

 Government Technology Insider

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# BUILDING THE FOUNDATIONS:

A New Era for the Department of Defense

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# Building the Foundations for Transformation



**Michael C. Masten**

Vice President of Operations at Chenega  
Applied Solutions

The Department of Defense (DoD) has always been a pioneer in support of the mission and the warfighter. After all, there is nothing more important than defending the nation from myriad threats and ensuring that the warfighter returns home safely. But as the nature of threats facing the nation evolve in the digital age, it's time for the DoD to once again forge new pathways and seize new opportunities to continue its commitment to excellence and its long history of mission success.

Today's leaders in the Pentagon face a far different world than their predecessors did even twenty years ago. After all, it's not only the threats to national security that have changed, so too have the weapons of war, and even the warfighter. With the pace of IT innovation increasing exponentially with each passing year there are more capabilities available that revolutionize how the mission can be executed. And the men and women who are answering today's call to arms are fundamentally different too; they are digital natives, skilled tech users, and have more opportunities at their fingertips than any generation before them.

But while the forces of change have propelled innovation in some areas, they have left other areas – including procurement and infrastructure – firmly stuck in the past. It's no secret that the federal government's bureaucracy is struggling to keep up with the pace of change, the need for rapid acquisition tools, or the ability to provide work environments that reflect and support the needs of tomorrow's warfighters.

While this might sound like a dire situation, what you'll learn in the pages that follow is that there are solutions to these challenges. There are partners, like Chenega Applied Solutions, at the ready to come alongside the Department of Defense and its members to equip them not just with the tools and technology for today's mission, but with the physical spaces and new perspectives that not only meet today's needs but continue building the foundations for what will be needed next.



# USAF Prioritizes Modernization: We Want You to Make us Into Google

Michael C. Masten

**“The DoD, and the Air Force, in particular, needs to be able to transform themselves into a Silicon Valley-like organization that will attract the talent and skillsets they need to support the transformation of the organization...”**

The United States Air Force (USAF) is in the midst of a wholesale modernization effort. From the introduction of Space Force to modernizing nuclear capabilities and adopting advanced battle management systems, all systems go to deliver a defense force that is ready to meet the challenges of the 21st century. However, one area that is often overlooked during modernization efforts is how to improve the acquisition process to not only support broader transformation goals but also attract top talent.

This is not the case for USAF, though, as Air Force Chief of Staff, General Charles Q. Brown, has made

acquisition one of the three pillars of the Air Force's transformation and modernization strategy. "The Department of Defense (DoD) has, in general, taken a piecemeal approach to transformation that has slowed the overall progress and hampered the success of modernization efforts," explained Michael C. Masten, Vice President of Operations at Chenega Applied Solutions (CAS). "Brown's commitment to overhauling the way in which the Air Force acquires everything from physical office space to technology will be critical to ensuring the success of these efforts."

With more than a decade of leading modernization efforts for the DoD and the Intelligence Community, Masten knows of what he speaks. "The DoD, and the Air Force, in particular, needs to be able to transform themselves into a Silicon Valley-like organization that will attract the talent and skillsets they need to support the transformation of the organization," he shared. "Right now, the Air Force and the DoD writ large are struggling to attract or retain top talent because so much of the organization and infrastructure is outdated. The buildings are old, the technology is old, and even the way technology is procured is old. People might joke about it taking 10 years to access new software, even if it's developed in-house, but it's not far from actuality."





**“Approaching Modernization as-a-Service enabled these Air Force teams that were looking to perform mission-critical software and solution development nimbly to get off base and immerse themselves in the technology communities that would support agility and help them successfully compete for the right talent.”**





## Designing a Coordinated Modernization Push

But as Masten knows – and as his team at CAS has demonstrated – there’s a different path forward. Even before this coordinated modernization push within the Air Force, an emerging program birthed out of the Defense Innovation Unit (DIU) engaged Masten and his team to deliver a turnkey solution from locating and renovating office space in downtown Boston to sourcing and building out the IT infrastructure and providing on-going IT and facilities support. Now known as Kessel Run, USAF’s Life Cycle Management Center (AFLCMC)’s Detachment 12 at Hanscom AFB delivers “combat capabilities warfighters love” and has a mission is to “revolutionize the Air Force software acquisition process” with support from the DIU in Boston and

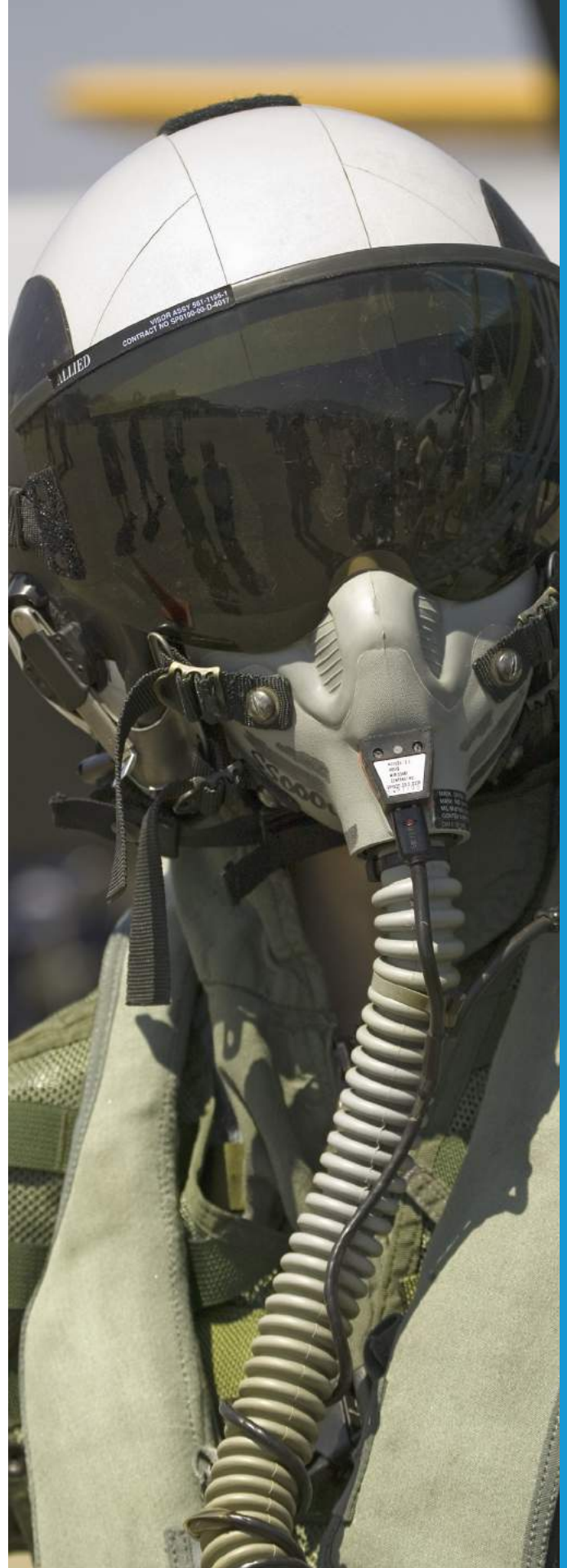
Joint Base Langley.

In short, what this experience created was a blueprint for Modernization as-a-Service (MaaS). Masten and his team have since leveraged their MaaS model to provide cutting-edge facilities and support for numerous other Air Force programs and software factories, including the Enterprise IT as-a-Service (EITaaS) program at Hanscom AFB, LevelUP in San Antonio, Blue Sky in Macon, GA, and most recently Project Synergy supporting the 402nd SWEG at Warner Robins AFB.

“Approaching Modernization as-a-Service enabled these Air Force teams that were looking to perform

mission-critical software and solution development nimbly to get off base and immerse themselves in the technology communities that would support agility and help them successfully compete for the right talent,” explained Masten. And this approach will become even more important to USAF as the Space Force Command ramps up in the coming year and as the DoD adopts DevSecOps for developing and updating critical tools in near real-time to meet the mission.

“The visionaries inside the Air Force, including General Charles Q. Brown, who are advocating for these bold changes, are directly influencing mission success in an increasingly complex geopolitical environment,” concluded Masten. “We’re proud to be part of this effort supporting modernization and transformation, quite literally, from the ground floor up.”





## Proof Points: From Kessel Run to Project Synergy

In February 2020, USAF senior leadership signed off on Project Synergy, an IT modernization effort to develop a new software engineering facility at Robins AFB in Georgia, bringing in 160 on-site software developers to advance mission-critical software solutions. Because the DoD faces many challenges when it comes to modernization, Masten says completing a huge IT modernization effort in such a short amount of time is “almost unheard of.”

“Modernization isn’t cheap,” Masten said. When the DoD already operates many programs that need to be funded, it can be very intimidating to embark on something new. However, Project Synergy was completed in just one year, and the

R. Wayne Lowe Synergy Innovation Complex was fully operational by February 2021, setting a milestone example for modernization efforts in the DoD. So how did they do it?

Masten attributes the success to senior leadership champions, who he believes are key to making DoD modernization goals a reality. In the case of Project Synergy, General John C. Kubinec paid close attention to what the 402nd Software Engineering Group was working on and where software development could take Robins AFB. Not only can senior leadership champions get project sign off completed more quickly, but they are also able to influence a culture shift within their agencies. Enthusiasm for

innovation and openness to new approaches are essential to modernization efforts.

Kessel Run paved the way to forward-thinking leadership when the team approached CAS with an ambitious request: “We want you to make us into Google.” Influenced by the DIU in Silicon Valley, the Kessel Run team wanted to model their efforts from tech industry leaders. By adopting agile methodologies, creating horizontal leadership structures, and generating a momentum for change, USAF has since been seeking to replicate this effort in what Masten describes as a “gold rush” to modernize. The success of Kessel Run helped lay the groundwork for CAS’s MaaS model, which would lead to the development of additional DoD software factories such as LevelUP, SpaceCAMP, and Platform One, as well as bring Project Synergy to fruition.





# Three Heroes of Modernization: Agile Acquisition, Champions, and Turnkey Solutions

Michael C. Masten

**“What alpha contracting allows is for you to have that solutioning conversation directly with the government where you can actually see where they want to go.”**

One major step towards becoming more agile was USAF’s investment in a leaner acquisition process. Traditionally, the DoD’s acquisition process means writing out heavy-handed proposals that go out to competitive bidding processes. “The government puts out a bid, and then, all of a sudden, you can’t talk to contracting officers anymore. You do a proposal in a vacuum, and you submit it to them,” Masten explained.

But in the case of Project Synergy, USAF partnered with an 8(a) small business like CAS, which enabled

them to focus on sole-source contracts in a process known as alpha contracting. In alpha contracting, the DoD sends an offer letter directly to the contractor to eliminate back and forth. Masten said his team was able to hear out what the USAF was looking for, draft out a plan, and bring it back to the discussion table – “What alpha contracting allows is for you to have that solutioning conversation directly with the government where you can actually see where they want to go.”

Masten encourages anyone advancing a modernization project to find a senior leadership champion. Project Synergy was a clear example of what a modernization project championed by an innovative leader like General Kubinec can produce. Masten says, “There’s a culture shift that has to take place within the DoD. To try and lean forward, modernize in the holistic way we are talking about with MaaS, it really does take some champions from the government side to make sure that happens.”

In May 2021 the Biden White House released its 2022 Defense Budget, which calls for \$112 billion in research, development, test, and evaluation (RDT&E) for the DoD, a 5 percent increase from 2021. This is the largest request of this kind in

many years. So, what does this mean for the future of DoD’s agile methodology modernization?

Masten believes the future looks bright for delivering the success of IT modernization projects. The emergence and adoption of software factories throughout the Air Force, Army, Navy, and Marine Corps has set a blueprint for the DoD to advance IT modernization. In addition, promoting modernization at the top is key to driving these projects all the way to the finish line – as Masten put it, modernization must be promoted “all the way up to the Pentagon, all the way up to the President of the United States.” With the model, budget, and buy-in from the Commander-in-Chief all in place, modernization opportunities are abundant, and projects are set to make it to the finish line.

However, the momentum must continue even after project completion in order to prevent progress from stalling out. Senior leadership champions cannot leave the work of advancing completed projects to people in lower positions. Fortunately, the budget increase in RDT&E is a significant leap in perspective for top-most officials. This momentum will flow to senior leadership champions, and the troops below will respond. Eventually, this will build

a culture shift across the DoD, where agencies as a whole are eager to embrace innovation and drive change.

For Masten, adopting agile development principles is core to the culture of digital transformation that DoD agencies must pursue in order to be successful in modernization. Agile methodology is not simply a way to approach getting to an end point — rather, it is a philosophy predicated on being open to cycles of change and review, which open the door to innovative new endeavors. The iterative nature of agile methodology means that there is constant room for improvement and changes — if a project strays from its initial plan, then agencies can adjust as they go, using iterative processes and sprint cycles to reach the final product. This is a necessary culture to bring to the DoD, which has historically been a very risk-averse organization. Modernization projects must break this mold in order to see their greatest potential.

IT experts in the defense industry can help DoD agencies transform into agile organizations. For example, CAS's MaaS program provides a turnkey solution of hardware, software, and support services, so that the government can focus on the warfighter. Hanscom AFB's EITaaS program

is an example of how the MaaS program brought a novel look on how to approach change. For this program, CAS sent a team of engineers to work on-site at Hanscom so that a brand-new team could provide a fresh perspective in order to keep driving innovation. Project Synergy is another example. Here, the MaaS program created a new project-specific position, the MaaS Solutions Specialist — a solutions architect that will address technical solutions and continue innovation in maintenance post-build.

As leaders in the DoD leverage the bumper FY22 budget to drive new investments in software factories, they must make sure to lay the groundwork for progress to continue after project completion. Rallying for agile methodologies will help ensure that a culture of innovation and discovery continues across the DoD. Masten says, "Modernization is not a single point...it's a constantly evolving process. Technology is changing every single day; a lot of the software that we use today will be irrelevant two years from now... as you know, you have to buy a new phone every so many years... so it really requires knowledge and continuous flow of information to the customer for agencies to remain on the tip of the sphere."

# Getting Started on the Journey to Tomorrow



**Michael C. Masten**

Vice President of Operations at Chenega  
Applied Solutions

Having taken a deep dive into the possibilities created by Modernization as-a-Service it should, hopefully, be clear what opportunities lie ahead for the Department of Defense with this bold approach. However, unlike other experiments with innovative thinking that have fallen short of success, this path forward brings insights from the tech world but also a deep understanding of the unique requirements of the nation's defense forces.

When Chenega Applied Solutions first started working with the United States Air Force on its Modernization as-a-Service needs, the inspiration was drawn from the Defense

Innovation Unit and then executed by our team. And just as the DIU laid the foundation for our first partnership, Project Synergy and Kessel Run have paved the way for each subsequent step on the Air Force's modernization journey. With each iteration and interaction things that were unfamiliar, or seemed unattainable, became part of standard operating procedure.

As the Department of Defense prepares for its new fiscal year with a strong budget, additional funding from the Technology Modernization Fund, and forward-thinking leadership, the time is right for the broad based adoption of Modernization as-a-Service. If you're ready to explore the possibilities, or start a conversation about where our partnership could take your organization, we're ready, willing, and able to help get you started on the journey to tomorrow.

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Ready to Learn More?

Chenega Applied Solutions  
10505 Furnace Road Suite 205  
Lorton, VA 22079

(703) 493-9880

Visit: [www.CASMaaS.com](http://www.CASMaaS.com)