

For Immediate Release:

ADI Wins Manufacturing Leadership Award for Collaborative Ecosystems

Applied Dynamics, in conjunction with MxD, The Dow Chemical Company, and the University of Michigan, has been recognized by the Manufacturing Leadership Council for its work in Open Process Automation and Digital Twin technology

July 12, 2022. Ann Arbor, Michigan.

ADI is proud to announce its win of a Manufacturing Leadership Award from the Manufacturing Leadership Council. ADI, in collaboration with the Digital Manufacturing Institute (MxD), The Dow Chemical Company, and the University of Michigan's Barton Research Group was recognized in the Collaborative Ecosystems category for its project, Digital Twins for Process Manufacturing: Open Architecture Industrial IoT Framework.



Left to right: Daniel Reed, Wildaline Serin, and Berardino Beratta of MxD, and Joe Manly of Applied Dynamics.

This project began when MxD, the Nation's Digital Manufacturing Institute, worked with their key member-manufacturers and identified a critical technology gap preventing the widespread adoption of Industrial IoT and Digital Twin capability. Industrial IoT and Digital Twin technology enable you to access your manufacturing data in real-time to reduce downtime and energy consumption, improve safety and efficiency, and more.

There are many impressive Industrial IoT software platforms on the market, offered by major equipment and software suppliers. However, a common weakness found across the vast majority of these Industrial IoT software solutions is at the edge, where there is a need for plug-and-play connectivity to equipment and solutions from multiple vendors, and a need for the capability to execute real-time apps on-premises and in the cloud. MxD launched a competitive Request for Proposals to fill that gap. ADI bid to demonstrate how the ADEPT software could meet this critical technology demand, and won the contract in partnership with the University of Michigan.

This collaborative demonstrator project brought together large-scale industry need, with highly-advanced university technology, and a software platform that connects and enables a complete Industrial IoT solution. The project was an overwhelming success and as a result was recognized by the Manufacturing Leadership Council, at their annual awards gala, on June 29th, 2022.

ADI's ADEPT software is proving itself as a powerful Industrial IoT Edge solution for real-time plug-and-play connectivity and digital twin capability for manufacturing intelligence. For many customers, ADEPT is only a piece of their complete Industrial IoT platform solution, but a critical piece.

The chemical manufacturing market has tremendous opportunity for ROI on Industrial IoT and Digital Twin investments. ADI is now tackling the same problems in the discrete manufacturing world, working with major automotive manufacturers, and manufacturing equipment suppliers to deliver the same, critical, real-time data connectivity and digital twin computing.

Next steps for this technology and team include further collaboration with the University of Michigan, Manufacturing Robotics SMARTLab within the newly formed Robotics Department. ADI, the SmartLab, and our manufacturer-partners are working to create a future where a marketplace of manufacturing intelligence functions and apps can be securely connected to the factory, opening up competition, and enabling innovation to move at tremendous speed.

About the ADEPT Plug-and-Play Industrial Computing and Connectivity Software Platform

ADEPT is an industrial computing and connectivity software platform built around the concept of time-deterministic "data frameworks" executing on industrial real-time Linux servers and operating as a single, coherent distributed resource controlled and managed via intuitive, drag-and-drop desktop tools. ADEPT is used in the largest, most demanding industrial computing and connectivity applications across the global aerospace and defense industry, but also scales down to work with low-cost computing hardware and open-source real-time Linux. The open architecture nature of ADEPT allows users to leverage best-in-class COTS and open-source technologies in a common, project-based environment. ADEPT dramatically reduces the cost and time to deploy and operate industrial IoT and open process automation capability, providing comprehensive out-of-the-box capability built on a trusted technology platform.

ADI's ADEPT software platform can support advanced open real-time and virtual computing applications that require NIST 800-171 and CIS Security Level 2 compliance.

About Applied Dynamics

[Applied Dynamics](#) is a digital engineering and industrial digital transformation solutions company. We have been pushing the limits of simulation and real-time systems for over 60 years. Applied Dynamics flagship product, ADEPT, is the most advanced real-time, industrial Internet of Things (IoT) software platform available, providing an agile, open architecture, feature-rich environment for the complete product lifecycle from development through integration, verification, validation, certification, deployment, and sustainment. ADEPT embraces an open architecture and allows its users to leverage best-in-class COTS components. The ADEPT user base includes 14 of the global top 35 A&D companies and extends into marine, power systems, oil & gas, and the automotive industry.

To learn more about how ADI and the ADEPT platform can help your team, visit www.adi.com or send an email to adinfo@adi.com.

About MxD

MxD, the nation's Digital Manufacturing Institute and the National Center for Cybersecurity in Manufacturing, is where innovative manufacturers go to forge their futures. In partnership with the Department of Defense, MxD equips U.S. factories with the digital tools, cybersecurity, and workforce expertise they need to begin building every part better than the last. As a result, our approximately 300 partners increase their productivity, win more business, and strengthen U.S. manufacturing. Learn more at mxdusa.org, and contact us about projects at projects@mxdusa.org.

About the SMARTLab located at the Ford Robotics Building led by Profs. Kira Barton and Dawn Tilbury

A new industrial system-level manufacturing testbed has been launched within the Manufacturing Robotics SMARTLab in the new Ford Robotics Building at the University of Michigan. This cyber-physical manufacturing systems testbed, called SMART 4.0, incorporates manufacturing processes and automated material handling, to enable flexibility and reconfigurability. The state-of-the-art control system in the testbed connects the different hardware elements and enables human interactions. The SMART 4.0 testbed incorporates a number of the latest technologies for the purpose of developing and researching intelligent solutions, such as digital twins, for a manufacturing system. Those requirements include additive and subtractive manufacturing in one integrated testbed, flexibility and reconfigurability, ability to transition between centralized and distributed system control, wireless communication for cameras and mobile robots, robot-to-robot part transfer, human-to-robot direct interaction, integrated methods for enhanced cybersecurity, platform flexibility to accommodate 3rd party software, and VR modeling of the complete testbed. SMART 4.0 uses the ADEPT framework with real time data collection capability. ADEPT's open architecture, data-centric, and highly extensible real-time Linux computing paradigm provides a versatile and dynamic platform for SMART 4.0.

Contact:

Applied Dynamics International
3800 Stone School Rd
Ann Arbor, MI 48108, USA
Email: press@adi.com

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