

PARTNER PERSPECTIVE



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Building Community Innovation from the Inside and Out

new technology alongside Sheridan researchers, CAMDT is turning Brampton into a 'hub'-urb – a vibrant place where experts come together, ideas collide, and innovation flourishes.

As a response to Canada's continued challenge to fuel innovation, CAMDT is embracing a new research and development model that is being realized through a shared commitment to transfer best practices to the regional manufacturing community. This model ensures long-term involvement of industry leaders that is directly linked to helping fellow manufacturers adapt, develop, and commercialize new technology.

Under the visionary leadership of CAMDT Director Dr. Farzad Rayegani, the Centre now acts as the central link between large, leading corporations that provide the technology and expertise to the College, and the local SMEs that explore how to integrate these new tools into their businesses with the help of Sheridan's faculty and student researchers. This approach

allows the College and its innovation collaborators to address the challenges of the industry, but also helps to produce graduates with the skills required to make an immediate and positive impact on the workforce.

Through undergraduate research projects – which involve students, faculty advisors and staff working together to solve a particular challenge for an industry partner – Sheridan has become established as a respected community partner in manufacturing, with a track record of helping clients succeed through creative thinking. Since 2012, CAMDT has worked with over 40 companies in addition to conducting more than 20 energy/engineering assessments, all while ensuring the knowledge developed is transferred to partners through consulting and training.

Insights from each project then feed back into the student researchers' learning experience. These hands-on opportunities support Sheridan's approach to engineering education as members of the world-

wide Conceive, Design, Implement and Operate (CDIO) initiative.

Through multi-year partnerships with industry leaders like Cimetrix and ABB, who share a commitment to enriching the local manufacturing sector, CAMDT now makes a suite of advanced technology accessible to its SME research partners as a way of furthering technology adoption. Thanks to significant commitments of cash and in-kind contributions from each of these collaborators, CAMDT can help local manufacturers explore emerging tools that could make them more productive, more sustainable, and more competitive.

For example, a recent partnership with Cimetrix brought a state-of-the-art additive manufacturing (3D printing) lab to the Centre enabling the new Product Innovation Lab to become a cornerstone of the Centre's activity, providing an effective solution for local SMEs looking to transform their ideas into prototypes at a fraction of the conventional cost. Further, Sheridan partnered with Canadian Manufacturers & Exporters (CME) to launch Canada Makes,

a national network of excellence dedicated to promoting the development of additive manufacturing in Canada.

"CAMDT is one of the most advanced applied research labs in Canada and it has the latest technologies and software in the field of Fused Deposition Modeling (FDM). We are proud to help make this state-of-the-art laboratory available to SMEs across the country," said CME President and CEO Jayson Myers. CME and Sheridan will collaborate on a series of workshops, demonstrations, and customized projects with SME partners.

CAMDT's technology transfer capacity was also recently enhanced once through the launch of the CAMDT-ABB Robotics Centre, another multi-year collaboration. The new robotics facility features over 12 robots with capabilities including: welding; picking, packing and palletizing; machine tending, material handling and product assembly; and advanced vision-related programming.

"Keeping pace with global

manufacturing demands starts with the education of the Canadian workforce. The CAMDT-ABB Robotics Centre is about creating opportunities for our students to work with industry on client projects using these state-of-the-art tools, but it's also about transferring knowledge to industry partners through training and consulting that may be difficult for them to access otherwise," said Dr. Rayegani.

Through the dedication of our faculty, staff, and students at CAMDT, Sheridan is becoming more than an innovation partner in manufacturing – we're becoming true innovation catalysts. By bringing industry partners into the classroom, we ensure that our students work on real, interdisciplinary problems that challenge them to be creative as they prepare to enter the workforce. And through long-term partnerships with industry leaders we bring Sheridan's state-of-the-art spaces for R&D out to industry in order to link regional SMEs to the tools, knowledge and support they need to make groundbreaking ideas a reality.