

Supporting your company's Industry 4.0 journey

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11,000+ FT students

1,600+ international students

7 campuses, downtown Barrie location

3 Centres for Career and Employment Community Services

72,000 grads

➤ GEORGIAN COLLEGE AND INDUSTRY PARTNERS WORK TOGETHER ON R&D PROJECTS

Applied R&D need

- A tangible issue that the company needs to address (e.g., product development; process improvement; technology adoption)

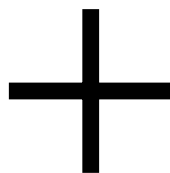
Expertise

- Industry partners have knowledge on the industry/sector, markets, and their own operations

Resources

- Industry partners contribute financially (cash) and *in-kind* (time; materials; equipment)

Partner*



Expertise

- A broad range of faculty and technicians with deep expertise

Resources

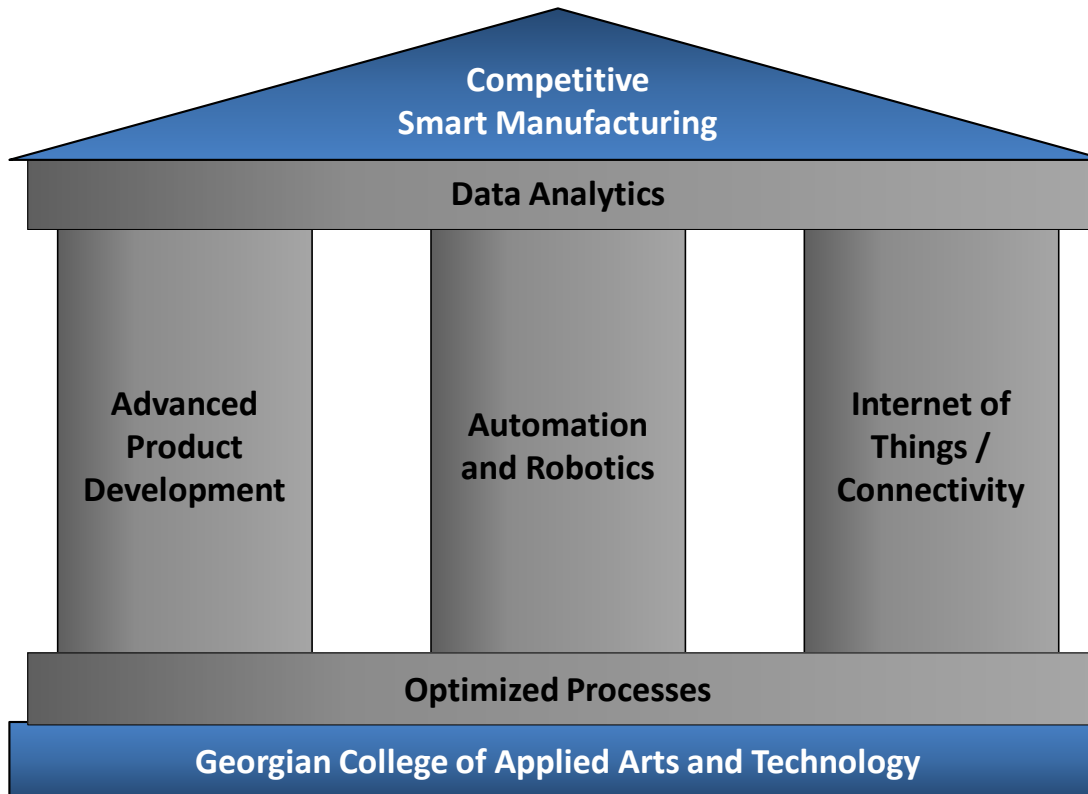
- Students who are excited to be involved
- Specialized equipment that companies might not have in house

Access to Funding

- Colleges are eligible for research funding through federal, provincial granting agencies

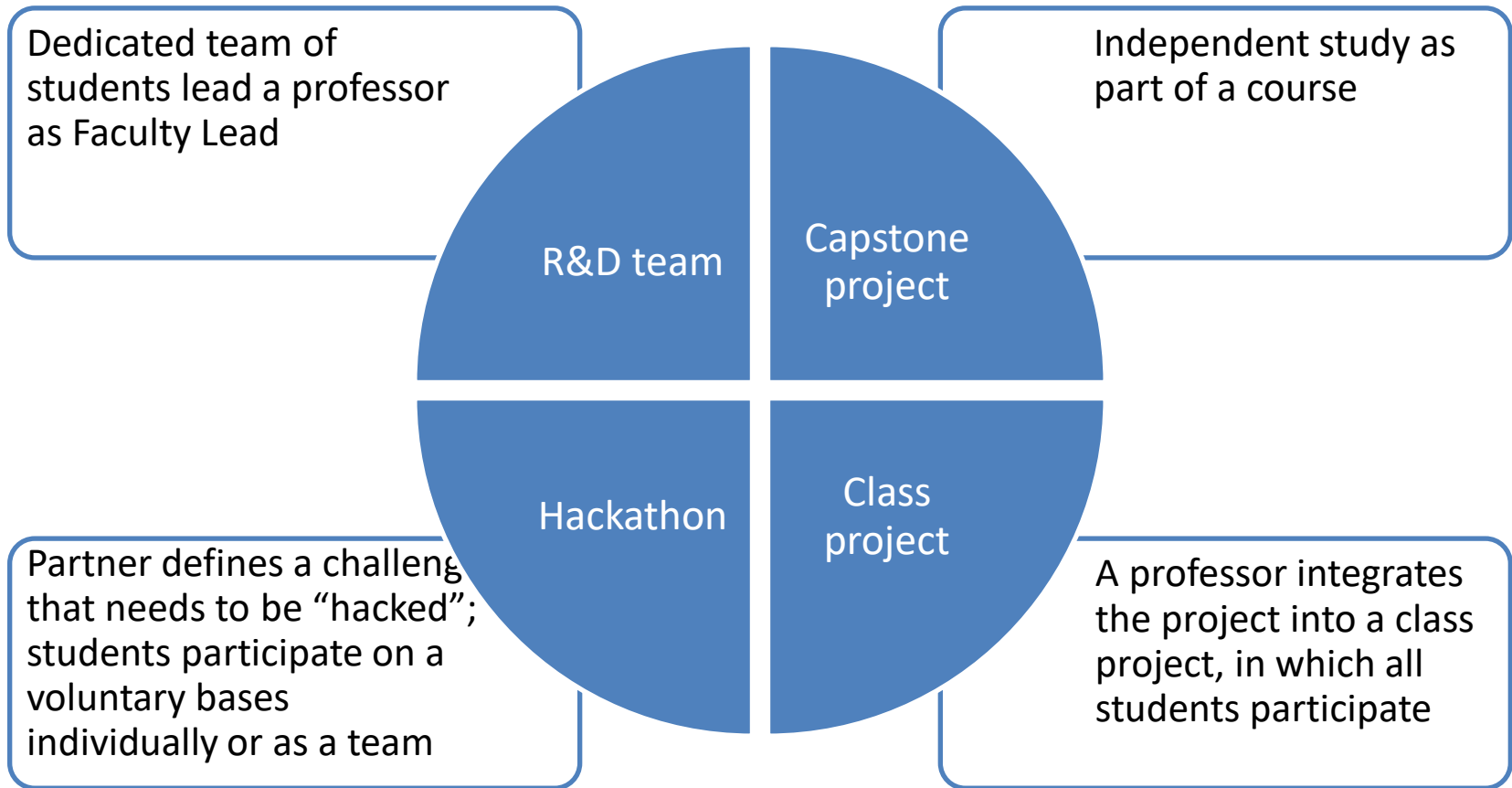
Georgian College

➤ COMPETITIVE SMART MANUFACTURING APPLIED R&D AT GEORGIAN COLLEGE

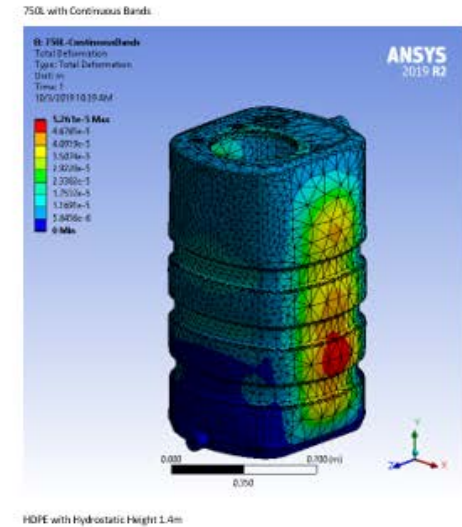
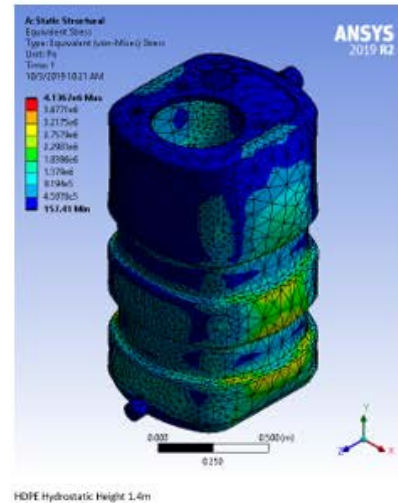
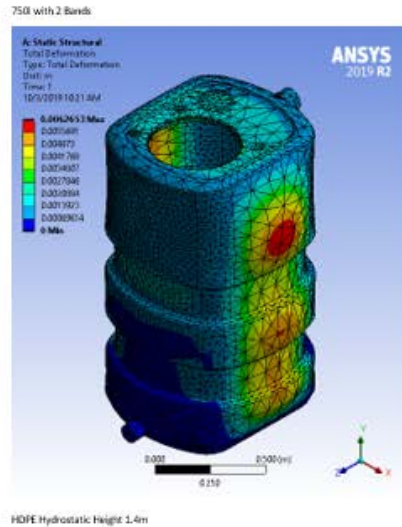
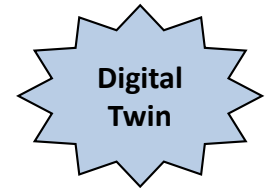


- **Interdisciplinary** approach that:
 - ✓ Starts with a strong foundation
 - ✓ Provides solutions that include technology, data collection, and analytics
- Potential for **increased efficiency, productivity, and quality**
- Bringing **Industry 4.0** to regional manufacturers
- Digital solutions that can lead to **AI applications**
- Solutions will increase **competitiveness and enable growth**
- **NSERC Build Innovation Enhancement grant provides \$2-million over five years**

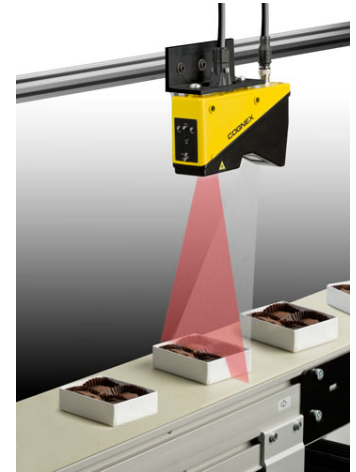
➤ DIFFERENT MODELS FOR IMPLEMENTING A R&D PARTNERSHIP WITH GEORGIAN COLLEGE



➤ ADVANCED PRODUCT DEVELOPMENT USING COMPLEX, MODELING/ SIMULATION

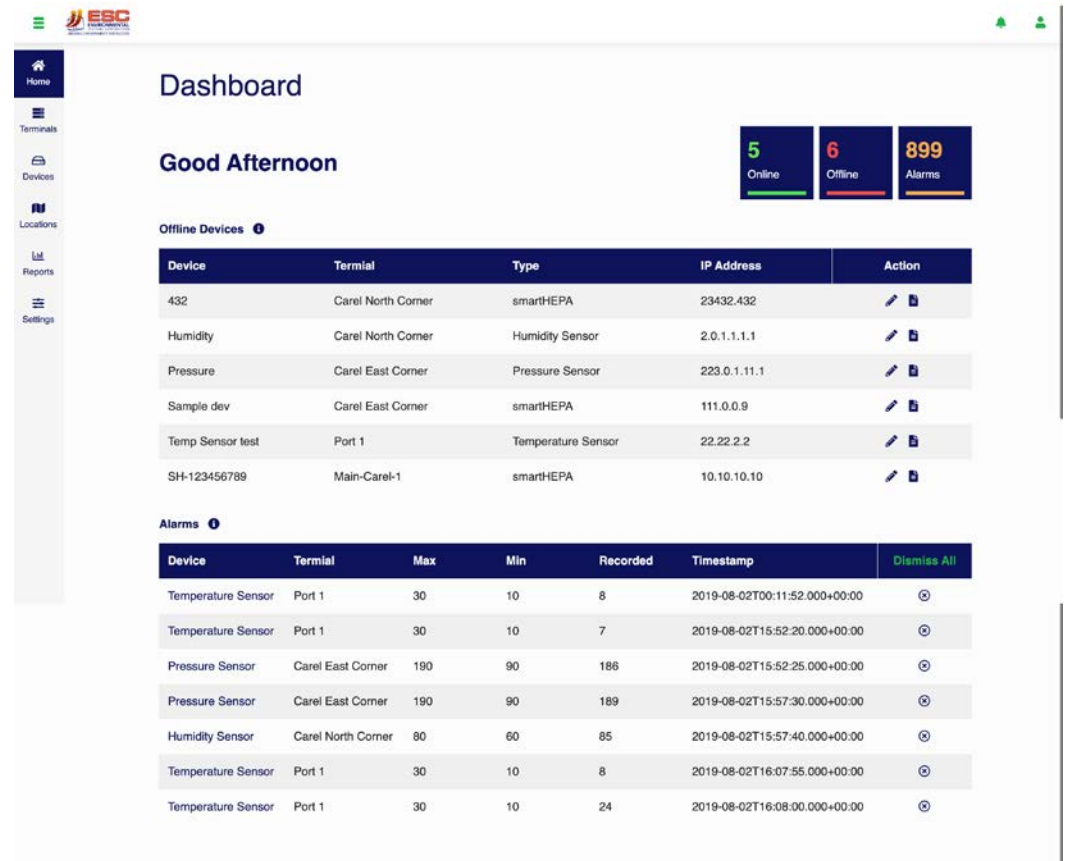


➤ INTEGRATION OF ROBOTICS AND VISION SYSTEMS



Digital Twin

CONNECTING THE CONNECTED ELEMENTS OF A PRODUCT

Dashboard

Good Afternoon

5 Online, 6 Offline, 899 Alarms

Offline Devices

Device	Terminal	Type	IP Address	Action
432	Carel North Corner	smartHEPA	23432.432	[edit] [delete]
Humidity	Carel North Corner	Humidity Sensor	2.0.1.1.1.1	[edit] [delete]
Pressure	Carel East Corner	Pressure Sensor	223.0.1.11.1	[edit] [delete]
Sample dev	Carel East Corner	smartHEPA	111.0.0.9	[edit] [delete]
Temp Sensor test	Port 1	Temperature Sensor	22.22.2.2	[edit] [delete]
SH-123456789	Main-Carel-1	smartHEPA	10.10.10.10	[edit] [delete]

Alarms

Device	Terminal	Max	Min	Recorded	Timestamp	Dismiss All
Temperature Sensor	Port 1	30	10	8	2019-08-02T00:11:52.000+00:00	[dismiss]
Temperature Sensor	Port 1	30	10	7	2019-08-02T15:52:20.000+00:00	[dismiss]
Pressure Sensor	Carel East Corner	190	90	186	2019-08-02T15:52:25.000+00:00	[dismiss]
Pressure Sensor	Carel East Corner	190	90	189	2019-08-02T15:57:30.000+00:00	[dismiss]
Humidity Sensor	Carel North Corner	80	60	85	2019-08-02T15:57:40.000+00:00	[dismiss]
Temperature Sensor	Port 1	30	10	8	2019-08-02T16:07:55.000+00:00	[dismiss]
Temperature Sensor	Port 1	30	10	24	2019-08-02T16:08:00.000+00:00	[dismiss]

➤ DATA ANALYTICS– SMART FACTORY

softserve

Objective

To develop a working, **proof of concept model** that demonstrate the healthiness of a piece of equipment by **measuring and analyzing the industrial parameters** associated with it through the **sensors and related instrumentation**.

Five Phases of the Data Analytics Project

1. Acquisition and processing of the **physical data** from sensors
2. Collecting and storing it in a data **warehouse**
3. Implementation of **machine learning technology**
4. Directing to a platform for **predicting** the failing points of machine components
5. Determination of **which components** require servicing or replacement, when and why.



➤ FUNDING OPPORTUNITIES THROUGH GEORGIAN COLLEGE



Program	<ul style="list-style-type: none"> Engage Applied Research and Development (ARD) 	<ul style="list-style-type: none"> Voucher for Innovation and Productivity (VIP) 	<ul style="list-style-type: none"> Accelerate 	<ul style="list-style-type: none"> Industrial Research Assistance Program (IRAP)
This grant is best for...	<ul style="list-style-type: none"> Projects with an element of discovery 	<ul style="list-style-type: none"> Proof of concept and commercialization projects 	<ul style="list-style-type: none"> Research projects that involve student interns 	<ul style="list-style-type: none"> In-house R&D with support from contractors
Grant Funding	<ul style="list-style-type: none"> \$25,000 - \$150,000 per year 	<ul style="list-style-type: none"> \$20,000 - \$150,000 per year 	<ul style="list-style-type: none"> \$7,500 per intern for up to 6 months 	<ul style="list-style-type: none"> Up to \$50,000 (can be more)
Industry Contribution	<ul style="list-style-type: none"> Cash: \$0 - \$60,000 per year In-kind: \$0 - \$60,000 per year 	<ul style="list-style-type: none"> Cash: \$10,000 - \$75,000 per year In-kind: \$10,000 - \$75,000 per year 	<ul style="list-style-type: none"> \$7,500 per intern for up to 6 months 	<ul style="list-style-type: none"> Depends on amount of in-house vs. contracted research
Industry Eligibility	<ul style="list-style-type: none"> For profit companies 2 years incorporated 2 FTE 	<ul style="list-style-type: none"> For profit companies 2 years incorporated in Ontario 5 FTE in Ontario 	<ul style="list-style-type: none"> For profit companies, not-for-profit companies, and hospitals 	<ul style="list-style-type: none"> For profit companies Incorporated in Canada

➤ WE'RE INTERESTED...WHAT NEXT?

	R&I	Industry Partner
1 <input type="checkbox"/> Identifies appropriate Faculty Lead	• Project Manager	
2 <input type="checkbox"/> Defines scope, timeline and resource requirements	• Faculty Lead • Project Manager	• Project Sponsor • Technical Lead(s)
3 <input type="checkbox"/> Develop budget, proposal, and project plan <input type="checkbox"/> Prepare funding proposal, if required	• Faculty Lead • Project Manager	• Project Sponsor
4 <input type="checkbox"/> Coordinates Collaboration Agreement	• Project Manager	• Project Sponsor
5 <input type="checkbox"/> Identify student(s) for project	• Faculty Lead • Project Manager	
6 <input type="checkbox"/> Kick-off project	• Project Team	• Project Team



Research,
Innovation
Scholarship and
Entrepreneurship
(RISE) Series 2021

RISE **Today** for **Tomorrow**

➤ **APRIL 6 – 9, 2021**

80 +
speakers



3
showcases



6
student awards



1
grand prize



➤ EXPERIENCE THREE EVENTS IN ONE!



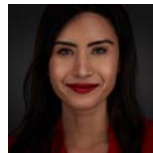
Equity, Diversity, & Inclusion in the Workplace
Angela Auja
Professor & Curriculum Advisor, Georgian College



Impact of the SarsCov2-COVID-19 Pandemic in Guatemala and the Limited Responses of the Health Sector
Dr. José Ortiz, MD, MSc
Obs & Gyn, Epidemiologist, Covid19 Pandemic Observatory, Guatemala



The Unequal Pandemic: Why COVID-19's Effects on Work Were so Unfair, & How to Repair the Damage
Dr. Jim Stanford
Director and Economist, The Centre for Future Work



How to Think Like a Futurist
Leah Zaidi
Founder, Multiverse Design



PRESENTED BY



BDC Economic Outlook: What Manufacturers Should Expect
Pierre Cléroux
Vice President, Research and Chief Economist, Business Development Bank



Ransomware: With Big Data Comes Big Responsibilities
Brendan Beasley, MBA
Regional Sales Director, SoftServe (TBC)



- **GET UP TO DATE INFORMATION ABOUT LOCAL PROGRAMMING, TECHNOLOGY AND INDUSTRY TRENDS**

The logo for 'Shifting Gears' features four stylized gear icons arranged in a 2x2 grid. The top-left and bottom-right icons are grey, while the top-right and bottom-left icons are red. To the right of these icons, the word 'Shifting' is written in a large, bold, grey sans-serif font, and the word 'Gears' is written below it in a large, bold, red sans-serif font.

Shifting Gears

*FREE MANUFACTURING
NEWSLETTER*

A rectangular button with a white border and a light grey background, containing the text 'CLICK TO SUBSCRIBE' in a bold, white, sans-serif font. The button is positioned over a background of interlocking gears and colorful geometric shapes.

**CLICK TO
SUBSCRIBE**

➤ WE LOOK FORWARD TO WORKING WITH YOU



HONDA



BEAVER ROCK™



softserve



**BUSCH
SYSTEMS**



Electric Motor Coil Co.



Junglewood



MediPharm Labs



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