted to follow up a little more on the challenge of getting STEM graduates, which also speaks to the issue that you’re raising, Senator Kaine, and also what the potential for additional cuts does to our ability to attract those people with that—those skills that we need.

Again, Mr. Bagley, Paul, could you all speak to that? What are you seeing with respect to hiring ability when there’s uncertainty around what’s going to happen with contracts for the shipyard and with future funding? It’s true, I think, also, at Huntington-Ingalls.

So, you want to go first, Mr. Bagley?

Mr. Bagley: Yeah, I’ll try.

I will say, based on where we are in our current conditions, we are more concerned with, “How do we prepare for coming back up the valley?” You know, I guess we’re projecting maybe 17–18 months, just roughly, from here. So, how do we take what I call, you know, the cornerstone, a significant piece of our business that we’re not going to affect, and allow the apprenticeship program and the leaders who we’re producing out of that, along with our training organization to set us up, that we’re ready to come back up and take whoever is out there that we choose to hire, and hopefully, as

we have in the past, certainly the most recent 5 to 6 years, we'll have the quality of people to hire that can, not only come in and have the physical attribute, but that intellectual attribute that can help us with the training, that we're going to have leaders to give them to come up that power curve a whole lot quicker?

So, that's really our strategy. I suspect we're going to still be pretty selective in who we're going to be able to hire. So, when we consider the technology, when we consider how—How do we be proactive and anticipate the future rather than letting the future come and take us, like sequestration, you know, what that may do to us?—what we're trying to focus on is, What are the things we can control? That's where we're putting our energy. Then, the things that we can't control, we are acknowledging those, but we are telling the people that we've got a team of folks, you know, up here in D.C., working with Senators and *et cetera*, to help change that. But, we do have a significant piece in our hands that we can control our own destiny.

So, that's where I'm asking the leadership, the workers—let's put our energy there. At the end of the day, we can feel good about—that we fought a good fight, because we're going to stand tall. Now, will we have all the team members possibly on the team? Maybe not. But, the ones who are there, we're going to reset the business. This is what we're looking at now. How do we reset the business for the future? In resetting this business, we have to get leaner, we have to get more productivity, we have to prepare for the unknowns, but, yet the things that we do know, that's where we're going to put a lot of our energy.

Senator SHAHEEN. Thank you.

Paul, as you're looking at an aging workforce at the shipyard, what kind of challenges does the uncertainty of sequestration present as you're looking at all the people that need to be hired over the next couple of years?

Mr. O'CONNOR. Well, historically, you know, when the budgets are cut, the first things that get cut are outreach, training—you know, we try to focus on the core mission. Not that training isn't core, but, you know, if we have to cut somewhere, that's, historically, where they cut.

The—it's a tough question, because our people—like, during sequestration, our outreach people were cut. It was ended, officially. Zero budget. That didn't stop the men and women at our shipyard who volunteer on a regular basis from continuing to volunteer, to spend their own money, you know, to help these kids that were in the programs that they were involved in. We—our outreach program goes out to colleges, high schools, and middle schools. We're not going to let those kids down. But, we shouldn't have to bear the cost out of our own pockets because of sequestration.

Senator SHAHEEN. Well, and I certainly agree that the volunteer efforts on behalf of the shipyard for programs like Sea Perch that really gets kids excited about—

Mr. O'CONNOR. Oh, they do. It's a great program.

Senator SHAHEEN.—work in fields that are going to ultimately going to be important to the shipyard, are critical. I was thinking more of whether, as you're looking at hiring people, the challenges of bringing somebody on when there's uncertainty about whether

the funding's going to be there for the jobs at the shipyard. That's—

Mr. O'CONNOR. We had to freeze our hiring.

Senator SHAHEEN. Yeah.

Mr. O'CONNOR. It was that simple. We had to freeze. So—which has an impact on our performance, because our workload didn't freeze.

Senator SHAHEEN. Right.

Mr. O'CONNOR. Just the workforce. So, yeah, that's a huge issue.

Senator SHAHEEN. Thank you.

Thank you both.

Senator AYOTTE. I want to thank both of you for being here today and for the important and excellent work being done at Newport News and the Portsmouth Naval Shipyard, defending our Nation, because we couldn't defend the country and our Nation without the incredible work done at both our public and private shipyards. So, I hope you'll pass on our gratitude to your workforce. I think we learned some valuable, important information.

Certainly, Mr. Bagley, what you're doing in the private sector and the importance of—of course, I fully agree with Senator Kaine, the importance of career and technical education in valuing what's being done, in terms of our manufacturing workforce and the incredible skill set they have.

Mr. O'Connor, the lesson that the Declaration of Excellence and the work—the important and very good relationship between labor and management at Portsmouth Naval Shipyard, and how we can use those examples across the Federal workforce.

So, I thank you both for being here, and for all—and all the members that were here today. Appreciate it.

[Whereupon, at 4:05 p.m., the hearing was adjourned.]

