

The Digital Transformation Center at onMain

Dayton, Ohio

October 25, 2022

THE NEED:

Digital Transformation (DT) will modernize how the Air Force designs, develops, delivers, operates, and sustains weapon systems. New and emerging DT tools will streamline Air Force operations such as technology transition, design review and requirements tracing, contract writing, scheduling maintenance, testing and evaluation by connecting processes and data flows in a seamless data environment. It also includes specific initiatives for developing standard contract language, supporting standards for digital engineering goals, developing implementation plans, and collaborating with industry on standards, formats, and interfaces to improve collaboration, data exchange, and internet protocol protection.

DT is a key objective of Air Force Materiel Command headquarters located at Wright-Patterson Air Force Base (WPAFB) and is managed through the Department of the Air Force's Digital Transformation Office (DTO). The DTO leads the digital transformation efforts for the entire Department of the Air Force acquisition and sustainment enterprise, Air and Space Forces. DT is central to the future vision of both the Air Force Research Laboratory (AFRL) and the Air Force Life Cycle Management Center (AFLCMC), also located at WPAFB. These two organizations, along with HQ AFMC, employ more than half of the personnel at WPAFB, have a strong history of collaboration with industry partners and academia, and have embraced digital transformation toolsets to accelerate innovation and system acquisition, fielding, and sustainment. The National Air and Space Intelligence Agency (NASIC), other AFMC Centers, and other support capabilities located at Wright-Patterson AFB are also pursuing DT.

Digital transformation is critical to future Air Force operations to maintain supremacy over adversaries who, in some cases, are surpassing the United States in speed and flexibility of weapons systems acquisition. Not only must the U.S. develop new and disruptive capabilities, it must address how it develops and acquires technologies and gets them to the field much faster.

Digital transformation requires a close working relationship among partners, with both virtual and physical nexus' for driving common approaches. It also requires the development of a cutting-edge workforce with experience in many digital skillsets. Incorporating industry digital expertise into Air Force projects is necessary to ensure a rapid and robust Air Force digital transformation. The current lack of a suitable space prevents the DTO from bringing that expertise to its transformation efforts. Under the existing conditions, the DTO is hindered in its efforts to facilitate targeted outreach efforts at smaller-scale industry partners who are just as critical to digital progress but who do not have the ability to directly access the Department of Defense.

THE DIGITAL TRANSFORMATION CENTER:

The proposed Center will be designed to meet the current needs of WAFPB's digital transformation mission and enable the necessary collaboration with industry. The Center will also accommodate future expansion of digital operations as this growing field of study and its associated Department of Defense missions evolve. The Digital Transformation Center will be sited at the front door of onMain, Dayton's Imagination District; an emerging innovation district located just one mile south of downtown Dayton. The Center is just 6.5 miles west of WPAFB; sufficiently close to provide ongoing coordination between the Center and Base personnel. It is also directly adjacent to the University of Dayton and 1.5 miles southeast of Sinclair Community College, providing significant opportunities for education and training.

The Digital Transformation Center will be a 125,000 square-foot, five-story facility that provides custom-built space for Air Force, industry, and academic personnel to jointly accomplish the AFMC's digital transformation mission. The majority of the Center will include collaborative project and administrative space for both Air Force personnel and industry partners. This will enable small business representatives to work side-by-side with major defense contractors and Air Force project managers, allowing for access to non-traditional technology innovators critical to the process of digital transformation. Also included in the facility is dedicated classroom space for the Dayton area colleges and universities to teach digital skills and offer other education and training opportunities. The top floor of the Center (approximately 25% of total square footage) will be constructed as SCIF-ready in order to support future secure

programs at the appropriate levels of classification. This secured area will include the required on-site support personnel and will be available for industry users to lease. The Center will house a multi-level security infrastructure and network foundation to support rapid movement from unclassified conceptual demos to classified implementation on appropriate Air Force networks.

KEY PARTNERS:

1. The US Air Force's Digital Transformation Office (DTO) is currently located at WPAFB. The DTO supports the Air Force's mandate for digital transformation with a location that links industry experts with Air Force leaders to deliver cutting edge digital transformation programs and products. Its presence in Dayton provides a unique opportunity to drive transformation across both the Air and Space Forces. The DTO will have a collaboration presence at the Digital Transformation office to better connect with industry and academia to fulfill its mission.
2. The Center will house a Digital Twin Incubator (DTI), which will support the digital transformation mission by tackling high return-on-investment projects for Wright-Patterson requirements. By collaborating with academia, industry and government, the DTI will identify rapidly scalable digital twin demonstration projects; match users, funds, contract vehicles, and industry partners needed to efficiently demonstrate the concept; support execution of the projects, and help to scale the project enterprise-wide. In addition, the DTI will collect and publish lessons learned from each effort to accelerate future efforts.
3. The Digital Twin Center of Excellence is a partnership between industry, academia, and government to implement and learn from digital twin implementation projects. The DTCOE goal is to accelerate digital and cultural transformation, which includes developing models with the ability to adapt to demand signals that may include: requirements of varied scale and complexity, interdependent technologies, and requirements that will likely outstrip organic Air Force capability. Thrust areas for the DTCOE include: Digital Collaboration, Joint All-Domain Command and Control (JADC2), Agile Air Mobility, Attributable, Autonomous, Collaborative Platforms, and Sustainment, Mods and Upgrades.
4. The Digital Design Studio provides digital infrastructure and tools for rapid development, sustainment, and innovation of digital projects. The electronic framework provides a gateway between academia, industry, and government and provides a virtual hub for geographically dispersed teams to demonstrate new toolsets and gain access to other providers toolsets for training and prototyping.
5. Working in conjunction with all other efforts in the Center is the Digital Enterprise for Applied Learning (DEAL). The DEAL concept is to support upskilling of the workforce for all partners in the Center. Working to close the skills gap in the digital transformation community, the DEAL will connect the Air Force and industry with college interns and coops from regional and national universities and well as community colleges; provide on-site training in toolsets, concepts, and lessons learned; and open doors for non-traditional students to advance their education and earning power while earning a paycheck.

SUMMARY

The Digital Transformation Center will be designed to help industry partner with the Air Force in a secure, yet seamless environment; both physically and virtually in ways that will advance digital transformation projects across the Air Force enterprise. Its success is dependent on a core of collaborative-minded industry partners working with government program offices and the Digital Transformation Office to bring the best ideas to the warfighter and keep the U.S. far ahead of its adversaries.

ABOUT onMAIN, DAYTON'S IMAGINATION DISTRICT

onMain is a state-of-the-art innovation district located on a 38 acre site that is just south of a revitalizing downtown Dayton and adjacent to the University of Dayton and Premier Health's Miami Valley Hospital. At full buildout, the district will contain 15+ buildings that will provide nearly 1 million square feet of research and related work space, 1,500 housing units, 75,000 sf of retail uses and parking for 2,500 vehicles. This master planned development will represent the best of Dayton, Ohio as a city of Innovation, entrepreneurialism, creativity, sustainability, and inclusivity. For more information visit onMainDayton.com

ARCTOS | All In.

The Dayton Region Priority Development & Advocacy Committee
c/o Dayton Development Coalition
1401 South Main Street
Dayton, OH 45409

November 3, 2022

Dear PDAC Committee Members:

On behalf of ARCTOS, please accept this letter of support of onMain's application for prioritization in this year's PDAC process. As the lead sponsor for the Digital Twin Center of Excellence (DTCOE) and one of the anchor uses envisioned for the proposed Digital Transformation Center (DTC), I am excited for the Dayton community's vision to support the US Air Force's digital transformation efforts.

The Digital Twin Center of Excellence will facilitate the development of a joint strategy and scalable framework to coordinate the Aerospace Industry efforts toward value realization from digital twin implementation. Working closely with Industry, the Digital Twin Center of Excellence will prioritize how, when, and where to 'focus on value' for the greatest impact while accounting for risk and cost. The Digital Twin Center of Excellence will work with Government to establish appropriate policy, regulation, and incentives for top-down transformation. This is critical to connecting the Executive Offices in both Industry and the government with the efforts underway to realize the Digital Transformation.

The Center will also house a Digital Twin Incubator (DTI), which will support the Digital Transformation mission by tackling high return-on-investment projects for Wright-Patterson requirements. By collaborating with academia, industry and government, the DTI will identify rapidly scalable digital twin demonstration projects; match users, funds, contract vehicles, and industry partners needed to efficiently demonstrate the concept; support execution of the projects and help to scale the project enterprise-wide. In addition, the DTI will collect and publish lessons learned from each effort to accelerate future efforts.

Co-locating the Digital Twin Center of Excellence with the Air Force's Digital Transformation Office, Ohio University's Digital Design Studio and Digital Enterprise for Applied Learning in the Digital Transformation Center will help industry and academia partner with the Air Force in a secure, yet seamless environment; both physically and virtually in ways that will advance digital transformation projects across the Air Force enterprise.

Please contact me if you have any questions.

Sincerely,



Joe Sciabica

SVP of Strategy, Growth & Partnerships

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