

A large industrial facility, likely a refinery or chemical plant, with numerous tall distillation columns, complex piping, and structural steel frameworks. The scene is set against a clear blue sky. The entire image has a semi-transparent blue overlay to ensure the white text is legible.

RETOOLING FOR THE FUTURE

Integrating Automation into the
Manufacturing Sector in Ontario

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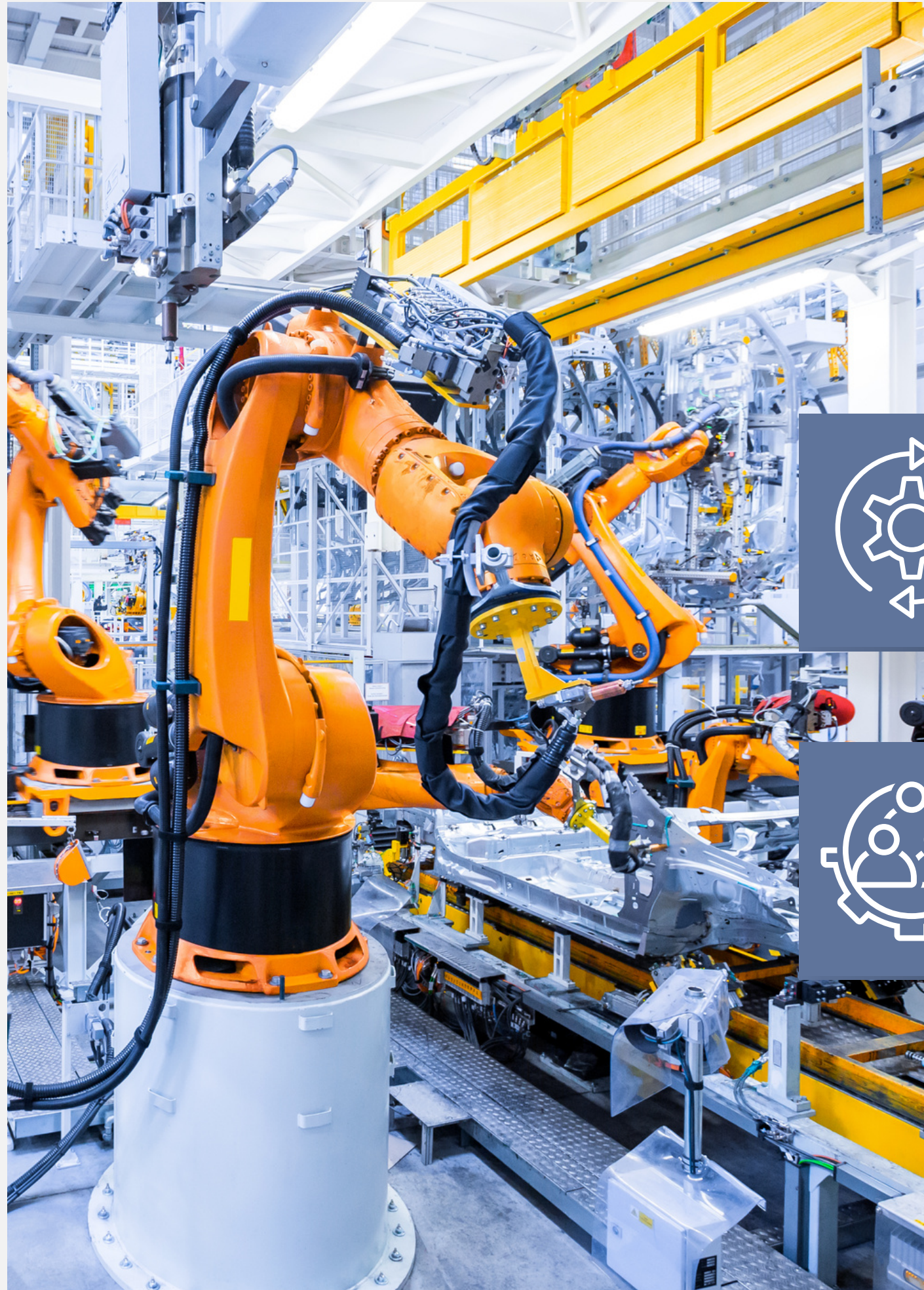
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INTRODUCTION



Manufacturing in Ontario has a significant history as a primary economic driver, contributing to 11% of the province's GDP and 68% of Canada's exports.



Talent acquisition and retention has been a critical issue for nearly a decade for all sectors, but the manufacturing sector in particular.



WORKFORCE

3.0%

Job Vacancy Rate

The Job Vacancy Rate in the Ontario is 4.1% with 3.0% in the Manufacturing sector. The number jobs has decreased 0.5% but will continue to fluctuate.

6.2%

Unemployment

The Unemployment Rate as of October 2023 in Canada is 5.7% and **6.2% in Ontario**. This is up 0.2% since September.

21.8%

Retirement Age

1 in 5 people in Canada are **aged 55-64**, with the average age of retirement being 65. In Ontario this number is 18.5%.

Programmable Automation

Can be programmed to complete a range of different tasks



Flexible Automation

Can adjust to how tasks are performed



Fixed Automation

Delivers one task from start to finish



Integrated Automation

All machines are connected to a central control hub



INDUSTRY 4.0

The Manufacturing Sector is in the midst of the fourth industrial revolution, characterized by the integration of automation and new innovative technology. The goal is to create more efficient and agile processes that can adapt to changing landscapes.

\$ 800 MILLION

invested in the manufacturing sector through FedDev since 2015

WHY SHOULD SMES INVEST IN TECH?



**Increased
Efficiency**



**Cost
Reduction**



**Improved
Quality**

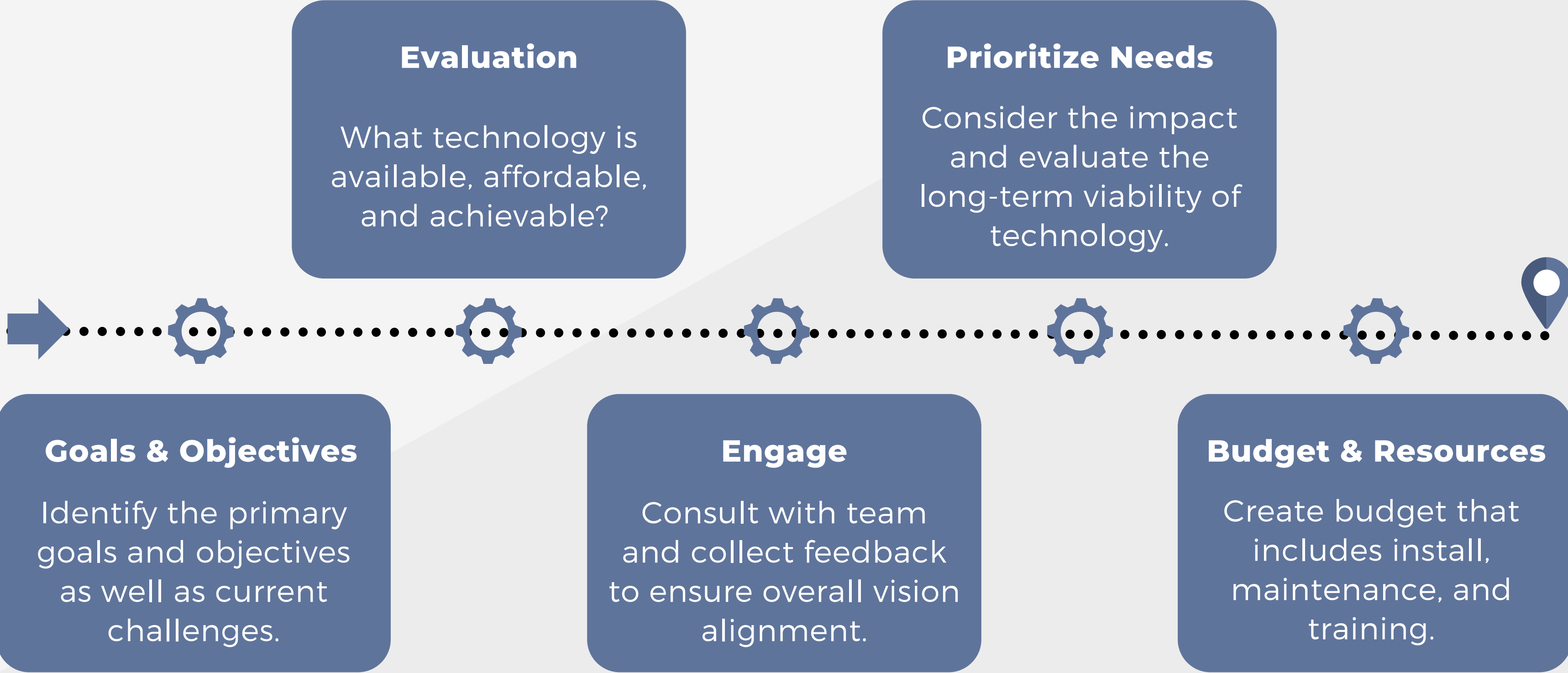


**Data-Driven
Decision Making**



**Competitive
Advantage**

COMPREHENSIVE NEEDS ASSESSMENT





IMPLEMENTATION

The goal of the implementation phase is to streamline the adoption process, manage risks, and continuously optimize for best results

Pilot Testing

Conduct a small-scale pilot test of the integrated tech in a controlled environment to identify and assess any issues before full-scale implementation. Involve key operators for observation and participation.

Gradual Implementation

Minimize disruptions by gradually implementing tech, starting with less critical processes before moving to critical ones. Collect live feedback and make adjustments as necessary to optimize the process.

Full-Scale Implementation

After refining all components of the implementation process, full-scale implementation will take place. Maintain open communication and begin comprehensive training for operators. Establish reporting system should issues arise.

EVALUATION

Process Evaluation

- How well has the tech integrated into the process?
- Have the performance metrics been met?
- What is the tech maintenance schedule?
- How quickly are tech issues resolved?
- Have there been any downtime issues?

Personnel Evaluation

- What is the employee feedback?
- Is the training satisfactory?
- Has the tech improved overall job satisfaction?
- Are there measures to support any negative staff impacts?

Strategic Evaluation

- Is the process aligned with the strategic goals?
- What are the expected and realized ROI?
- Is the tech scalable and adapted elsewhere?
- How well does the tech position the business for evolving trends?

Financial Evaluation

- Have there been unexpected costs?
- Is there any additional government funding that can be accessed?
- What are the identified cost savings?

RESOURCES

The Government of Canada and the Province of Ontario continue to invest in new and innovative projects within the manufacturing sector.

Technology Investment Program

Grants Manufacturing SMEs in Southern Ontario 50% of eligible project costs up to \$50,000 to support investments into technology that supports sustainability.

EODF/SWODF

Grants of 15% up to \$500,000 to support businesses that are looking to grow and invest in skills development.

Strategic Innovation Fund

Repayable grant to support Business support the expansion or material improvement of existing industrial or technological facilities.