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MANUFACTURING SECTOR DEVELOPMENT PROGRAM

The Planning and Economic Development Committee recommends the adoption of the recommendations contained in the following report dated May 4, 2010, from the Commissioner of Planning and Development Services.

1. RECOMMENDATIONS

It is recommended that:

1. The Economic Strategy and Tourism Branch submit a funding application to the Ontario Ministry of Training, Colleges and Universities to implement the Innovation in Manufacturing Program as outlined in this report.
2. The Regional Chair and Regional Clerk execute funding contracts with federal and provincial programs to help advance the Region's Manufacturing Sector, subject to the approval of Legal Services.

2. PURPOSE

This report summarizes the economic implications of York Region's manufacturing sector and outlines the proposed Manufacturing Sector Development Program, a three part strategy to assist in the revitalization of the manufacturing sector, including Innovation in Manufacturing, Green Enterprise York and Youth in Manufacturing.

3. BACKGROUND

In the global economy, knowledge, research and innovation drive economic growth and enhance social well-being. Our long term economic competitiveness depends now, more than ever, on innovation. That is why a commitment to creating the right environment to elevate York Region's reputation for innovation in manufacturing excellence is required.

The entire spectrum of industries from manufacturing to services is undergoing transformation. The unprecedented pace of change, disruptive technologies and the massive entry of foreign competition are changing the nature of innovation and the basis of competitive advantage. A new model for innovation is required to compete in the globally networked and knowledge intense economy.

A key objective of the Region's Economic Strategy is to align workforce development efforts with the needs of industry clusters in York Region

Key actions included in the 2005 Economic Strategy:

- Improve efforts to maintain effective and adequate human service infrastructure to meet the needs of the labour force.
- Strengthen entrepreneurship and industry clusters through encouraging technological innovation and commercialization, supporting the growth and creation of business enterprise, enhancing the export capabilities of Regional companies.
- Facilitate access to capital and better forecasting of industry requirements, skills shortages and deficiencies within the Region.
- Sustain a high quality workforce and advocate for more apprenticeship and skilled trades training and education.

The 2007 Sustainability Strategy outlines an action plan for achieving sustainable economic vitality

Sustainability will make York Region a more competitive place to attract a talented labour force and leading edge companies. Achieving Economic Vitality through sustainability identified a number of actions, one of which is addressed in this report: Improve the understanding of the Regional economy in order to address industry requirements and skills availability.

The 2008 Economic Development Marketing and Communications Strategy also supports the proposed Manufacturing Sector Development Program

The 2008 Economic Development Marketing and Communications Strategy identified three initiatives:

- Enhance the sustainability of existing York Region businesses
- Attract foreign owned environmentally sustainable corporations to locate in York Region
- Develop the green industry cluster in York Region.

The Manufacturing Sector Development Program supports these initiatives and will prepare the Region's workforce to be qualified to meet the labour needs of manufacturers and environmentally sustainable companies.

Ontario's dynamic economy employs 807,000 in manufacturing

Statistics Canada's March 2010 Labour Force Survey indicates Ontario's manufacturing employment at 807,000 representing 12 per cent of Ontario's total labour force of 6.6 million. This compares to 1.1 million jobs in March 2000 or 19 per cent of total employment. Ontario's Gross Domestic Production (GDP) in manufacturing was over CAD \$84.3 billion in 2008.

Manufacturing is important to York Region

Manufacturing accounted for 17 per cent of employment in York Region versus only 12 per cent for all of Ontario. While manufacturing accounted for 75,250 York Region jobs in 2009, manufacturers experienced employment declines of approximately 3.2 per cent per year over the past five years. The global economic crisis impacted York Region with a 10.5 per cent decline in manufacturing jobs in 2009 vs 2008. By 2031, the number of jobs in York Region is projected to be 780,000 which would mean an increase of 57,350 manufacturing jobs by 2031 if the manufacturing sector remained at 17 per cent of total employment. A commitment from key stakeholders to a focused Manufacturing Sector Development Program will ensure that York Region will meet its goals.

Increasingly, products manufactured in York Region can be produced more cheaply elsewhere

Global competition, driven by relatively cheap labour in other economies, means that York Region's manufacturers, especially those that have a substantial labour component in their cost structure, are vulnerable to losing customers and markets to foreign competitors. To be successful in the future, York Region manufacturers will need to develop and market innovative products on a global basis.

Previous actions form the background of the proposed Manufacturing Sector Development Program

- The need for the development of a Manufacturing Sector Survey was an outcome of the Industry Cluster work plan presented to Council in March 2008.
- A manufacturing sector survey was delivered by Ipsos Reid in fall 2009 resulting in interviews from 301 York Region manufacturers on 92 key performance indicators. The report on Manufacturing Sector Survey Results and the Ipsos Reid Study publication were presented to Council December 16, 2009. The key conclusions were that manufacturers that are most likely to succeed:
 - Invest in research and development (R&D)
 - Sell products nationally and internationally
 - Secure government financing.

- A Manufacturing Sector Symposium was held in March 2010 resulting in a recommendation that all levels of government, federal, provincial and municipal work with the manufacturing community and partners to develop a Manufacturing Sector Development Program that would:
 1. Provide vision and leadership for the future
 2. Positively and competitively differentiate York Region manufacturers
 3. Communicate a clear message that York Region is the place to build and grow innovative manufacturing-based enterprises.

4. ANALYSIS AND OPTIONS

This report presents a blueprint for developing the York Region manufacturing sector innovation ecosystem

Innovation begins with ideas, and the ideas need to be transformed into useful commercial and social outcomes. An innovation ecosystem model encompasses more than knowledge inputs and incorporates all relevant factors and stakeholders that generate value to customers. A highly evolved innovation ecosystem enables participants to work across enterprise boundaries, focus on customer value creation, respond quickly to shifts in market demand, accelerate the transition from research to production and be more adaptive to change. Innovation ecosystems build a collaborative advantage, a strategic asset for growth and profitability in the years ahead. In this report we present a blueprint for developing the York Region manufacturing sector innovation ecosystem.

The proposed program utilizes current resources, the York Small Business Enterprise Centre and the Export Development Program

The project work will develop the insights, tools and metrics for organizations to implement innovation ecosystems. We will partner with business enterprises, governments, university research centers, associations and economic development agencies to discover future drivers of success in competitiveness, job growth, economic wealth and sustainability. The proposed program will also encompass two Economic Strategy Branch programs: the York Small Business Enterprise Centre and the Export Development Program.

The vision is to build innovation networks, facilitate learning, and advise youth on starting goods vs. service-based enterprises

We will work with clients and partners with the ultimate vision to:

- Build open innovation networks and collaborations for breakthrough technologies with the Innovation in Manufacturing initiative.

- Facilitate creative problem solving, entrepreneurship and lifelong learning with Green Enterprise York.
- Advise start up enterprises on goods versus service based business opportunities including the commercialization of new technology, products and services in manufacturing with the Youth in Manufacturing project.

The three major strategy components of the Manufacturing Development Program are: Innovation in Manufacturing, Green Enterprise York, and Youth in Manufacturing.

INNOVATION IN MANUFACTURING

The Manufacturing Sector Survey completed in September 2009 shows that we need to engage business in a fundamentally different way. Building on this feedback and the experience of other jurisdictions, the Innovation in Manufacturing initiative will identify four key developmental initiatives to establish the approach, tools, capacity and knowledge required to build relationships with business to sustain and grow the workforce.

Leading economists and academics have identified the need to develop new innovative products for global markets as the key to continued economic prosperity for the manufacturing sector. A key challenge for manufacturers, especially small enterprises, is to find the time, knowledge, capital and resources to develop a new business plan and model for the future. The proposed Innovation in Manufacturing initiative will research best practices in manufacturing innovation and develop an online resource for local manufacturers to assess their business and develop a roadmap for new product innovation.

The proposed Innovation in Manufacturing Initiative consists of 5 phases beginning in October 2010 and is based on securing external funding

Phase 1: Research and Partner Development

A project team of two staff will assemble research on innovation in manufacturing from around the world, conduct focus group interviews of regional manufacturers on barriers to innovation, complete an inventory of academic programming relative to innovation, conduct a strengths, weaknesses, opportunities and threats (SWOT) analysis on our manufacturing sectors versus comparable international locations and source statistical data of consumer purchasing trends to identify promising new markets for product innovation.

An Advisory Panel will be established at the outset of the initiative. Three partner organizations will be secured and identified in the proposed financial proposal submission to the Ministry of Training, Colleges and Universities.

The project will also involve a close partnership with the Community and Health Services Department's Ontario Works portfolio. Improved understanding of the manufacturing sector's labour force needs will enhance the design of skills training programs for Ontario Works recipients leading to increased employment opportunities in the manufacturing sector for this vulnerable client group.

The research phase will conclude with facilitated focus groups of 10 manufacturers in each of six sessions, engaging a total of 60 manufacturers.

Phase 2: Solution Development

The findings from Phase 1 will be published online to a special project BLOG and distributed through press releases and e-communications. Interested stakeholders will be invited to electronically submit suggestions for solving the challenges around innovation in manufacturing. Based on the research finding and the stakeholder suggestions, the project team and the Advisory Panel will develop a proposed online solution to stimulate innovation in manufacturing.

It is anticipated that the online solution would include business assessment tools, market trends and resources, information on government incentives for innovation, partnership opportunities with academic researchers, business plan development, new product development processes and progress monitoring.

Phase 3: Test Market

The framework for a "Virtual Manufacturing Innovation Consultant" would be finalized and reviewed with the Advisory Panel and regional manufacturers for input and refinement.

Phase 4: Building the Solution

Designed to provide a self guided business revitalization road map for manufacturers, the final online solution would be designed and tested for accuracy and functionality with key stakeholders and technology experts.

Phase 5: Project Launch

Results of the research and information collected and overview of the online solution would be published in a final report with an estimated 2,500 printed copies to be distributed to regional manufacturers and interested stakeholders. Approximately 2,500 copies of the report would be broadly distributed electronically through partner websites and a series of regional forums would be held to present findings, generate publicity and demonstrate the online solution. The York Region Export Development Program Advisors will play a key role in meeting one on one with regional manufacturers to present the online solution and to assist in its ongoing use and value.

Expected results are reinvention through innovation

The overall goal is to create a solution that will encourage manufacturers to review and reinvent themselves through innovation thus leading to sustainability in the long term. The project will engage in the research phase 60 manufacturers and researchers from five academic institutions. The creation of a virtual innovation resource will involve key regional partners and stakeholders in its development and it will provide manufacturers an ongoing tool to revitalize their business. The outreach communication activities will reach 5,000 manufacturers and the target is for 200 regional manufacturers to enrol in the program.

The proposed Innovation in Manufacturing Initiative will begin in July 2010 and be completed by mid-year 2012 as indicated in *Table 1*.

Table 1
Key Milestones: Innovation in Manufacturing Initiative

Project Deadlines	Date
Report to Regional Council	June 24, 2010
Submit MTCU Concept Paper Application	July 2010
Submit MTCU Proposal	September 2010
MTCU Funding Approval	September 2010
Project Initiation	October 2010
Milestone 1: Report to Regional Council	March 2011
Milestone 2: Report to Regional Council	November 2011
Project Completion	Summer 2012

GREEN ENTERPRISE YORK

The Green Enterprise Ontario (GEO) organization offers local partners a turn key program to create a community based virtual network to connect businesses who market green products with customers who want to purchase them and to improve the sustainability practices of all businesses. The GEO program is a membership based model and GEO provides, maintains and updates a website that can be identified as Green Enterprise York with the following features:

- Regional specific website within GEO's global portal
- Local and regional member directories for B2B and B2C contact
- Full communications management system
- Suite of green workshops and seminars
- Event management and registration system
- Articles and whitepapers on green business practices

York Region Economic Strategy Branch will encourage local businesses to become members of Green Enterprise York and there is the ability to incorporate Regional sustainability documents, initiatives and workshops into the website.

The Green Enterprise Ontario program is offered at no cost to local communities with GEO revenues to manage the program being derived from the membership fees. Local partners are expected to encourage membership from local businesses and there is a revenue sharing model that would contribute a portion of the membership fees to the local partners.

Green Enterprise York will enhance the sustainability practices of York Region businesses

The Green Enterprise York project will enable York Region to advance the sustainability practices of businesses in the Region and encourage the development of the green industry cluster. This initiative fulfills a key objective outlined in the Economic Development Marketing and Communication Strategy approved by Regional Council in February 2008.

The “York Region Guide to Greening Your Business” and 2007 Sustainability Strategy will serve as starting points and the Green-Connections group of small businesses founded in January 2009 at the York Small Business Enterprise Centre’s Annual Conference "Entrepreneurs and the Green Economy" will provide a partnership foundation.

A partnership will be developed with Green Enterprise Ontario (GEO) to facilitate the Green Enterprise York website. GEO is a group dedicated to exploring and sharing environmentally friendly practices, products and ideas. Its goal is to encourage all businesses to 'Go Green'. Green Enterprise York will generate communications and publicity amongst York Region manufacturers, green businesses and stakeholders. *Table 2* presents the project milestones.

Table 2
Key Milestones: Green Enterprise York

Project Deadlines	Date
Report to Regional Council	June 24, 2010
Milestone 1: Project initiation	July 2010
Milestone 2: Concept development	October 2010
Milestone 3: Project implementation	November 2010
Milestone 4: Report to Regional Council	February/March 2011

YOUTH IN MANUFACTURING INITIATIVE

Over 98 per cent of entrepreneurs who seek consulting advice from the Small Business Enterprise Centre are planning to start a service based business. A service business generally requires less start up capital than a product based business however, the economic benefit to the local community is significantly higher with a product based business. This includes more direct jobs, increased purchases of goods and services from the local economy and the ability to generate higher value export sales.

Youth in Manufacturing Initiative will encourage young entrepreneurs to start product based manufacturing businesses

The Youth in Manufacturing Initiative will seek to broaden awareness of the opportunities for young entrepreneurs to start product based businesses. Over the next year, this initiative will seek to:

- Build partnerships with Regional School Boards, Ministry of Economic Development, Seneca College and key Regional manufacturers to create an education forum that will promote the opportunities in manufacturing and provide insight on how to develop a new product.
- Leverage existing initiatives by adding new product development programming through the Small Business Enterprise Centre and the Summer Company program.
- Develop an inventory of suppliers to assist young entrepreneurs in developing a new product including tool & die makers, 3D modeling, prototype developers, graphic designers and contract manufacturers.

In addition, staff will explore the potential to establish a Tech Shop which would house the equipment required by entrepreneurs to design and prototype a new product, offer design workshops and equipment training. The outcome will be experiential learning and the creation of new products and the concept is based on a successful model in California (<http://techshop.ws>). Key milestones of the Youth in Manufacturing Initiative are presented in *Table 3*.

Table 3
Key Milestones: Youth in Manufacturing Initiative

Project Deadlines	Date
Report to Regional Council	June 24, 2010
Develop Concept	September 2010
Milestone 1: Project charter	November 2010
Submit Proposal for funding	December 2010
Milestone 2: Publish inventory	February/March 2011
Milestone 3: Education forum	April 2011

Relationship to Vision 2026

Vision 2026 identified attracting and supporting businesses, encouraging continual learning, promoting and supporting innovation, and partnering in service delivery as key elements in achieving the Vibrant Economy goal. Implementation of the Economic Strategy supports the Vibrant Economy Goal of Vision 2026.

This report relates to Vision 2026's goal of building a vibrant economy by attracting and supporting businesses. The project identifies workforce and educational needs together with key business and education partners.

5. FINANCIAL IMPLICATIONS

The Innovation in Manufacturing Initiative will incur the cost allocations identified in *Table 4* which will be reimbursed fully through a funding application to the Ministry of Training, Colleges and Universities. This report seeks approval from Regional Council to submit the funding application and the launch of the initiative is subject to approval of provincial funding.

Table 4
Estimated Costs: Innovation in Manufacturing Initiative

Budget Item	Proposed cost
Staffing	\$425,000
Data Acquisition	\$10,000
Benchmarking analysis	\$50,000
Meetings	\$20,000
Communications	\$40,000
Innovation in Manufacturing Website	\$200,000
Travel Expenses	\$10,000
Total	\$755,000

York Region contributions would cover in kind office space, phones, computers, internet, meeting space, office supplies, project supervision, legal services and administrative support.

Funding for the development of Green Enterprise York and Youth in Manufacturing is included in the approved 2010 Economic Development operating budget.

6. LOCAL MUNICIPAL IMPACT

Manufacturing is central to York Region's economic future. Engaging and helping to revitalize the manufacturing sector will assist policy makers, innovative manufacturers

and investors in identifying competitive opportunities in York Region manufacturing and lay the essential groundwork to encourage new and sustained manufacturing investment at the local level.

Due to the importance of developing the manufacturing sector in each local municipality, project staff will partner with local economic development offices to identify high potential manufacturers to participate in the proposed programs.

7. CONCLUSION

The future of manufacturing is knowledge intensive. Understanding manufacturing and the emerging green economy innovation ecosystems and its possible impact on York Region will help us to effectively meet Ontario's aggressive Places to Grow Strategy and York Region's 2007 Sustainability Strategy.

The York Region Municipalities and their manufacturing businesses share important common goals: to retain and create jobs and to foster a more innovative and prosperous business climate. Communication, consultation and collaboration are the cornerstones and Region-wide stakeholder input is being actively sought to ensure that the needs of the business community are fully reflected in the outcome.

The initiatives outlined in this report support York Region's commitment to building a vibrant and sustainable economy. The initiatives will work with local manufacturing businesses to seize innovation, growth and expansion to adopt the capacity to share information and ideas and form new linkages and networks within the business community. These linkages will be essential to foster conditions where manufacturing innovation can thrive.

The proposed Manufacturing Sector Development Program will prepare York Region and the Toronto Region to compete globally in manufacturing.

For more information on this report, please contact Sharon Végh, Program Manager, Economic Strategy at (905) 830-4444, Ext. 1509.

The Senior Management Group has reviewed this report.