



WPI

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Subject Letter of Affirmation: WPI STARS Innovation Credit

To Whom It May Concern:

This letter serves to demonstrate that the WPI's Lab for Education and Application Prototypes (LEAP@WPI/QCC) meets the requirements of the Innovation Credit for the STARS Survey. As Director of LEAP I am in a position to evaluate the significance of this program. This response is organized by the criteria for this credit.

This innovation credit describes a new, extraordinary, unique, groundbreaking, or uncommon outcome, policy or practice. WPI, in collaboration with Quinsigamond Community College (QCC), have developed the Laboratory for Education & Application Prototypes (LEAP @ WPI/QCC). Part of the national American Institute for Manufacturing Integrated Photonics (AIM Photonics) and funded through the Massachusetts Manufacturing Innovation Initiative (M2I2), the LEAP @ WPI/QCC supports the integrated photonics manufacturing sector in central Massachusetts through an open-access facility and service center model.

Photonics involves the transmission and processing of information using light (photons) instead of electricity (electrons). Photonic devices are often faster, use less power, and can be made at smaller scales than electronic ones. This creates opportunities to develop new and better sensors, imaging technologies, medical diagnostics, and more. These technologies are receiving increased attention as critical technologies in sustainable manufacturing, and their role is considered to be essential for a sustainable future.

While photonics is already applied widely in communications, computing, healthcare, and other industries, the field has the potential to usher in a new era in the Information Age. LEAP@WPI/QCC expects to make next big breakthrough by providing infrastructure, and expertise to enable internal and external users to explore materials, components and systems that can interface with integrated photonics.

The facilities include separate laboratories for photonic integrated circuit fabrication and functionalization, wafer/die/chip prototyping, and testing and characterization. The facilities include 750 square feet of active learning classroom/lab for courses, workforce training and outreach activities. The classroom has computers with software for simulation and design of photonic integrated circuits and other system design components.

The I-90 corridor, which connects Albany to Boston, is becoming a conduit that ties together elements of a vibrant integrated photonics education, research, and development ecosystem. LEAP@WPI/QCC represents the Central Massachusetts section of the corridor. LEAP@WPI/QCC is focused on strengthening regional partnerships with business, colleges and universities, and government entities to support research, development, education, and workforce development.

The innovation credit is not already covered by an existing STARS credit. This program has never been included in any other STARS credit.

The innovation practice, program, or outcome has occurred within the past three years. This program is currently in its second year.

The institution has not previously received a STARS innovation credit for this specific practice, policy program, or outcome. This program has not been previously reported for an Innovation Credit, or any other STARS credit.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Douglas T. Petkie". The signature is fluid and cursive, with the first name "Douglas" being more legible than the last name "Petkie".

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