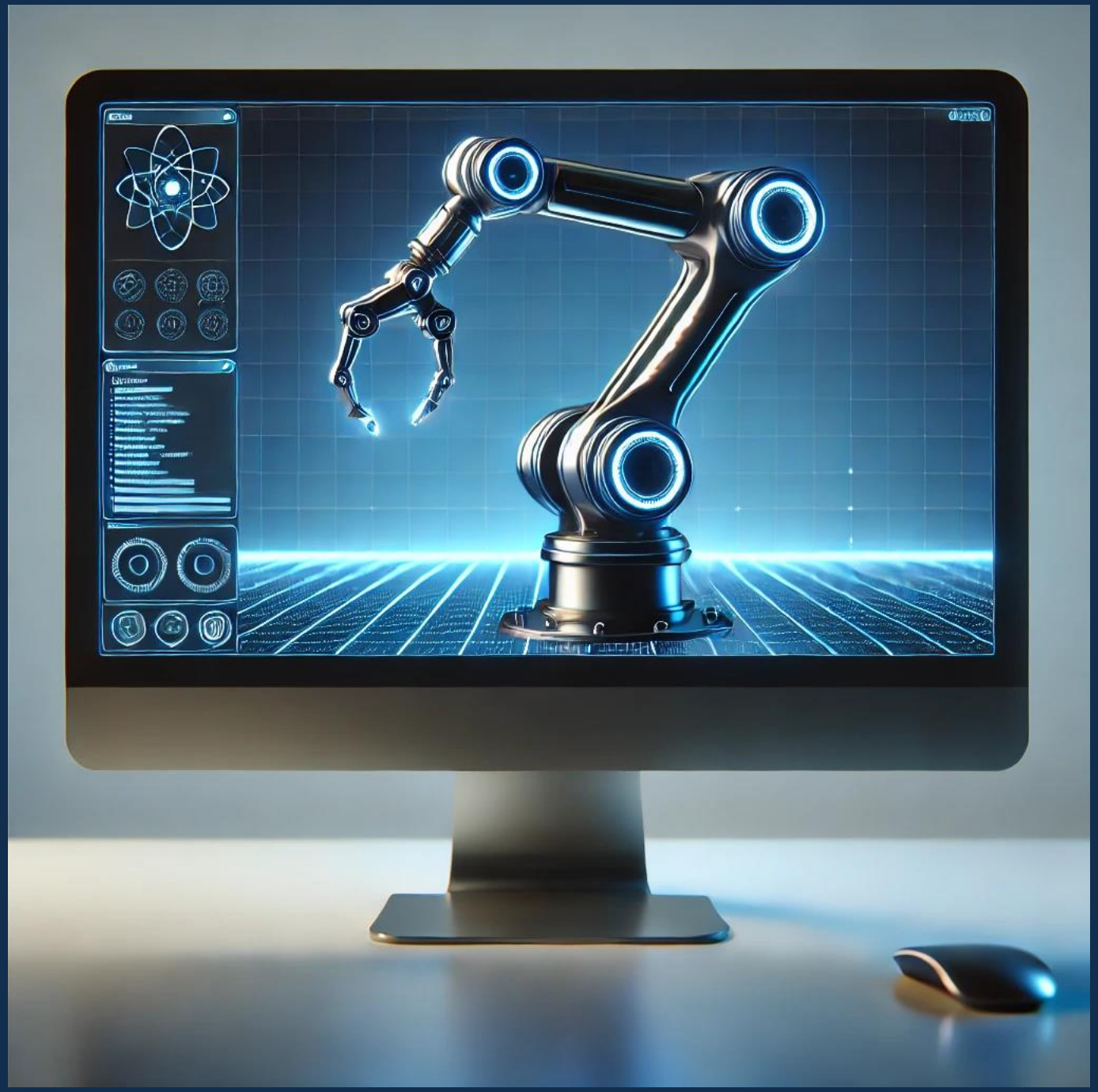


Bidder’s Conference

Massachusetts Robotics Digital Twin Initiative

December 11, 2025

MASSACHUSETTS TECHNOLOGY COLLABORATIVE

Mission:
To strengthen the competitiveness of the tech and innovation ec onomy by driving strategic investments, partnerships and insigh ts, that harness the talent of Massachusetts.

Divisions:

THE INNOVATION INSTITUTE

MA-AI Massachusetts AI Hub

MBI MASSACHUSETTS BROADBAND INSTITUTE

CAM MASSACHUSETTS CENTER for ADVANCED MANUFACTURING

MeHI MASSACHUSETTS eHEALTH INSTITUTE

MassCyberCenter

NEMC Northeast Microelectronics Coalition

The Massachusetts Technology Collaborative (MassTech) was established in 1982 by legislative statute.

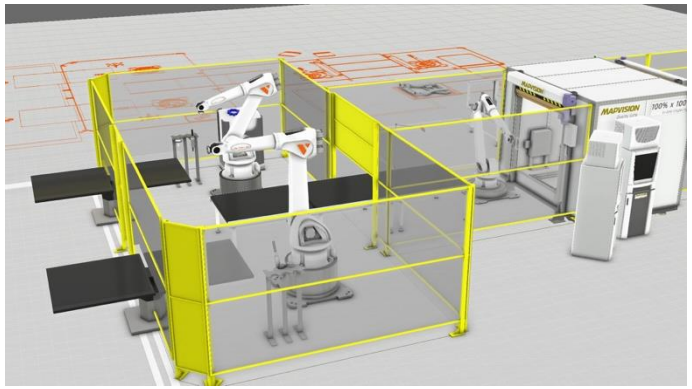
Program Summary – Massachusetts Robotics Digital Twin Initiative

The **Robotics Digital Twin Initiative** is an economic development project that aims to increase access to robotics tools for communities across the Commonwealth, as well as boost the local entrepreneurial ecosystem. Through direct grants to small robotics start-ups and research labs, this program will enable the creation of a common Robotic Digital Twin Library, enabling more widespread robotics education and adoption.

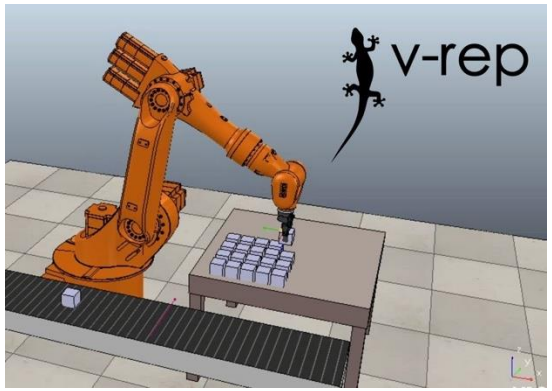
What is a Robotic Digital Twin?

Robotic digital twins are advanced simulations that replicate a robot's ability to sense and move in its environment. Because they are low-cost and unbreakable, digital twins enable users to work with robots in a zero-risk environment.

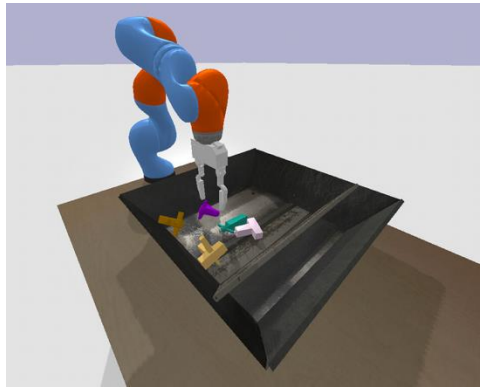
A manufacturing plant can create a digital twin of a production cell to assess how automation might improve efficiency, even calculating return on investment.



An educator can use a digital twin of a robotic arm to teach students how to program robots to perform interesting tasks.



Physical AI researchers use digital twins to perform Reinforcement Learning, teaching a robot how to do a complex task through repetition.



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Program Summary – Massachusetts Robotics Digital Twin Initiative

Unmet Needs

1. There are currently significant barriers to using digital twins due to the need to build them from scratch or invest in integration services. This in turn **limits robotics adoption, research, and access to quality robotics education**.

2. Smaller robotics startups and research labs often face a "Valley of Death," unable to secure enough funding to manufacture and test their products, which **hinders their efforts towards further investment**.

Proposed Solution

To address both needs, we propose the **Massachusetts Robotics Digital Twin Initiative**, which will grant awards to robotic startups or research labs, enabling them to develop a digital twin of their robot and **speed up testing and commercialization**. Additionally, grantees will begin establishing a publicly accessible library of robotic digital twins, which will further their own commercialization efforts and **enable the widespread use and adoption of robotic systems**.

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Eligible Applicants

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Who is Eligible to Participate in the Digital Twin Initiative?

The lead or primary applicant must be a nonprofit, university research lab, or small-to-midsized business whose primary focus is **research or development of a novel, hardware-based robotic platform**. Organizations must have a point of presence in MA.

In order to be considered, applicants must demonstrate the **technical ability and willingness to develop a publicly available digital twin** of their product.

Applicants must also **present a strong business case** for commercializing their robotic platform.

Industry Verticals	Industry Segments
Drones/AUVs Autonomous vehicles Robotic Arms Autonomous mobile robots (AMRs)	Logistic/Warehouse Robotics Consumer Robotics Medical Robotics Agricultural Robotics Assistive Tech Educational Robotics Manufacturing Robotics Marine Robotics

Usage of Funds

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The Digital Twin Initiative offers **capital grants** ranging from $**250K – $500K** towards the creation of physically realistic robotic digital twins. It is expected that funds will be used over 12-24 months towards expenses such as:

- Computer Aided Design (CAD) modelling of robotic systems,
- Software development for controlling the digital twin
- Software or AI validation of the digital twin,
- Physical prototyping to verify the physical feasibility of the digital twin,
- Project management in the creation of the digital twin,
- Server and/or compute infrastructure needed for development of the digital twin

MassTech is looking to award up to 8 grants of up to $500K to boost the local robotics ecosystem, and enable the creation of publicly available digital twins for widespread use in workforce development, manufacturing, commercialization, and research.

Q+A Session

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