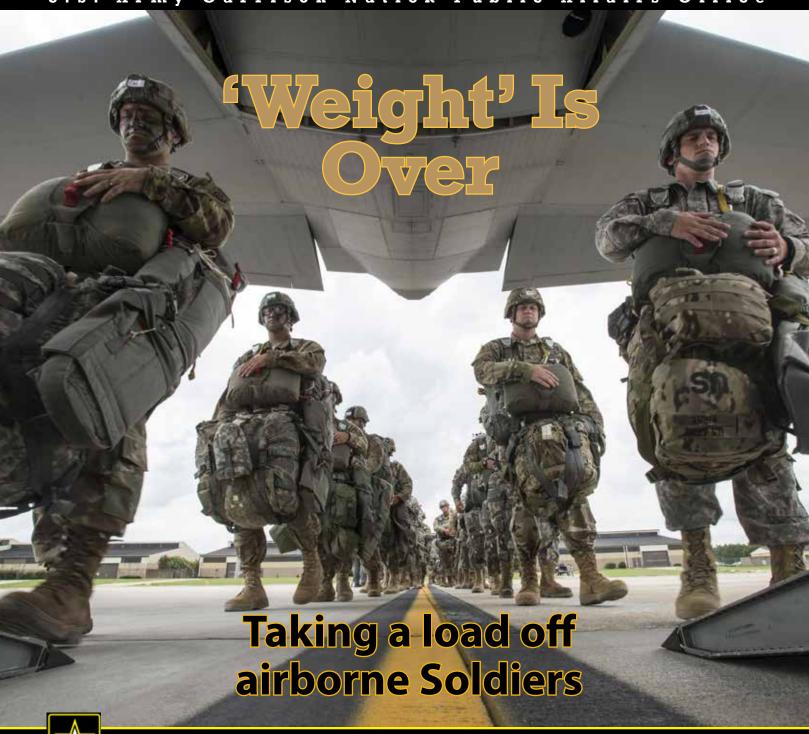
# TISS C This Month



U.S. Army Garrison Natick Public Affairs Office



Lt. Col. Ryan Raymond *USAG Natick Garrison Commander* 



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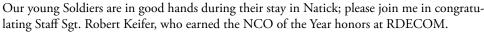
September 2016



### Providing for our Soldiers

The leaves are getting ready to change, but that doesn't slow things down when it comes to what Team Natick is providing to our Soldiers.

This month we welcomed a new cohort of Soldiers serving as Human Research Volunteers; I can't overstate the degree to which these fine young Americans impress me. *NCO Journal* recently visited Natick to tell the story of how these Soldier volunteers help our researchers provide America's Soldiers the best equipment possible.



I want to thank everyone who participated in both our Patriot Day ceremony and the Memorial Stair Climb. I especially appreciate the collaboration between our team and the Town of Natick's emergency responders; we have a fantastic partnership that I am thankful for every day. The performance by the young ladies from the Natick High School Chamber Singers added emphasis to our lasting remembrance; the young ladies who lent us their time and voices were infants when the tragedy occurred.

I'm not yet ready to accept that winter is coming. I hope you all enjoy a beautiful and safe autumn ... Sox over Cubs in six (just so we can finish up at home).

Thank you for all you do for our Soldiers and for continuing to be an essential part of Team Natick.

Lt. Col. Ryan Raymond USAG Natick Garrison Commander



## NSSC This Month

NSSC Senior Mission Commander Brig. Gen. Thomas H. Todd III

Garrison Commander Lt. Col. Ryan Raymond

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Editor
Bob Reinert

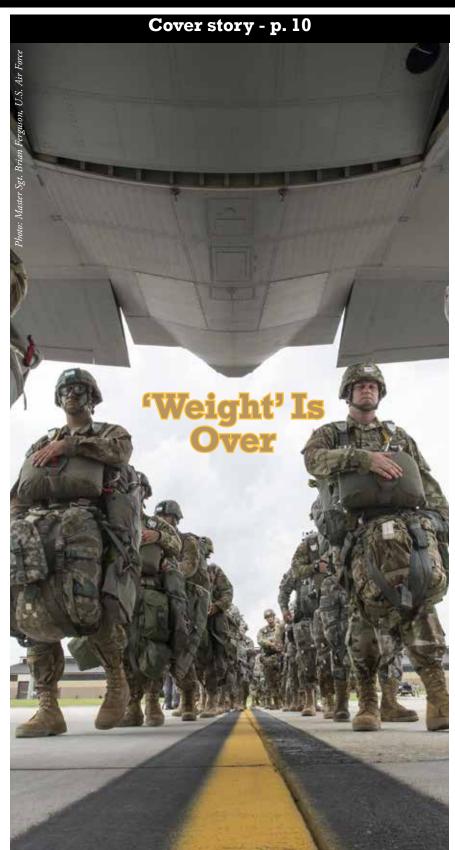
About this newsletter NSSC This Month is a monthly newsletter covering NSSC news within the Army and commercial media.

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To subscribe to NSSC This Month, please contact Bob Reinert at robert.j.reinert.civ@mail.mil.

On the Web: <a href="https://www.army.mil/natick">www.army.mil/natick</a>

Cover photo: Master Sgt. Brian Ferguson, U.S. Air Force



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### Mindfulness at Work Program

The <u>UMass Center for Mindfulness</u> will implement this program from Sept. 29 to Nov. 17 for active-duty Soldiers and veterans. The group will meet weekly on Thursdays from 11:30 a.m. to 12:30 p.m. and is designed to strengthen resiliency, communication, complex thinking and decision-making, and health and well-being. To register, or for more information, contact Kari Sharpe at <u>katharine.m.sharpe.civ@mail.mil</u>.

#### **Hunter Auditorium Update**

Renovation work in Hunter Auditorium is in full swing. Additional asbestos removal work has been identified, but this will not impact the construction schedule. All work is scheduled to be completed by Oct. 31. Thanks to all for your patience and understanding. If you need more information, please contact Russ Stokes at ext. 4409 or <a href="mail.russell.e.stokes.civ@mail.russell

#### **Main Gate Update**

The Main Gate entrance is now scheduled to be completed by Oct. 31 and will be reopened soon afterward. Your patience and understanding during this project has been greatly appreciated. Please direct any questions to Russ Stokes at ext. 4409 or russell.e.stokes.civ@mail.mil.

## **Nutrition for Better Health Series Six**

Get motivated to eat better, be more fit, and/or lose weight in this exciting nutrition and exercise class hosted by Tricia Silverman, registered dietitian, fitness instructor and wellness coach. The first half of the class will feature inspirational expert nutrition and weight-loss advice and group discussion. The second half of the class will consist of easy-to-follow warm-ups followed by exercises with resistance bands, balls and body weight. The series will be held on the following dates: Thursdays, Oct. 6, 20; Nov. 3, 10, 17; and Dec. 1, from 11:30 a.m. to 12:30 p.m. If you are interested in participating, please contact Amber Black at ext. 4584, or email amber.m.black.civ@mail.mil to register. Class is limited to 25 participants, so act fast.



#### **Pete Suh**

#### What Pete Does:

"I develop, analyze and implement various installation-wide contingency plans and operations, to include special events and programs."



## DPTMS Director John Cavanaugh on Pete:

"Pete is a jack-of-all-trades in the Plans and Operations section. He provides synergy to NSSC and enjoys being engaged in the community. He's young, innovative and always strives to put on the 'best show in town,' as evident in this year's 9/11 ceremony.

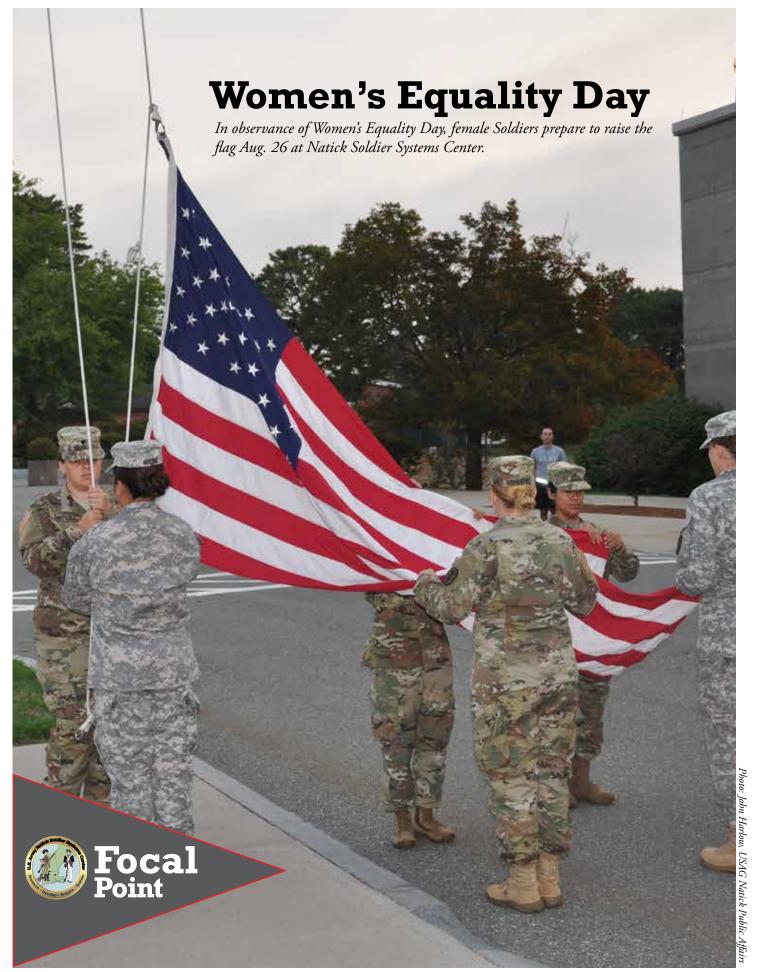
One of his best traits is his ability to build partnerships across NSSC – both within and outside the workplace. He's established great rapport with many of our supported units and has even engaged the Natick Soldier population by establishing an NSSC Soccer team in a local league. It's people like Pete who will define the future of our civilian workforce. He is Natick Strong."

#### **ACS Overseas/PCS Assistance**

ACS offers one-on-one briefing appointments for overseas relocation or other Permanent Change of Station (PCS) moves. Gain information on what you need to know about living overseas, or let us help you link up with your next duty station with welcome packets and other online resources. Briefings are available for both military and DoD civilians anticipating a PCS move. For an appointment, please contact Diane Magrane at diane.k.magrane.civ@mail.mil.

#### **Volunteer Opportunity**

The <u>Hanscom Retiree Activities Office</u> is seeking volunteers to provide information and assistance to military retirees in our community. For more information, please contact the HAFB Retiree Activity Office at 781-225-1310.



4 NSSC This Month NSSC This Month



Gen. Daniel B. Allyn, center right, listens to a presentation by NSRDEC Director Doug Tamilio. Allyn, who visted Natick on Sept. 13, is flanked by, right, RDECOM Commander Mai, Gen, Cedric T. Wins and NSSC Senior Commander Bria, Gen, Thomas H. Todd III.

## **Army vice chief visits Natick**

## Allyn focuses on innovative research begin done

By Jane Benson, NSRDEC Public Affairs/NATICK, Mass. (Sept. 14, 2016)

he U.S. Army Natick Soldier Research, Development and Engineering Center hosted Vice Chief of Staff of the Army Gen. Daniel B. Allyn on Sept. 13.

"It was a pleasure to host General Allyn, and this was a great opportunity to gain insight into some of the priorities and issues at his level," NSRDEC Director Doug Tamilio said. "NSRDEC is committed to helping the VCSA to streamline the acquisition process to enable rapid enhancements in Soldier capability."

The visit focused on the innovative research being performed at NSRDEC, which is part of the U.S. Army Research, Development and Engineering Command. NSRDEC's cutting-edge research includes advances in body armor, textiles/ fibers, combat feeding, aerial delivery, shelters, expeditionary basing and collective protection, biomechanics and cognitive science - to name just a few.

Allyn, who grew up in Maine, interacted with subject matter experts with genuine interest, asking tough questions and peppering frank discussions with humor.

"People from Maine tend to speak bluntly," Allyn said. "They don't like to waste people's time."

NSRDEC's partnerships with top-notch universities were also highlighted, including research efforts with the Massachusetts Institute of Technology, Tufts University, Worcester Polytechnic Institute and the University of Massachusetts

The visit also focused on Soldier and Squad Performance Optimization, or S2PO, and the Soldier Squad Performance Research Institute, or S2PRINT.

NSRDEC has partnered with the 82nd Airborne Division as part of a larger, all-encompassing science and technology effort called the S&T Project Integration Pilot, which is part of the S2PO initiative. NSRDEC scientists and engineers are working closely with the 82nd Airborne Division and other organizations to garner new insights into the cognitive, physical and emotional performance of Soldiers.

Rick Haddad, NSRDEC's S2PO Program Integration lead, was grateful for the opportunity to brief the vice chief of staff.

"This is a great opportunity to share how RDE-COM's S2PO strategy is an innovative approach to improving Soldier performance and readiness through partnering directly with units," said

Allyn recognized Haddad's efforts by giving him a "Soldier for Life" pin.

Rob DiLalla, an NSRDEC engineer/team leader, was another one of the day's many briefers. Di-Lalla discussed the revolutionary Ballistic Combat Shirt and other protective items with Allyn and RDECOM Commanding General Maj. Gen. Cedric T. Wins.

Wins commended DiLalla for being the recipient of the FY2015 Maj. Gen. Harold "Harry" I. Greene Award for Innovation in the Individual -Civilian Award Category. DiLalla was recognized for his work on the Ballistic Combat Shirt.

The vice chief of staff thanked NSRDEC for its work to improve life for the Soldier.

"I have an extraordinary passion to make life better for our Soldiers," said Allyn. "The way we can do that is to deliver capabilities to them faster. I know with your help, we can make a difference."

## **NSRDEC** engineer honored

## DiLalla receives first Maj. Gen. Harold J. Greene Award

By Jane Benson, NSRDEC Public Affairs/NATICK, Mass. (Sept. 20, 2016)

obert DiLalla – an engineer and team leader at the <u>U.S. Army</u> Natick Soldier Research, Development and Engineering Center -- was presented the FY2015 Maj. Gen. Harold "Harry" J. Greene Award for Innovation in the Individual - Civilian Award Category during a ceremony on Sept. 19.

DiLalla won the award for his work on the Ballistic Combat Shirt, which reduces bulk and thermal burden on the Soldier while maintaining a high-level of ballistic protection. DiLalla took a revolutionary design approach by focusing on the Soldier as an athlete.

The Maj. Gen. Harold "Harry" J. Greene Award for Innovation recognizes innovative technologies provided by the research and development/science and technology communities, as well as Soldiers in the field. The award acknowledges contributions that greatly enhance the Army's overall readiness, while positively impacting Soldier performance.

Greene was killed in Afghanistan in 2014 and had served as senior commander at the Natick Soldier Systems Center where he was revered as a Soldier, scientist and commander – from August 2009 to

"You know in all of the interactions that I had with General Greene, it was very clear to me that he was all about improving, making things better for others, whether it was a process, a product or a method – he wanted to make things better," said Lisha H. Adams, executive deputy to the commanding general at the U.S. Army Materiel Command.

Maj. General Cedric T. Wins, commanding general of the U.S. Army Research, Development and Engineering Command, pointed out that innovations like the Ballistic Combat Shirt help improve readiness and help save the lives of Soldiers. Wins said that DiLalla's invention empowers, unburdens and protects the Soldier.



Rob DiLalla, left, briefs Vice Chief of Staff of the Army Gen. Daniel B. Allyn, center, and NSRDEC Director Doug Tamilio during Allyn's Sept. 13 visit to Natick. DiLalla earned the FY2015 Maj. Gen. Harold "Harry" J. Greene Award for Innovation in the Individual - Civilian Award Category.

"So I think you hit here, Rob, the trifecta, with this one piece of equipment, and that's quite an accomplishment for one garment," said Wins.

NSRDEC Director Douglas A. Tamilio commended DiLalla for his great character and said that Maj. Gen. Greene would be proud that the first award took place here

"I am extremely pleased that Rob and his team were recognized with this prestigious award for their work on the Ballistic Combat Shirt," said Tamilio. "This capability significantly increases the protection and flexibility of our personal protective en-

semble, ensuring we are giving our Soldiers the edge they need."

"I am truly humbled to be recognized with the Maj. Gen. Greene Award for Innovation," said DiLalla. "I had the opportunity to meet Maj. Gen. Greene on a few occasions while he was the CG of NSSC/DCG RDECOM, so being the first recipient of his award hits close to home. The Ballistic Combat Shirt changes the way we think about wearing personal protection and improves Soldier performance. Knowing that Soldiers are better protected and more capable of performing their mission is extremely rewarding."

## Gold Star Mother speaks at Natick

## Her mission is to prevent suicides

By Tazanyia Mouton, USAG Natick Public Affairs / NATICK, Mass. (Sept. 28, 2016)



ynn Patton, a Gold Star
Mother, spoke to the Natick
Soldier Systems Center
workforce, Sept. 23, about the suicide
death of her son, Sgt. Matthew
Patton.

"It's been very difficult on us," Patton said to a group of young Soldiers, "but this is what's helping us survive, is to talk to you."

Patton mentioned that after her son's death, it was tough for her to even be around Soldiers.

"Because I really, really wanted him to be there, but now I love being around all of you because you remind me of him and I feel like his presence is here," Patton said.

In May 2013, with only six months left before he was due to complete his military service, Matthew died by suicide. He was 23 years old.

"You (have) to take care of yourselves; that's the big message. And don't believe the stuff about stigma. If someone says 'Don't go to behavioral health because they will think you're crazy,' they're wrong and they are part of the problem."

Lynn Patton, Gold Star Mother

"Pieces of me are gone that I can't even describe to you," said Patton. "Whole body parts are gone, not just my heart. It's been three years, and I miss him." Gold Star Mother Lynn Patton speaks to Soldiers at the Natick Soldier Systems Center Sept. 23 about the suicide death of her son, Sgt. Matthew Patton. Opposite, John and Lynn Patton hold a photo of their son.

After Matthew's death, Patton said it was important for her to speak to the Soldiers in Matthew's unit. She recalled speaking with the brigade commander and saying, "I would really love to talk to your Soldiers because I want them to know that they are important as Soldiers, but they are more valuable as human beings," Patton said.

Turning toward the group of Soldiers in the room, Patton continued, "You're friends, you're moms, you're dads, you're fellow Soldiers. You are so important just as people, and you have to remember that. You have to watch out for each other."

Patton, a registered nurse, also wanted to talk about the stigma surrounding the issue of suicide.

"You (have) to take care of yourselves; that's the big message," said Patton. "And don't believe the stuff about stigma. If someone says 'Don't go to behavioral health because they will think you're crazy,' they're wrong and they are part of the problem."

Patton also said that the Soldiers should seek assistance if they are in need.

"You're not weak," said Patton,
"you're strong if you decide to go for
help and it works."

In addition to Patton, Dr. Barry Feldman, the director of Psychiatry Programs in Public Safety and assistant professor of Psychiatry at the <u>University of Massachusetts Medical Schoo</u>l, also spoke at NSSC to conclude National Suicide Prevention Awareness Month.

"Suicide is a topic that a lot of people are uncomfortable with and can invoke a lot of anxiety," said Feldman. "The myth is that we shouldn't ask people about suicide."

Feldman said this myth is false.

"Research shows that the ability to get people talking about their thoughts of suicide or their struggle can actually help to reduce suicidal behavior," Feldman said.

According to the <u>Centers for Disease</u> <u>Control and Prevention</u>, suicide is the 10th-leading cause of death among all ages, and the secondleading cause of death among adolescents, and Feldman said the national conversation has to continue.

"If we had an identifiable medical condition that was taking a toll on our society like that, there would be significantly more effort and emphasis to try to eradicate that problem," said Feldman.

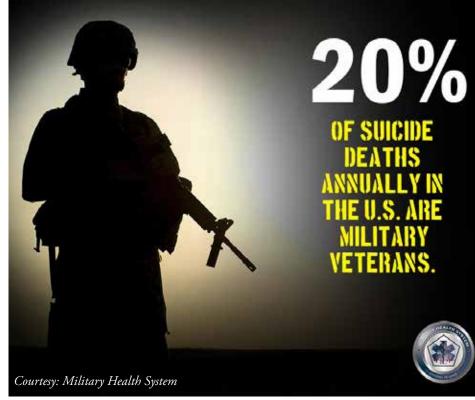
Statistics also show that more people die by suicide than in motor vehicle crashes.

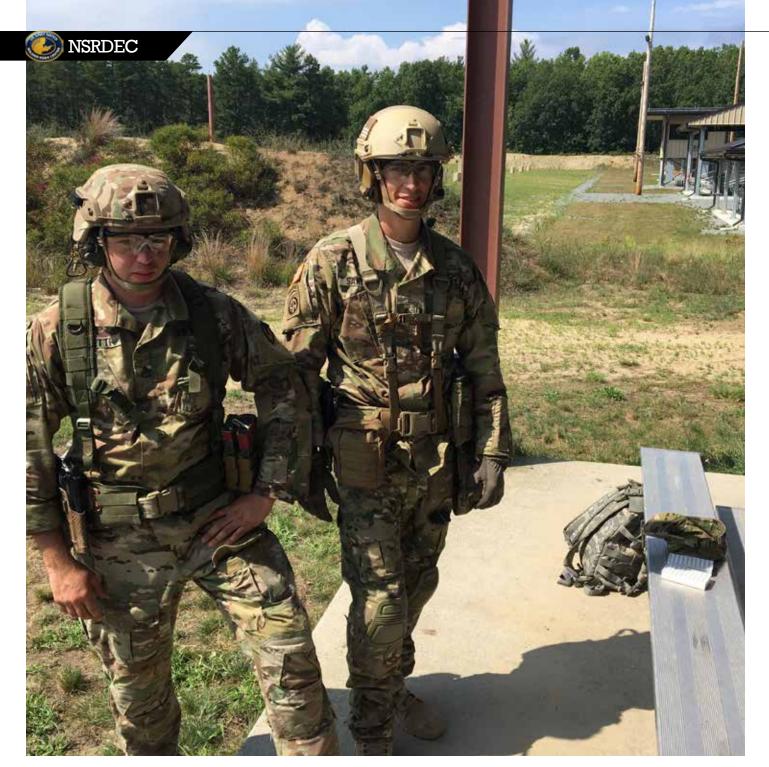


"There should be an ongoing effort to really improve our ability and increase our efforts to prevent suicide," said Feldman. "Suicide is preventable."

To learn more about Matthew's story and the Matthew Patton Foundation, visit www.matthewpattonfoundation.org.

If you or someone you know is feeling hopeless or having thoughts of suicide, call the National Suicide Prevention
Lifeline at 1-800-273-TALK (8255), to be connected to a trained counselor at a suicide crisis center nearest you. Service members and veterans should choose Option 1.





# On Target

Natick NCOs place at marksmanship championship

By Jeff Sisto, NSRDEC Public Affairs/NATICK, Mass. (Sept. 26, 2016)

wo Soldiers from the Natick Soldier
Research, Development and Engineering Center competed in the New
Hampshire Army National Guard's 2016
Excellence in Competition Match for service rifle and service pistol, earning a second-place finish and an honorary Governor's Twenty
Tab.

Staff Sergeants Justin Coletti and Anthony Sandoval, operations NCOs for NSRDEC's Headquarters Research and Development Detachment, or HRDD, received a Memorandum for Record and plaque from the NHARNG, distinguishing them as one of the top 20 teams during the August 12-14 event held at Fort Devens, Massachusetts.

"This memorandum serves to recognize this accomplishment and inform their command of their exceptional marksmanship abilities," said Maj. Brooks Hayward, NHARNG's Sustainment Training Branch chief. "Staff Sergeant Coletti and Staff Sergeant Sandoval's participation in the match increased the level of competition and added a sense of camaraderie with our active-duty brethren."

The chance to compete arose after the NCOs learned that their unit's Table of Distribution and Allowances, or TDA, which prescribes the HRDD's mission, organizational structure, personnel and equipment requirements, does not authorize weapons to be issued to its staff. NSRDEC's science and technology centered mission made it difficult for them to train. That's when Coletti and Sandoval began seeking opportunities to hone their marksmanship skills outside of Natick's gates.

"Marksmanship is a perishable skill," said Coletti, an infantryman and sniper with nine years of active- duty service and three overseas deployments under his belt. "So I started Googling competitions in the area we could compete in.

"In order to advise scientists on Soldier-focused research and lead young Soldier research volunteers, we need to stay relevant."

"Human Research Volunteer Soldiers come here directly from their (Military Occupational Specialty) training, where many of them had their first experience firing a service weapon," Sandoval said. "So it's important for us as NCOs to maintain our fundamental skills and prepare the Soldiers for when they are sent to combatant commands."



Staff Sergeants Justin Coletti, left, and Anthony Sandoval hold the plaque they were given by the New Hampshire Army National Guard. Opposite, Coletti, left, and Sandoval on the range at Fort Devens.

It was this mindset that sparked the NCOs' pursuit of more Soldier-skills training, which they could, in turn, reinforce with the young Soldiers from the HRV program that they are in charge of and offer more insight during research studies across the organization.

"Our primary role here is the advancement of the Soldier through innovation and collaboration," said 1st Sgt. Miguel A. Martinez Jr., HRDD's first sergeant. "The NCOs here take that to heart and seek to assist the employees of the NSRDEC in that endeavor. To provide current and relevant feedback, my NCOs understand they must maintain a high state of readiness."

The EIC rifle and pistol competitions were graded as individual events, which rated participants in areas such as shooting sequence, known and unknown distances, and different firing positions with both the M9 service pistol and the M16-A2 service rifle using only the iron sites.

"The events were medium stress, focused on accuracy," said Sandoval, a cavalry scout who has served eight years on active duty and deployed once to Iraq with the 82nd Airborne Division.

Their aggregate scores contributed to a team score with two New Hampshire National Guardsmen. The combined team competed

in three team events, placing second overall for the match. Individually, the NCOs placed within the top 20 competitors, earning the recognition of being part of the top 20 shooters in the State of New Hampshire for 2016.

"Firing at silhouettes instead of bull's-eyetype targets trains your brain to shoot a person, which is something that all Soldiers need to practice for combat situations," said Sandoval.

For their outstanding performance, both NCOs were invited to compete in the regional individual and team EIC matches at Camp Ethan Allen, in Jericho, Vermont, later this year.

"Our Soldiers took the initiative to shape a training event into something much larger," said Capt. Enrique Curiel, HRDD commander. "Staff Sergeant Coletti and Staff-Sergeant Sandoval's achievements are great examples of our unit's leadership model: develop, empower and trust.

"Their achievement is a perfect example of their individual and collective talents and defines the quality of Soldiers that NSRDEC acquires. I am very proud of the countless achievements from our exceptional Soldiers and workforce."

Natick remembers 9/11

15th anniversary observed

By Bob Reinert, USAG Natick Public Affairs / NATICK, Mass. (Sept. 12, 2016)

Tifteen years after terrorists used hijacked comthe U.S., the Natick Soldier Systems Center workforce gathered Friday to remember the nearly 3,000 Americans who died and the courageous actions of first responders on 9/11.

At 8:46 a.m., the time when American Airlines Flight 11 struck the north tower of the World Trade Center in New York City on that clear, crisp Tuesday morning, NSSC observed a moment of silence before a bell tolled 11 times.

"This is a day that we pause and mourn those we lost in the World Trade Center, the Pentagon and in the fields of Shanksville, Pennsylvania," said Brig. Gen. Thomas H. Todd III, NSSC senior commander. "We also take time to reflect on the strength that was shown that September day."

Todd pointed out that many distinguished themselves as heroes on that Tuesday in September 2001. One was Welles Crowther, an equities trader and former volunteer firefighter.

"He directed survivors down the stairs and carried an injured woman on his back down 15 floors to safety," Todd said. "He went back inside the towers to help others with the 'Jaws of Life' in his hand, and his body was found alongside firefighters in a stairwell. Welles Crowther was 24 years

Todd related that Spc. Beau Doboszenski, a trained EMT, spent hours treating co-workers and running into the inferno as part of

a six-man team; that Tom Burnett, Mark Bingham, Jeremy Glick and Todd Beamer rushed the cockpit of Flight 93, which mercial airliners to attack crashed into a Pennsylvania field instead of reaching Washington, D.C.; and that Officer Moria Smith, the first New York City police officer to respond to the attack, saved many from the towers before becoming the only female officer to lose her life that day.

> "The 343 firefighters, 60 police officers and eight EMTs who lost their lives were heroes that day," Todd said. "They made the ultimate sacrifice running into a burning building to rescue their fellow citizens. Without their heroic efforts, we can't imagine how high the loss of life would have been."

> Todd thanked members of the Natick Police and Fire Departments in attendance for their own service and professionalism. Then he turned his attention to service members and the NSSC workforce.

> "Our military answered our nation's call fifteen years ago, and it continues to do so today," Todd said. "Many of the Soldiers standing here today have volunteered for military service since 9/11 knowing that they could deploy in harm's way. They serve with honor and pride, and I am honored to be on

> "The workforce standing here today answer our challenges every day. We ask them to make our warfighters the best protected and best equipped in the world, and they continue to find new ways to do it. They live the vision of the Natick Soldier Systems Center one team committed to Soldier success."

> Natick Police Chief James Hicks read the Patriot Day Proclamation from President Barack Obama, and the Natick High School Chamber singers performed at the ceremony.



# First responders honored

#### Natick holds stair climb

By Tazanyia Mouton, USAG Natick Public Affairs / NATICK, Mass. (Sept. 12, 2016)

More than 100 people from the Natick Soldier Systems Center workforce and local first responders participated in the first-ever stair-climb challenge Sept. 9, to symbolize the sacrifices that our first responders make on a daily basis.

Bert Scott, a supervisory recreation specialist for Family and Morale, Welfare and Recreation, said he thought the event was a success.

"I thought the turnout was amazing," said Scott. "A lot of people came out, not just to enjoy other people's company, but also to reflect on what happened 15 years ago."

While in the stairwells, participants also had a chance to read the names of the passengers of the flights that originated from Boston Logan International Airport on Sept. 11, which Scott said was

"Putting those names up, just kind of glancing at them at, it was too many," Scott said, tearfully. "In a sense of remembering people, it's nice, but, it shouldn't be up there."

Spc. Brittani Thibodeau, a bio-scientist assistant with the United States Army Research Institute of Environmental Medicine, said the event was physically difficult.

"The last five rounds were the hardest rounds out of this challenge because it starts to give you perspective," said Thibodeau. "The first part of the challenge, you're like 'Let's get this done, I'm pumped,' but the last five (flights), you really start to reflect on what everybody went through."

Luis Mateo, an Auburn firefighter, said the idea of the stair-climb challenge was remarkable.

"For people to not only think about first responders but actually do a 110-floor stair climb to honor them is amazing," said Mateo. "It's nice that people can actually have the opportunity to feel and recognize the physically demanding job that first responders have."

Pete Suh, an operations specialist for United States Army Garrison Natick, said the significance of the Natick team participating in this event was very important.

"Our goal wasn't really to complete the 110 flights of stairs," said Suh. "If you could have done one or two (flights), the major significance behind it was to recognize our local first responders, and that was the essence of today's stair climb."

Suh also said planners are already looking ahead to next year's stair-climb event.



"Next year we plan on perhaps having the event off the installation," said Suh, "so we can get maximum participation from the Town of Natick."



# 'Weight' Is Over

## **Taking a load off airborne Soldiers**

By Jane Benson, NSRDEC Public Affairs/NATICK, Mass. (Aug. 10, 2016)

## For members of the 82nd Airborne Division, the wait is about to get less weighty.

Dr. John Ramsay – a biomechanics engineer at the <u>Natick Soldier Research</u>, <u>Development and Engineering Center</u>, or NSRDEC – along with Jonathan Kaplan, an NSRDEC biomechanical engineer, invented the Low-Cost Airborne Soldier Load Assistance Device. The inexpensive, reusable device helps alleviate the airborne Soldiers' weight burden caused by resting their equipment on their legs/knees prior to boarding a plane.

"It is specifically for the airborne Soldier," said Ramsay. "They can be waiting many hours, and their packs can weigh up to 120 pounds, depending on what their job may be. While they sit, their equipment sits right along their knee caps. They are too uncomfortable to rest. When it's time to stand up, oftentimes their feet are numb. Their legs and backs are hurting. Then they have to board the plane and are expected to perform their mission at full capacity."

Ramsay explained that the device is a Soldier-driven engineering solution to an atypical load-carriage issue.

"When I saw the problem," said Ramsay, "I thought 'Why not just make them something that lifts the weight off their legs'? So, we took the height of the bench they are sitting on and we took <u>ANSUR II</u> data of an average thigh circumference. We then invented a device that sits between their legs and lifts all the weight off their legs."

The invention not only took weight off the legs, but it also alleviated shoulder discomfort.

"One of the biggest wins is that we designed this for load carriage off the legs, but it also helps the shoulders," said Ramsay. "The weight is strapped to their harness, which is around their torso, and, as they are sitting, there is pulling on their shoulders. The device helped reduce the pressure of paratrooper shoulder straps in the harness. After they tried to the device, almost unanimously, they said 'Man, this feels great on my shoulders."

NSRDEC's <u>Bootstrap Initiative</u> helped make this innovation possible.NSRDEC devised and implemented the Bootstrap Initiative,

an exciting new way to spark innovation, creativity and risk-taking while streamlining processes and minimizing bureaucracy.

NSRDEC's Dr. Ken Desabrais, a research aerospace engineer, conceived the idea and led the Bootstrap Implementation Team.

"The Bootstrap initiative provides a forum for someone with a great idea, that they think could help the Soldier, to pursue it," said Desabrais. "Part of the intent and process for Bootstrap was envisioned to allow people to go after concepts and ideas that may be so early in the conceptual stages or outside their normal area of work that it would be difficult to secure resources using traditional methods. Bootstrap is a way to try something new and see if it will work before deciding the best way to move forward."

"The Bootstrap Initiative provided the funding and an avenue to get it done," said Ramsay. "Through the Bootstrap Initiative, we were able to prototype a couple of designs, test them and get some feedback from the Soldiers. The device is super inexpensive, and it is a solution that they can continue to carry out themselves."

"Innovative ideas are often inspired by a deep understanding of unmet and unarticulated customer needs," said Tom Merle, chief innovation officer at NSRDEC. "Soldiers are our customers. In this case, Dr. Ramsay observed a condition that had never been self-reported through other means. He immersed himself in the Soldiers' environment, he identified a condition that, as an expert in biomechanics, he could assess was compromising the Soldiers' physical condition, and then he and his team moved to use their creative design and engineering skills to develop a simple and elegant solution that addressed the Soldiers' needs."

"We wouldn't have known this was an issue if we hadn't had experience with the 82nd Airborne, and we wouldn't have had a way to get funded if it wasn't for the Bootstrap Initiative," said Kaplan, co-inventor of the device, who is involved with the actual manufacturing. "It was super satisfying to go from idea to implementation in a little over two months."

"The Low-Cost Airborne Soldier Load Assistance Device defines the intent of the Bootstrap program perfectly," said Dr. Charlene Mello, chief scientist at NSRDEC. "It is a creative solution to an unarticulated need with tremendous benefit to the Airborne Soldier."

**Continued Page 16** 





"I think Soldiers now realize that scientists do care about them as professionals and as human beings. We actively sought their opinion. It is important that this was vetted through members of the 82nd and improved by people who are going to use it. They could be called into combat at a moment's notice."

Dr. John Ramsay, NSRDEC biomechanics engineer

"This is an incredibly powerful example of Soldier-centric innovation that only happens when experienced and creative S&E's immerse themselves in the Soldiers' environment and open their eyes fully to the compromises and challenges Soldiers face every day," said Merle. "Through the Bootstrap

Jonathan Kaplan, left, and Dr. John Ramsay, both of NSRDEC, examine a Low-Cost Airborne Soldier Load Assistance Device being used by an 82nd Airborne Division Soldier.

program, John and his team made this innovative solution happen."

In addition to NSRDEC's Bootstrap Initiative, the invention was also made possible by NSRDEC's partnering with the 82nd Airborne Division.

NSRDEC scientists and engineers are working closely with the 82nd Airborne Division to garner new insights into the cognitive, physical and emotional performance of Soldiers.

"The partnering has been a massive help in understanding what Soldiers actually do," said Kaplan. "I think there are so many possible opportunities for researchers and engineers to find out what the problems are and develop quick fixes."

"By partnering we were better able to envision what they needed," said Ramsay. "The goal was to make them more comfortable. Because if they experience less discomfort and pain, when it comes time for them to have to make a decision or perform a physical task, anecdotal evidence shows their morale is going to be higher and their energy level is going to be better. We aren't weakening our Soldier force, but are rather providing them a means to fully focus on their mission, without the added complexity that pain and discomfort might add."

NSRDEC's work with the 82nd is part of a larger science and technology effort called the S&T Project Integration Pilot, which is part of the Soldier and Squad Performance Optimization, or S2PO, initiative. Rick Haddad is NSRDEC's S2PO Program Integration lead.

"This is a perfect example of what we can do for the Soldier when we get our scientists and engineers out of the lab and into the Soldier's organic operating environment," said Haddad. "There is no publication or needs statement that can provide the level of fidelity or operational context you will see when observing the entire airborne timeline."

The device has been tweaked based on Soldier feedback from the 82nd.

"It took a scientist's perspective and a few discussions with paratroopers to allow us to make this low-cost device," said Command Sgt. Maj. David S. Jordan, 2nd Battalion, 504th Parachute Infantry Regiment, 1st Brigade Combat Team, 82nd Airborne Division. "It is all about flattening our organization and forcing critical and creative thinking at all levels."

"I think Soldiers now realize that scientists do care about them as professionals and as human beings," said Ramsay. "We actively sought their opinion. It is important that this was vetted through members of the 82nd and improved by people who are going to use it. They could be called into combat at a moment's notice. It's good to know that what we are doing as a team is helping the people who protect us perform better and get fewer injuries."

"Their input helped make the device so much better," said Kaplan. "It's great to see tangible improvements. We need to listen to them."



# Soldier volunteers provide critical service at Natick

By Martha C. Koester, NCO Journal/NATICK, Mass. (Sept. 1, 2016)

hey arrive every 90 days at the <u>Natick Soldier Systems Center</u> in Natick, Massachusetts, ready to perform an invaluable mission on behalf of their military brothers and sisters. If a Soldier wears it, eats it or sleeps under it, a <u>human</u> research volunteer has tested it for the Army warfighter.

HRVs arrive at Natick usually following advanced individual training and prior to their first permanent duty station. Many Soldiers often arrive unfamiliar with the small military research complex and installation.

"I had no clue about Natick," said
1st Sgt. Miguel A. Martinez Jr., first
sergeant of the Headquarters Research
and Development Detachment at the
U.S. Army Natick Soldier Research, Development and Engineering Center, who
works with many of the HRVs. "Before
I came here, I asked myself, 'What am I
getting myself into? I have no idea what
this is.' I have been here a year, and I
love it. It's great."

Behind every HRV is a small force of noncommissioned officers who are charged with sustaining Natick's mission of maximizing the warfighter's survivability and combat effectiveness.

"We know what the equipment can be used for, instead of what it was designed to do," Martinez said. "Soldiers walk in

and say, 'That's awesome. I can do this, this and this.' The scientists then say, 'Wow. We never thought of it that way.'"

It happens often: Soldiers repurpose a piece of military equipment in a way that scientists never thought possible. One example was the Army poncho, said Sarah Ross, human research volunteer test coordinator and a veteran NCO.

"Scientists had no idea that Soldiers were using it as a shelter or a cover," Ross said.

"Two years ago, [a review] was done in the <u>Doriot Climatic Chambers</u> because Soldiers were getting heat injuries from being underneath the poncho. They found Soldiers were using the poncho as a shelter, and the temperature underneath the ponchos was reaching 150 degrees. Soldiers thought they were in the shade, but in reality they were hurting themselves by doing it. Scientists and engineers didn't create that item for them to use it in that regard, so they changed it. But they wouldn't have known that if they didn't have a good relationship with Soldiers to be able to get that feedback."

Martinez and Ross work together with HRVs to ensure that being a Soldier doesn't come second at Natick, Ross said.

"Bottom line is we are all just making sure that we do the best we can for the Soldier," she said.

A lot can happen in the 90 days that Soldiers serve as HRVs.

"It's enough time where Soldiers who are not diligent in staying within qualification of their MOS, their job, that they can become complacent quite easily," Ross said.

"So that's where HRDD comes in – to make sure that Soldiers keep that good order because that's important."

Soldiers who volunteer for studies at Natick may find themselves with such tasks as trying new uniforms or garments or enduring environmental conditions that Soldiers in the field commonly face.

"A Soldier can be here for 90 days and participate anywhere from doing one study to 10, 12 or 15," Ross said. "I keep records, and I give them all a little memo of things they have done. I did one where a Soldier did 17. That's the most I have seen a Soldier do in 90 days."

As part of the team at the Doriot Climatic Chambers, Ross has seen a lot of HRVs come through Natick.

"Our program is evolving because the Soldiers that we work for are evolving," Ross said. "The Soldiers we are getting in this program are changing because the demographic of the Sol-

dier is changing. We are seeing more females in these groups than I have ever seen. This upcoming group has 11 females. I have never had 11 females in a group of 30 before. That's never happened in my eight years here."

The installation often welcomes West Point cadets as well as squads from larger bases to help with testing.

"We have cadets from West Point who intern here," Martinez said. "We also have a squad from the 82nd Airborne Division that helps, as well. There are guys from Fort Stewart, Georgia, here, and we have HRVs, as well. It's a very busy installation for a small unit."

HRVs have been prized for their feedback since 1954 at Natick labs, where they take part in studies for NSRDEC and the <u>U.S. Army Research Institute of Environmental</u> Medicine. Ross often hears back from some Soldiers who have volunteered at Natick.

"One of the best things to me is when I open up Facebook, and I get a message from [a former HRV]," she said. "They tell me, 'Hey Sarah, I am an E4 now. My unit was chosen to use this new rucksack. I opened it up and realized that three years ago when I was at Natick as an HRV, I helped with this research.' I probably receive about 10 of those emails. That, to me, is so cool."



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# 'Rare Breed'

### Natick's Keifer earns RDECOM NCO of the Year honors

By John Harlow, USAG Natick Public Affairs/NATICK, Mass. (Sept. 26, 2016)

taff Sgt. Robert Keifer, a platoon sergeant at Headquarters Research and Development Detachment, Natick Soldier Research, Development and Engineering Center, earned the title of 2016 U.S. Army Research, Development and Engineering Command noncommissioned officer of the year.

A native of Navarre, Florida, Keifer joined the Army in October 2007 as a 11B infantryman and previously served with the 10th Mountain Division at Fort Drum, New York, and Fort Polk, Louisiana, the 3rd Infantry Regiment (The Old Guard) at Fort Myer, Virginia, and made two deployments to Afghanistan before arriving at Natick.

Keifer used his experience at The Old Guard to help prepare him for the NCO of the Year competition.

"There were a lot of long hours and hard work while serving at The Old Guard," said Keifer. "There is a lot of attention to detail, a lot of high-profile ceremonies that I participated in – such as the Presidential Inauguration, retirements of secretaries of Defense and general officer retirements. It was very eventful, and I learned a lot while I was there that translates to what I am doing today."

Preparation for the NCO of the Year competition is both physical and mental.

"I started going hard with my (physical training) by going to the gym every day and sometimes multiple times a day," said Keifer. "(U.S. Army Research Institute of Environmental Medicine) was very helpful. They would do training events (and) extended an invite to our detachment, which I gladly accepted to prepare for the He credited some of his mentors who helped him throughout his competition."

After winning the RDECOM competition, Keifer competed at the Army Materiel Command NCO of the Year competition. "I just focused on one thing at a time at the AMC competition,"

said Keifer. "The old saying 'slow is smooth and smooth is fast' helps you to focus on what you are doing, pay attention to detail and remember your training and go from there."

Keifer, who previously earned NCO of the Year at The Old Guard, said the land navigation was the toughest part of the AMC compe-

"The entire competition was very challenging," Keifer said. "You were working on very little sleep, little time to eat and it made conditions tough, but the toughest part was the land navigation.

"(On) this particular course, the terrain was very challenging. I don't think anyone had been walking through it for a long time



Staff Sgt. Robert Keifer, left, of NSRDEC works on a simulated casualty during the Army Materiel Command NCO of the Year competition.

because the vegetation was so thick and it was very hard to walk

Keifer finished second in the AMC NCO of the Year competition and scored highest on the M-4 Carbine qualification.

"My commander, Capt. Enrique Curiel, is one of my mentors," said Keifer. "He has taken a lot of time with me and the other NCOs in our organization to develop us as leaders. He has experience as a NCO himself, so he speaks from a place of knowledge. He comes from several different backgrounds. He was a military policeman as an enlisted Soldier and now is an Adjutant General Corps officer and sees things from a different perspective than you would get from another infantryman. That unique perspective has helped me see the Army from a different angle. His guidance has definitely

His commander holds Keifer in the highest regard.

"He truly cares and loves his Soldiers and the Army," said Curiel. "NCOs like Staff Sergeant Keifer are a rare breed. He is very passionate about what he does and takes care of his Soldiers, and we're honored to having him serving at HRDD."



On the short side of acquisition is the Rapid Equipping Force, which allows Soldiers or units in immediate need to file an urgent operational needs statement; the REF will respond, typically in fewer than six months, with a materiel solution that in most cases is developed on-the-fly by the Army, sometimes even in theater.

Output from the new Rapid Capabilities Office is meant to hit a "sweet spot" in development timelines of between one and five years, Wiltsie said. It is meant neither for immediate solutions, nor longterm development of projects like aircraft or vehicles. Its purpose is to close the capability gaps with rapidly evolving technologies that require a dedicated fast-track to approval.

"The Rapid Capabilities Office is focused on what it says: capabilities," Fanning said. "We're not embarking on creating new systems or new platforms. We're not focused on building a new helicopter, for instance.

"We're going to use this office because some technology on a helicopter isn't giving us the edge over an adversary that it should. But it might mean that some capabilities being developed for a future helicopter need to be developed faster."

#### A TEAM OF EXPERTS

Right now, the staff of the Rapid Capabilities Office is a bit of a skeleton crew, with Wiltsie and Piatt at the top of the pyramid.

It will require more than just two men and a staff to identify the most critical capability gaps, develop solutions, and then deliver them to the field in07 less than five years. And it will require a process different than the traditional acquisition process.

What it will take, according to Wiltsie, is active interest from senior leadership in the Army. To that end, a board of directors led by the secretary of the Army himself will serve as the top decision-makers. But other top leaders and organizations will also influence the Rapid Capabilities Office, Wiltsie said.

"In order to provide a holistic solution and a holistic assessment of what capabilities we are trying to bring to bear, you have to have Army Training and Doctrine Command's involvement as the subject matter experts in doctrine, organization, training and leadership," Wiltsie said.

"And [also] Army Forces Command, clearly, because they are the generating force command. Their operational units will be receiving the equipment, so we need FORSCOM performing the operational assessment of the equipment."

With that level of Army leadership directly involved in the identification of capabilities and procurement objectives, solutions are apt to move along much more rapidly than they would through traditional acquisition, Wiltsie said.

"You reduce the number of levels of oversight," Wiltsie said. "But it's the most immediate, urgent, or emerging threats that they believe the Army will encounter. So you shorten the level of oversight and you get decisions fast."

The board of directors will be responsible for identifying the procurement objectives to be developed. As of this writing, the board hasn't met, so it has yet to pass on its first development objectives. The general direction, Wiltsie said, will involve cyber, electronic warfare, and positioning, navigation and timing capabilities.

The board will take counsel on the Army's needs directly from combatant commanders. Those requirements will follow the operational needs statement process. Wiltsie said, with the Rapid Capabilities Office and its board of directors, it's possible for an operational needs statement to be turned around quickly and approved, if need be.

#### **FASTER PROCESS**

Once the Rapid Capabilities Office board of directors decides on an objective, Wiltsie said, his office will perform an analysis and return to the board with their results and request approval to move forward for prototyping of a solution.

Upon receiving approval, the Rapid Capabilities Office will develop and test a prototype and then perform an operational assessment of the prototype's effectiveness, as well as the training and maintenance required to implement it.

Wiltsie said the Rapid Capabilities Office will make use of every opportunity to perform operational assessments, including the Network Integration Evaluations and Army Warfighting Assessments held at Fort Bliss, Texas, and White Sands Missile Range in New Mexico.

Involvement of Army Forces Command at the level of the board of directors will ensure that Army units will be available to run the operational assessments. After analysis and prototyping, Wiltsie said, the Rapid Capabilities Office will either enter limited production, further refinement, or shelve the idea.

Piatt said the Rapid Capabilities Office can count on senior leader buy-in, because the leaders will be involved from the start in identifying capability gaps and in the decision-making process to move forward. That means solutions should reach the Army much faster than they would though traditional procurement.

But the process should also ensure more robust and future-proof solutions than those typically provided through the REF process.

"We're filling a gap that can meet a tactical need, in the near term, but also helps close a strategic gap, and move existing technology together so the Soldier doesn't have that demand," Piatt said. "The Army is always evolving."

Piatt cited Army Chief of Staff Gen. Mark Milley's remarks on always being prepared "for the last war," in part as an impetus for creation of the Rapid Capabilities Office.

"If we have a capability that the Rapid Capabilities Office can give the Army to [meet] that near-term need and emerging far-term gaps, we are going to close that gap," Piatt said.

"I think the best thing we will be able to do for Soldiers is not put them at an un-readiness in the future, but make them ready for today and also prepared for the future."

Fanning said the Rapid Capabilities Office will help the Army do what successful armies in the past have always done: anticipate the future. The Rapid Capabilities Office, he said, will ensure Soldiers always have the capabilities they need to achieve a deci-

"Our Army, as the principal land force of a global power, does not have the luxury of preparing to fight only one type of enemy at one time, in one place. We must be prepared across the full spectrum of conflict," Fanning said.

"The Rapid Capabilities Office will enhance the Army's ability to confront emerging threats and improve our acquisitions process; it will improve our ability to provide our Soldiers what they need when they need it, and it will allow our Army to be more nimble in our efforts to stay ahead of change and innovation."



## **Out-innovating Adversaries**

## DoD counting on installations such as NSSC for superiority

By Cheryl Pellerin DoD News, Defense Media Activity/WASHINGTON (Sept. 16, 2016)

uture <u>Defense Department</u> technological superiority hinges on the department's ability to out-innovate its adversaries, rethink how it sources technology and perhaps rethink its models for product delivery, the assistant secretary of defense for research and engineering said here vesterday.

Stephen P. Welby addressed an audience at the Center for Strategic and International Studies discussing research and development across the defense enterprise.

Such superiority also will require a DoD science and technology, or S&T, enterprise that is tuned to support sustained research in fundamental technologies and quickly leverage emerging technical opportunities to address warfighter needs, he added.

"We need to be open and agile, to leverage all potential sources of technical advantage, from our traditional industrial base, from nontraditional suppliers, and from academia to help to create competitive advantage," Welby said.

DoD laboratories must be prepared to perform a key role in translating technical capabilities into solutions and concepts, the assistant secretary said, that will help meet warfighter needs and grow their capability to overmatch any threat.

Welby believes the department's core technical engine is the DoD S&T community - the uniformed and civilian men and women who every day explore new scientific frontiers, advance military capabilities and critical military technologies and envision new military concepts.

The major technologies the department will rely on in the future will remain defense unique, he added, and some of DoD's most cutting-edge capabilities will reflect a convergence of military and commercial technologies.

"No one in a garage in Palo Alto is developing the next armor system, the next defensive capability for a carrier, the next acoustic-quieting technology for our submarines," he said, "... and I don't think we spend enough time focused on that core engine of technology and innovation that's made up of the service and defense laboratories and agencies."

The three principal service labs are the Army Research Lab in Adelphi, Maryland, the Naval Research Lab in Washington, D.C., and the Air Force Research Lab in Dayton, Ohio. The department also operates 63 specialized research and engineering centers nationwide, Walker said.

Some of these are the Air Force Rocket Propulsion Lab at Edwards Air Force Base in California, the Naval Air Weapons Station at China Lake in California, the military medical research centers in Texas and Maryland, the Army Aviation and Missile Command in Alabama, and the Army Natick Soldier Systems Center in Massachusetts.

The Washington, D.C.-based Defense Advanced Research Projects Agency also plays a unique role in the defense enterprise, he said, and for the last 58 years has remained at the forefront of disruptive revolution after revolution in military and civilian technology.

"DARPA is focused on high-risk, high-pay-off technologies with a project focus," Welby said. "They have achieved success over time by attracting the best and brightest who want to work on some of the most compelling and fascinating technical problems our country has to offer, and by operating with a very lean and agile operating model."

Welby said the president's 2017 budget request for DoD S&T was \$12.5 billion, divided among basic research, applied research, and the advanced technology development that turns applied research into the next stage of maturation.

One of his duties as DoD chief technology officer, he explained, is to ensure that the S&T portfolio stays focused on areas that provide the best return on the department's investment.

"To do this efficiently we've identified 17 of what we call Reliance 21 Communities of Interest ... the technical focus areas that the department organizes its S&T base around," the assistant secretary said.

Some of these include autonomy, cyber, sensors, electronic warfare, ground and sea platforms, space, human systems, air platforms, biomedical, counter weapons of mass destruction, counter improvised explosive devises, and others, according to the Research and Engineering

A technical expert from across the department leads each community, and the leadership roles rotate among the services. Leaders and their staffs come together to do reviews, Welby said, and then they go back to their day jobs.

"We need to be open and agile, to leverage all potential sources of technical advantage, from our traditional industrial base, from nontraditional suppliers, and from academia to help to create competitive advantage."

Defense for research and engineering portfolios – about 90 percent of that investment is

"We use these communities to perform technical assessments, to develop our classified and unclassified roadmaps for where we are taking our technology investments, and to make recommendations about work that should be accelerated and work that should be wound down," he added.

"Today about 75 percent of the total DoD S&T budget is covered by the 17 focus areas, and at the applied research and advanced technology research piece - the Stephen P. Welby, Assistant Secretary of more applied portions of our science and technology covered by these 17 communities," Welby said.

> One strategy Welby's office is pursuing to accelerate the maturation of capabilities in a constrained budget environment is an increased focus on prototyping and experimentation,

"Our prototyping efforts are a hedge against an uncertain future," Welby said. "They allow us to avoid early commitment to procurement in fielding, serial production, demand, and they provide options to leadership to help shape future system portfolios."

A good example of prototyping, he added, is Sea Hunter – a full-scale prototype of a new class of unmanned oceangoing vessel.

DARPA developed and built the technology-demonstration vessel through its anti-submarine warfare continuous-trail unmanned vessel program. The robot warship can travel thousands of kilometers over open seas for months at a time without crewmembers, but always with remote human supervision, according to a DARPA news release about the ship.

Today, Welby said, the ship has left Portland and is now with the fleet in San Diego. For the next two years the Navy is going to work with the vessel to help them understand how unmanned capabilities will intermix with manned capabilities and future systems.

"So many of these prototype programs are about taking that last step," he added. "They go from the capabilities we work on in the lab, in simulation, in wargaming, and actually put it into the field so folks can rap knuckles on the devices and understand what they can really do

(Follow Cheryl Pellerin on Twitter: @PellerinDoDNews)

