

Southern Ontario Network for Advanced Manufacturing Innovation

The Southern Ontario Network for Advanced Manufacturing Innovation (SONAMI) is a network of post-secondary research institutions that have come together, in an effort to grow the quality and quantity of applied research innovation in the Southern Ontario advanced manufacturing cluster.

Headquarters	100 Niagara College Blvd., Welland, Ontario, L3C 7L3
Year Established	2015
NAICS	-
Employees	2
Major Expansions	2017
Exports	N/A
Parent Company	N/A
Other Locations	N/A

The Southern Ontario Network for Advanced Manufacturing Innovation (SONAMI) is a network that partners with post-secondary research institutions and offers state of the art equipment, facilities and expertise to small and medium-sized firms. SONAMI focuses on these smaller firms in the manufacturing sector because they often have limited cash flow, and may not have the capacity to invest in research and development that will lead to more innovative products or processes. One of SONAMI's goals is to connect these firms with a post-secondary institution that can successfully complete the firms' projects.

SONAMI was awarded \$7.3 million from the Federal Economic Development Agency for Southern Ontario (FedDev) when it launched in May 2015. McMaster University, Mohawk College, Niagara College, and Sheridan College are the four post-secondary institutions that have been partnered with SONAMI since the network was launched. All four institutions have worked with local manufacturing firms and successfully completed projects that have improved the profitability of these firms. Since 2015, SONAMI has used \$5.4 million of its funding and completed 76 projects. SONAMI has also added 3 new partners which include Conestoga College, Lambton College, and Fanshawe College.

Any firm in Southern Ontario that wishes to either begin or develop a project is eligible to receive funding from FedDev through SONAMI and work with one of its partner institutions. The fund matches participating firms' company cash and in-kind contributions, which is why smaller firms with cash flow limitations benefit greatly from this partnership. A tremendous benefit to participating firms is the transfer of knowledge and

experience from students or faculty members at the institution to employees of the company regarding prototype development and process improvement. Occasionally, the institutions will also hire industry experts to assist with the project, which provides the students and faculty with the opportunity to learn new skills as well. Upon completion of the project, all intellectual property remains with the firms.

Firms can begin working with SONAMI by contacting the post-secondary institution they believe is the best fit for their project. A meeting is then held with a project manager of the institution to determine if that organization is capable of pursuing the project, or if another SONAMI partner can offer resources that are better-suited to the project. Another way that firms can utilize SONAMI's resources is to contact project manager Krystyn Keir. After meeting with a representative of the firm and being presented with the project, Keir connects the firm with the appropriate institution. Firms may be connected with institutions based on geographical proximity, previous relationships, and/or the specific expertise required for the project. Each institution has advanced skills and knowledge in a different area of manufacturing:

-Walker Advanced Manufacturing Innovation Centre (WAMIC), Niagara College, Welland, Ontario provides 3D scanning/CMM, 3D simulation and plant layout/efficiency expertise.

-Advanced Manufacturing Innovation Centre (AMIC), Mohawk College, Hamilton, Ontario provides the opportunity to apply metal additive manufacturing to all parts of the innovation process. They also provide materials characterization and cyber security expertise.

-Centre for Advanced Manufacturing and Design Technologies (CAMDT), Sheridan College, Brampton, Ontario specializes in flexible manufacturing and using robots, co-bots, computer controlled machines, and sensors in manufacturing processes.

-McMaster Manufacturing Research Institute (MMRI), McMaster University, Hamilton, Ontario provides materials characterization/property assessment, design for manufacturability and manufacturing process design expertise.

-Centre for Smart Manufacturing (CSM), Conestoga College, Cambridge, Ontario provides robotics and automation solutions and virtual and augmented reality solutions.

-Canadian Centre for Product Validation (CCPV), Fanshawe College, London, Ontario specializes in product validation, machine learning and digital twinning.

-Bluewater Technical Access Centre (BTAC), Lambton College, Sarnia, Ontario offers pre-commercial product/process development, pilot plant fabrication and qualification and industrial material development.

-Other services provided by most institutions include: 3D printing with plastics, CAD/CAM, reverse engineering, lean manufacturing, metrology, machining and Industrial Internet of Things (IIoT) Solutions.

After an institution has approved a project, developed a plan, and agreed on a budget with the partnering firm, there is no need to wait for funding. SONAMI is directly in charge of the funding provided by FedDev so

projects can commence immediately after approval. This system is a key advantage because it prevents any bottlenecks from occurring in the approval process. Firms recognize the value that SONAMI and its network of post-secondary institutions provide, which is why institutions often have repeat customers.

SONAMI aims to continue supporting the growth—in terms of both of quality and quantity—of applied research projects throughout the advanced manufacturing industry in Southern Ontario. Recently Conestoga College, Fanshawe College, and Lambton College have joined the network, which allows firms in those areas of Ontario to partner with local institutions as well. Moving forward, SONAMI will strive to partner with more research institutions from areas within Southern Ontario where it does not yet have access. Moreover, the organization has recently begun approving collaborative projects across institutions when a firm requires the expertise and skills of multiple institutions.

SONAMI still has \$1.9 million in available funding that must be utilized before March 31, 2019. Any small or medium-sized firms that have a project they wish to complete prior to March should not hesitate to take advantage of the opportunity this innovative network provides.