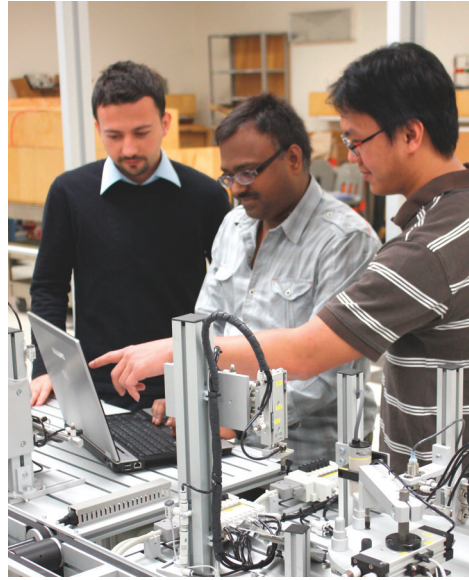
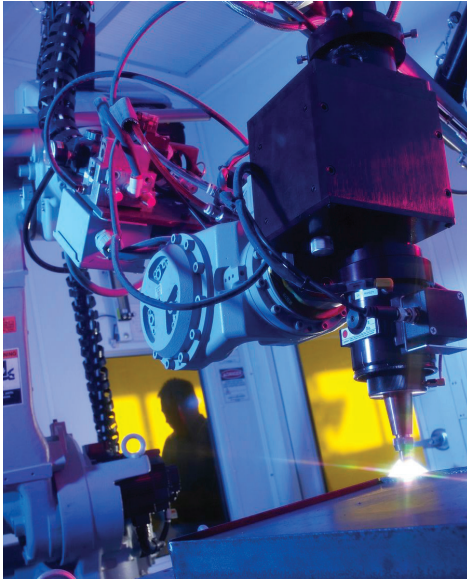


The Smart Factory at Red River College:

Expansion of the Centre for Aerospace Technology & Training



Overview

Red River College is pleased to officially open its new Smart Factory at the Skilled Trades and Technology Centre (STTC) at the Notre Dame Campus. The College is also expanding its Centre for Aerospace Technology & Training (CATT). These developments are part of a \$10-million (over five years) investment by Western Economic Diversification Canada (WD).

The College is a major supporter of Manitoba's robust aerospace and manufacturing industries, providing essential programs and services in workforce development, technology evaluation and validation, and applied research. Manitoba's aerospace sector is the largest in Western Canada.

The Technology Access Centre for Aerospace and Manufacturing (TACAM), which operates out of RRC, supports Manitoba's aerospace and manufacturing sectors by providing access to RRC's technological assets, specialized facilities and equipment, and subject matter expertise. Industry benefits through applied research, support for product development, technology evaluation and demonstration, technical support, knowledge and technology transfer, and specialized training.

Locally grown expertise at RRC will continue to set Manitoba and Canada apart in the global competition for skills in the high-tech market.

Smart Factory

The Smart Factory is an applied research space, an experiential learning facility and technology demonstration site. Inspired by General Electric's "Brilliant Factory" concept, it combines emerging technology elements to build upon RRC's aerospace and manufacturing training and applied research programs. The Smart Factory has the ability to connect key equipment and hardware for an industry 4.0 type of application.

Key technologies at the Smart Factory include:

- Collaborative Robotics, Robotic Autonomous Factory Vehicles and End-of-Arm Tools
- Flexible Robotic Work Cells for Research and Training
- Additive Manufacturing of Metals using Direct Energy Deposition with 5-Axis Milling Capability
- Robotic High-Speed Laser 3D Metrology
- Industrial Manufacturing Automation
- Industrial Networking
- Data Acquisition and Control Systems



Centre for Aerospace Technology & Training

The CATT was established in 2009 as a strategic partnership between RRC, StandardAero and federal and provincial governments. This centre, the first Industrial Campus at RRC, is co-located at StandardAero's Plant 5 facility and has been successfully catalysing regional adoption of emerging technologies with the aerospace and manufacturing communities.

Students and industry are provided with access to advanced technologies and equipment including laser and robotic technology.

Phase 3 technology enhancements provided by this expansion include:

- Cold Spray Technology
- Non-contact Inspection using High-Speed Laser Scanning
- Robotic Welding Seam Tracking
- Compressor Blade Profiling System
- Upgrades of existing Digital Industrial X-Ray NDI System

Investments that Drive Manitoba's Economy

- CATT 3 and the Smart Factory will expand RRC's capability to serve both the aerospace and non-aerospace industries through direct access to equipment, facilities and expertise.
- The Smart Factory will be available to industry as a research, technology demonstration and training site.
- These projects complement the College's existing Technology Access Centre for Aerospace & Manufacturing (TACAM), which provides ongoing innovation and customized training support to the aerospace and manufacturing sectors.

By the Numbers

Financing contributions for construction and operation of these projects are as follows:

- Western Economic Diversification Canada.....\$10,000,000
- StandardAero (in-kind contribution).....\$4,529,525
- Red River College (in-kind contribution).....\$1,204,906
- Canada Foundation for Innovation.....\$1,000,000
- Research Manitoba.....\$1,000,000
- NSERC ARTI (approved).....\$141,353

Funding from Western Economic Diversification Canada covers the cost of capital equipment, installations and research, and training program development.

This funding also supports professional, leadership and student positions in applied research for aerospace and manufacturing who are currently working on innovative projects, engaging industry, faculty and other students.

Funding from StandardAero and Red River College is applied toward the cost of operating the CATT and the Smart Factory.

Funding from Canada Foundation for Innovation and Research Manitoba is applied towards the cost of outfitting the Smart Factory with leading-edge equipment.

Funding from NSERC ARTI has been approved to be applied towards the Smart Factory and CATT 3.

For more information visit: rrc.ca/research