

FINAL REPORT

**The Corporation of the
Municipality of Port Hope**



**Municipality of Port Hope
Economic Development Strategic Plan Update**

February 8, 2011

AMER
& ASSOCIATES
ECONOMIC DEVELOPMENT



Location Strategies
From Research to Results

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TABLE OF CONTENTS

1. BACKGROUND	3
2. APPROACH & METHODOLOGY	3
3. EXECUTIVE SUMMARY - FINDINGS 2006 VS 2010	4
4. KEY STRENGTHS, ASSETS & BARRIERS - 2010 UPDATE	8
5. ENVIRONMENTAL SCAN – ECONOMIC BASE ANALYSIS	9
6. DEMOGRAPHICS	10
<i>6.1 HOUSING</i>	10
<i>6.2 POPULATION/EDUCATION/INCOME</i>	11
<i>6.3 LABOUR</i>	16
<i>6.4 EMPLOYMENT</i>	21
7. INDUSTRY SECTOR ANALYSIS	32
8. TARGET SECTOR ASSESSMENT	44
9. IMPLEMENTATION ACTION PLAN RECOMMENDATION	56
10. BUDGET & RESOURCE CONSIDERATIONS	59
11. CASE STUDIES	60
12. RESEARCH & BACKGROUND RESOURCES	67

2010 Economic Development Strategic Plan Update

1 Background

The Municipality of Port Hope was legally incorporated on January 1, 2001 as a result of an amalgamation of the former Town of Port Hope and the Township of Hope. Situated along the north shore of Lake Ontario, the Municipality of Port Hope is located on the western end of Northumberland County abutting the Municipality of Clarington in the Region of Durham. With a total population of approximately 16,500, Port Hope is made up of both urban and rural communities. The Municipality with extensive community input developed and adopted an Economic Development Strategy for the Municipality of Port Hope in April 2006. The strategy identified key strategic tactics and has been a guiding principle in the economic activities within the Municipality including getting the infrastructure right and building on our key industry strengths. The purpose of the strategy update is to evaluate the success of the 2006 strategy and identify additional or revised strategic directions for the Economic Development and Tourism Department and the Municipality of Port Hope. The strategic recommendations will allow the Municipality to increase opportunities for the growth of existing businesses, the establishment of new enterprises and increased employment opportunities for Port Hope and the local community. The objective of this report is to validate and update the Municipality of Port Hope 2006 Economic Development Strategic Plan identifying additional or revised strategic priority actions to retain and grow existing business and attract new investment, job creation and wealth generation in the Municipality of Port Hope.

2 Approach & Methodology

2.1 Research

Amer & Associates undertook a preliminary review of all available information, including existing strategic, economic development plans, marketing initiatives and sector data for similar communities.

2.2 Environmental Scan, SWOT Analysis & Target Sector Recommendations

Thorough and detailed research was conducted to confirm regional Strengths, Weaknesses, Opportunities and Threats (SWOT). This comprehensive research included community consultations and a comprehensive survey of key employment sectors. Utilizing the latest Census Data, and augmented by local and regional data, we provide comparables to previous data, incorporating a Location Quotient Indicator (LQI) analysis to identify key growth sectors to support Port Hope's competitiveness business case for investment.

2.3 Stakeholder Consultations

Consultations were conducted with a variety of community stakeholders from industry, business, public institutions and municipal government to secure a broad range of input. Consultations included personal interviews and facilitated group input sessions.

3 Executive Summary - Findings 2006 vs. 2010

Specific attention was directed to the following six Core Strategies from Port Hope's 2006 Strategic Plan to analyze current feasibility, relevance and success:

1. Get the Infrastructure Right
2. Build on the Key Industry Strengths of Nuclear and Tourism
3. Support Agricultural Diversification
4. Pursue a 'Big Idea' (Multi-sourced Energy Centre for the GGH)
5. Renewed Marketing of Port Hope
6. Human Resources to Meet Port Hope Business Needs

Action 1: Get the Infrastructure Right.

From 2006 ED Plan - This addresses the problem of available industrial land; at present there is not enough available land in the right places to attract new investments, and sewage treatment needs expanding. Further, rental housing shortages limit labour movement. All of these are significant constraints that need to be addressed if any type of aggressive economic development plan is to succeed.

2010 Update

The Municipality of Port Hope has made significant progress implementing tactics in this Core Strategy. In December 2009 land was purchased by the municipality and rezoned to develop a municipally owned and serviced industrial park on Jocelyn Street. In April 2010 a new and improved Sewage Treatment plant was opened. The new facility includes a new septage receiving facility, updated treatment tanks and equipment, and improved treatment processes to increase process operations. Rental housing availability was not identified as a barrier in this study. The establishment of IDEAHUB can be viewed as a successful infrastructure initiative to support business start-ups.

Tactic

Status

1.1 Establish Municipal Industrial Park	Complete
1.2 Use Tax Structure to Influence Industrial Land Owners to Cycle Land	NA*
1.3 Ensure Sufficient Waste Water Treatment Facilities for Future Growth	Complete
1.4 Establish Mixed Use – Intensified Housing	NA*
1.5 Expand Availability of Rental Housing	Progress
1.6 Encourage Retirement Housing	NA*

*** The ability of an economic development office to directly impact housing development is limited. Port Hope appears to have appropriate regulations in place to accommodate investment in this area.**

Action 2: Build on the Key Industry Strengths of Nuclear and Tourism.

From 2006 ED Plan – Nuclear is part of Canada's energy future for the foreseeable future. Uranium processing is highly regulated, subject to continual process improvement and as safe as any fuel source. It is the main export industry in Port Hope and it has a strong world future Tourism is a clean industry and is already a strength in Port Hope. It is a growth industry - especially if viewed as marketing to the GGH and pass-by traffic on the 401. Tourism growth can be a strong, added boost to industrial development since visitors who become familiar with the Municipality's assets may relocate their businesses to the Municipality and tourism can attract owner-entrepreneurs.

2010 Update

There has been significant progress made on this ambitious Core Strategy despite limited availability of adequate resources to fully implement. Progress has been made in all areas except the recommendation to establish an "Antique Centre", while Port Hope is renowned for its heritage and historic culture the returns on this are highly contingent on unpredictable markets and no action was taken to implement. In 2010 a Comprehensive Tourism Strategy was implemented and Port Hope's participation in regional marketing efforts through the Ontario East Economic Development Commission's sectoral strategies in both the nuclear and tourism leverages opportunities. Staff resources need to be sufficient to nurture new business opportunities. Stakeholder consultations confirmed that there were numerous tourism-related events established.

<u>Tactic</u>	<u>Status</u>
2.1 Market to Related Companies	Ongoing
2.2 Build on Port Hope Area Initiative/Cameco Vision 2010	Ongoing
2.3 Build/Expand as Antique Centre	NA
2.4 Continue Development Plans for a Major Marina Complex	Ongoing
2.5 Increase Tourism Events	Ongoing
2.6 Support Heritage, Arts and Cultural Activities	Ongoing

Action 3: Support Agricultural Diversification.

From 2006 ED Plan - This is the other strong 'industry' in the Municipality. This can be strengthened through the suggested Tactics as well as through close co-operation with the County. Two specific Tactics are suggested.

2010 Update

The Municipality of Port Hope has a high labour force concentration in Agriculture with new opportunities in support opportunities enjoying the highest concentration. This could relate to agriculture equipment and services suppliers. The Municipality of Port Hope partners with Northumberland County in programs that promote and support the agricultural sector. Generally stakeholders had limited knowledge of the importance of this sector the community, although there was an appreciation for locally sourced produce. Ongoing support of the Agricultural Advisory Committee is recommended.

<u>Tactic</u>	<u>Status</u>
3.1 Agri-Tourism	Ongoing with Northumberland County
3.2 Attract Ag Processing Facility or Establish Cooperative	NA

Action 4: Pursue a 'Big Idea' (Multi-sourced Energy Centre for the GGH).

From 2006 ED Plan - Be the new Multi-sourced Energy Centre for the GGH. The demand for energy and all its associated research and investment requirements are massive in Southern Ontario. Port Hope can build on its location and history, combined with modern research and a goal of being green. This initiative also builds on the ambitions to reduce the local energy footprint – it means that the “cobbler will have the lightest and most enduring shoes”. Five major Tactics are suggested here although it is unlikely that all would materialize to the same degree. The idea of a 'Big Idea' will also serve as a catalyst for driving all development efforts

2010 Update

Many of the tactics identified for Wesleyville (the focus of the 2006 report) are beyond the influence of the local community and contingent on the Government of Ontario support and buy-in however progress in renewable energy technologies has occurred in the immediate vicinity and there are long-term energy development potentials that will impact employment in the Municipality of Port Hope.

<u>Tactic</u>	<u>Status</u>
4.1 Nuclear Power Plant (WV)	Ongoing with Province
4.2 Alternative Energy Power Plant (WV)	Ongoing with Province
4.3 Cogeneration Power Plant (WV)	Ongoing with Province
4.4 Ethanol Plant (WV)	NA - Not recommended
4.5 Become a Model Low Energy Community	NA

Action 5: Renewed Marketing of Port Hope

From 2006 Plan - A new strategy means that the existing marketing efforts will need to be retooled to fit the newly adopted Tactics. Given the current effective capabilities of this department, only two specific plans are proposed under this Strategy.

2010 Update

The Municipality of Port Hope Economic Development and Tourism office has implemented a variety of initiatives to promote investment and visitor activity. The efforts of the municipality are well recognized by stakeholders however there is consensus that a heightened and properly funded long-term strategy be developed. The Tourism Action Plan and establishment of IDEAHub are successful tactics implemented in 2010. Continued engagement and co-operation with regional partners is recommended.

Tactic

Status

5.1 Update Marketing Collaterals and Website

Completed

5.2 Geographic Targeted Direct Mail and broadcast Advertising

Ongoing

Action 6: Human Resources to Meet Port Hope Business Needs

From 2006 Plan - Finally, economic growth is dependent on an employable labour force that fits the needs of existing and potential employers. Ensuring that the training and educational needs are met involves three Tactics.

2010 Update

There has been significant progress in identifying opportunities and developing efforts to support adequate labour supply. Ongoing activity with the Workforce Development Board and Northumberland County will assist in identifying gaps and how best to work with educational institutes to address. Port Hope youth are identified with lower levels of education and this should be further researched and addressed to meet future labour needs.

Tactic

Status

6.1 Improve School-to-Work Transition

NA

6.2 Coordinate Skills Training with ED Plan and Education

Ongoing

6.3 Build Volunteer base

Ongoing

4 Key Strengths, Assets & Barriers - 2010 Update

The following attributes and opinions were derived from current data research and consultations

4.1 Strengths

- Location – Port Hope’s location on Canada’s main highway transportation corridor, along major rail lines and Great Lakes access provides significant advantages over similar sized communities. Now recognized as part of the Greater Golden Horseshoe, the proximity to Ontario’s economic and population base enhances Port Hope’s positioning for economic growth.
- Existing Energy Corridor – a concentration of industries related to energy production provide opportunity for cluster development.
- Quality of Life – small town charm, access to amenities and a caring and welcoming community are positive attributes for business attraction.
- Commitment to Heritage – An expressed commitment to preserving and appreciating built heritage provides a community setting that is becoming scarce in higher growth areas.
- Waterfront development opportunities and river access provide recreational amenities to support quality of life and tourism development
- Proactive development of serviced industrial land for future development
- Skilled talent pool

4.2 Opportunities

- Build on existing low level clean-up, develop a centre of excellence
- Alternative energy; leverage existing energy sector expertise and experience
- Tourism development
- Marketing & branding Port Hope to attract new investments
- Available municipal industrial land

4.3 Barriers

- Perceptions related to nuclear industry and impact on business and tourism
- Level of partner engagement
- Decline in youth education, future labour force
- Competition – require adequate resources to compete with North America for investment

5 Environmental Scan – Economic Base Analysis

5.1 Introduction

Sitting at the furthest west point in Eastern Ontario, Port Hope is strategically situated along the 401 corridor; the municipality has the benefits of proximity to Toronto while maintaining its small town charm.

Like most Ontario regions the Municipality has grown in population, employment, with increased residential activity. However, through adopting a managed, strategic approach to growth the Municipality has avoided the pitfalls of rapid growth, evident in other areas of Ontario.

There are local competitive pressures from surrounding municipalities to the west in Durham, from communities such as Clarington, Whitby and Oshawa and regionally, from areas in Western Ontario among others. Shifts in manufacturing industries have left their mark, and going forward the municipality must address issues concerned an ageing community, educational attainment and creating a sustainable manufacturing sector.

The Environmental scan covers a comparative examination of Port Hope’s social, demographic and economic performance in relation to Ontario and the County of Northumberland where appropriate. In doing so, data from Statistics Canada, Census of Population in 2001 and 2006 was utilized, the OMAFRA labour market analysis tools were deployed, and the most recent data from Statistics Canada - Canadian Business Patterns, December 2008 was used. This was augmented by 2010 data from Manifold Data Mining where appropriate. Additional data was through Canada Mortgage and Housing Corporation in regards to Housing starts. Applicable Municipality documents were also reviewed to provide a contextual perspective. Combined, these sources enable a comprehensive situational analysis of Port Hope’s demographic and economic performance to underpin future strategic planning activities.

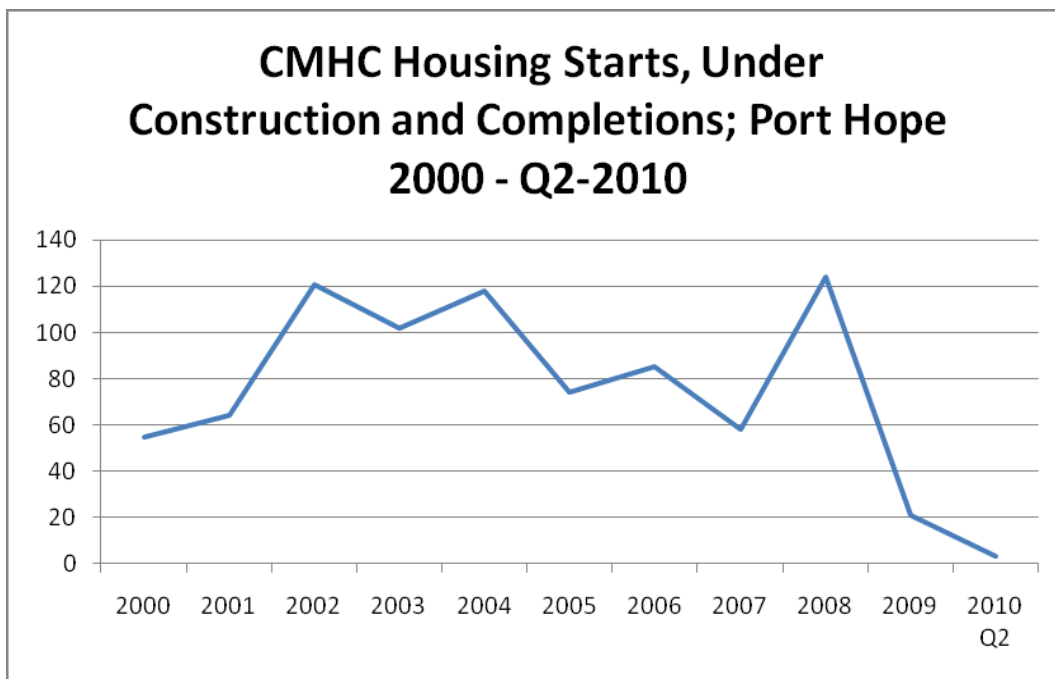


6 Demographics

6.1 Housing Starts

Housing activity during the period 2000- Q2 2009 saw consistent growth reflecting the steady population growth and an increase in construction employment during that period. This growth would suggest that housing stock kept pace with demand mitigating any potential supply problems and house price inflation as seen in other parts of Ontario. Housing in Port Hope can continue to remain affordable, which is a key selling point for the Municipality. The second quarter of 2009 saw a sharp drop in activity, which continued into 2010.

Table 1 Port Hope Housing Starts 2000 – Q2 2010



Source: CMHC 2010

6.2 Demographic Characteristics

6.2.1 Population

Table 2 Population Change Port Hope 2001-2010

	2001	2006	2009	2001-2006 % Change	2006-2010 % change	2001-2010 % Change
Port Hope	15,605	16,390	17,467	5.0%	6.75%	11.9%
Northumberland	77,497	80,963		4.5%		
Ontario	11,410,046	12,160,282	13,210,700	6.6%	8.64%	15.8%

Source: Manifold Data Mining 2010, Statistics Canada; 2001, 2006 Census of Population

Port Hope experienced an 11.9% increase in population during the last decade, equating to 1,862 new residents. ***The Municipality's population grew faster during the four year period 2006-2010 (8.64%) than that of the preceding five years between 2001-2006 (6.6%).***

Population growth has outpaced that of Northumberland County but remained behind the Province. However, many areas experiencing rapid growth, particularly around the GTA, have associated infrastructure pressures. Port Hope's population growth rate reflects a desire for strategic sustainable growth as set out in the current Strategic Plan.

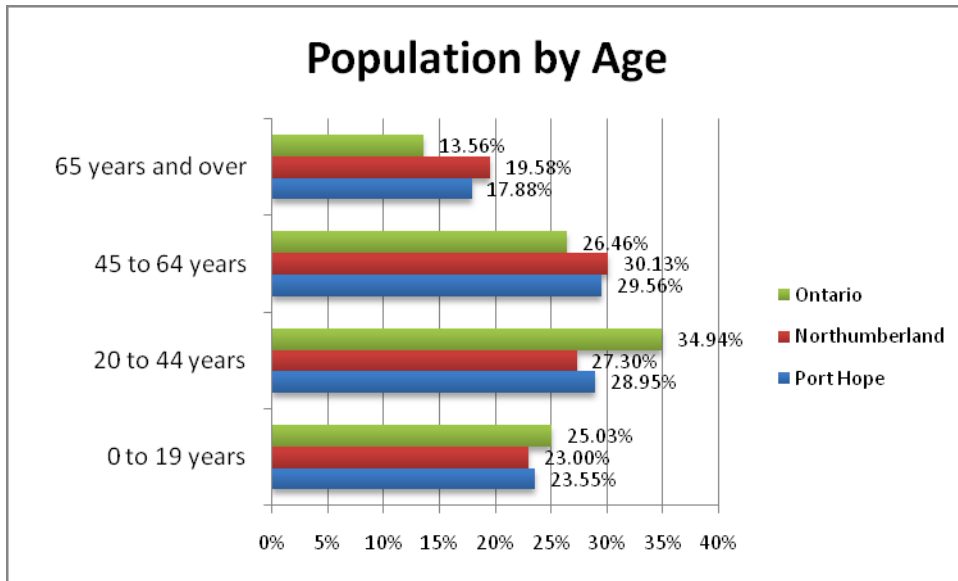
The Ontario Population Projections Update forecasts growth between 15%-40% for Northumberland County during the period 2009-2036 which is in line with historical growth.

6.2.2 Population by Age

Port Hope's population profile is older than Ontario but younger than the County of Northumberland. Future challenges posed by an ageing society are more pronounced in Port Hope. A greater proportion of seniors than the Provincial average, (Table 3) demonstrates the appeal of Port Hope to retirees. This trend is set to accelerate. According to the Ontario Population Projections Update, the proportion of seniors in the County of Northumberland will be over 35% in 2036, among the highest in the Province. The Municipality has responded through a number of age targeted community initiatives for seniors together with increased health care provision. Addressing the needs of an older society will be a key component of future strategic plans.

Port Hope also has a higher proportion of 45-64 year olds than Ontario. This presents a short and medium term threat of labour force decline. A situation, which is exacerbated by a significantly lower proportion of younger people in the 20-44 age group than the Province. The proportion of 0-19 year olds is only slightly less than that of the Province. With many set to retire over the next two decades competition for this emerging labour force will intensify locally, regionally and nationally. ***All of which highlights the importance of Port Hope's initiatives to retain young people.***

Table 3 Populations by Age in Port Hope, Northumberland and Ontario 2006



Source: Statistics Canada; 2006 Census of Population

6.2.3 Immigrant Population

Port Hope has a very small proportion of immigrants in comparison with Ontario. The immigrant community is stable and long-standing. The vast majority, 90%, arrived before 1991 and most are 3rd generation or more.

Koreans are the largest visible minority group comprising 26% of 405 immigrants. Business Immigration initiative activities would be well directed towards this group. An audit of community amenities and support groups would be helpful in this regard. Interestingly there are very few Filipinos, the largest minority group in Northumberland County.

Port Hope Economic Development office works closely with the New Canadians Centre in Cobourg to support and identify opportunities to attract new labour and investment opportunities. Continued participation in ongoing activities such as the Ontario East Business Immigration Familiarization Tours will further enhance the Municipality’s ability to attract labour and business from this important market.

Table 4 – Proportion of Immigrants in Port Hope, Northumberland and Ontario 2006

	Port Hope	Northumberland	Ontario
% of population immigrants	10.8%	11.0%	28.3%
% visible minority population	2.5%	2.2%	22.8%
% mother tongue English	94.7%	93.0%	68.4%
% mother tongue not English	5.3%	7.0%	27.2%

Source: Statistics Canada; 2006 Census of Population.

6.2.4 Educational Attainment and Field of Study

Table 5 compares the highest level of educational attainment in Port Hope, Northumberland and Ontario among the population aged 15 and over. Nearly half in Port Hope (48%) have some form of post-secondary education. This is only slightly less than the Province (50%), and slightly more than Northumberland County (45.9%). Those with a college, CEGEP or other non-university diploma or certificate, account for the majority of this group (22.3%), which is slightly more than both Northumberland County and the Province.

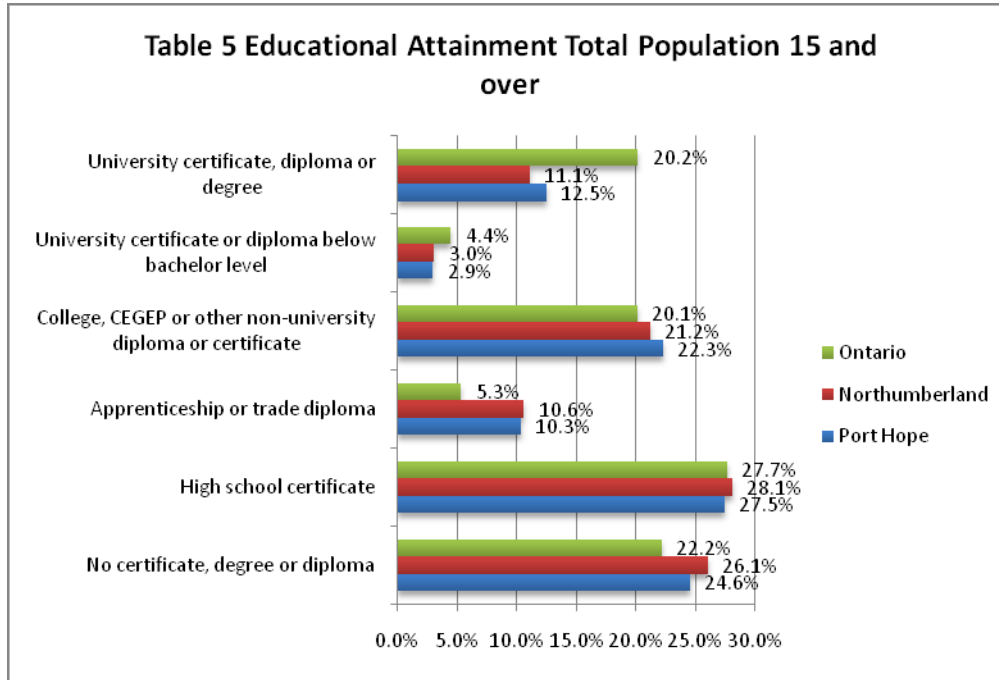
There are significant differences between Port Hope and Northumberland County and the Province in the composition of post-secondary education attainment. ***The proportion receiving apprenticeship or trade diplomas, in both Port Hope and Northumberland County, both at just over 10%, is double that of the Province (5.3%). Similarly, the numbers receiving a University certificate, diploma or degree in Port Hope (12.5%), while slightly more than Northumberland (11.1%) is significantly lower than attainment in Ontario (20.7%).***

The number leaving school without any qualification in Port Hope is slightly higher than the Province, and those with only a high school certificate is about the same as the Province and the County of Northumberland. ***All of which signifies that too many young people are relying on limited education credentials, which might have once been sufficient but is no longer the case.***

It is important to consider the population's educational attainment in the context of local employer requirements. Community college programs and apprenticeships provide the skills required by manufacturing industry. While highly qualified university graduates are important, an abundant supply is not necessarily the most appropriate labour mix for Port Hope.

However, economic restructuring has resulted in a transition to more technology intensive processes and a knowledge based economy. Many low skilled jobs have disappeared. ***It is therefore critical to ensure that local college and apprenticeship programs fully embrace this shift.***

Table 5



Source: Statistics Canada; 2006 Census of Population.

Table 6 highlights some differences in comparative regional attainment between the population aged 15 to 34 and 35 to 64. While the percentages in highest level of attainment will be skewed by the fact that many in the younger age group have yet to graduate, proportionately fewer young people have a university degree, diploma or certificate (9.44%), under half that of the Province (19.39%). The difference is less marked in the 34-64 age group where 14.8% have a university degree, diploma or certificate as compared to 24% in Ontario.

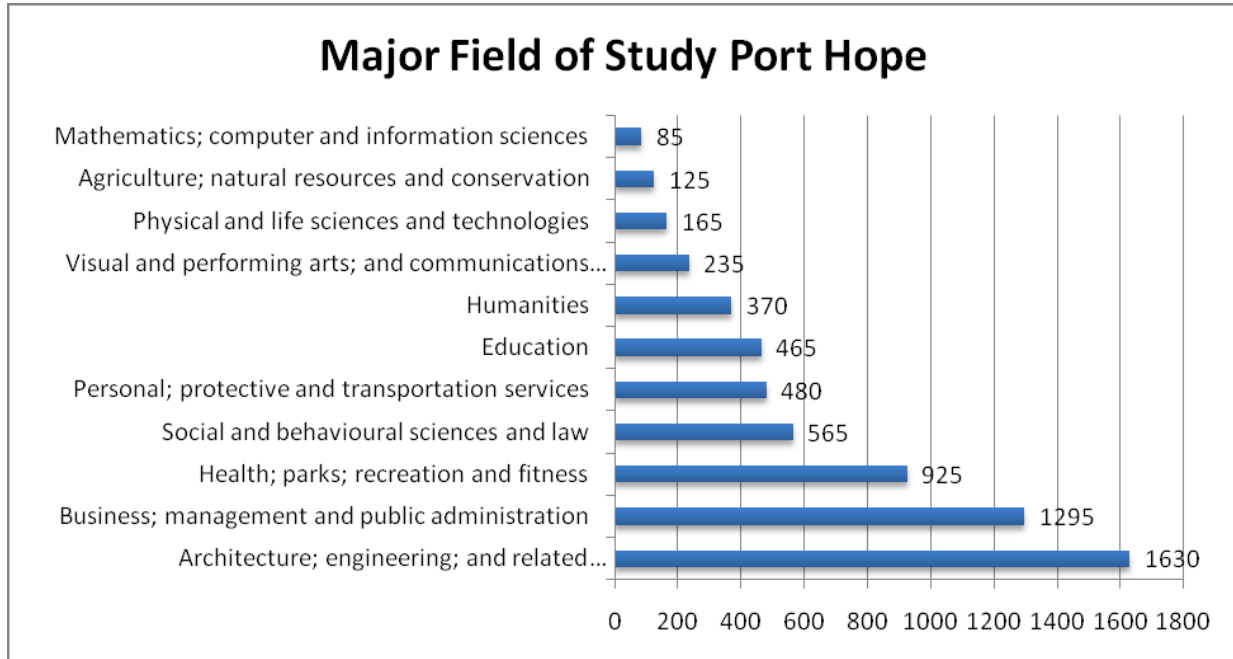
Table 6 Educational Attainment - Ages 15-34 and Ages 34-64

Qualification	Port Hope	Northumberland	Ontario
Total population aged 15 to 34			
No certificate; diploma or degree	27.78%	30.79%	24.76%
High school certificate or equivalent	34.86%	33.43%	31.42%
Apprenticeship or trades certificate or diploma	5.56%	5.87%	4.09%
College; CEGEP or other non-university certificate or diploma	20.83%	20.33%	16.88%
University certificate or diploma below the bachelor level	0.97%	1.19%	3.25%
University certificate; diploma or degree	9.44%	8.42%	19.59%
Total population aged 35 to 64			
No certificate; diploma or degree	17.31%	18.67%	15.01%
High school certificate or equivalent	26.64%	28.27%	25.38%
Apprenticeship or trades certificate or diploma	12.44%	11.90%	9.58%
College; CEGEP or other non-university certificate or diploma	25.65%	24.47%	21.32%
University certificate or diploma below the bachelor level	3.11%	3.21%	4.72%
University certificate; diploma or degree	14.77%	13.47%	23.99%

Source: Statistics Canada; 2006 Census of Population.

Table 7 shows the major field of study of the population aged 15 and over with post-secondary qualifications. The most predominant fields are Architecture, Engineering and related technologies (1630 graduates) and business management and public administration (1295 graduates). The high proportion of engineering graduates is in line with the local economic structure and bodes well for the future. Other scientific disciplines such as mathematics and physical and life sciences are not so well represented. The distribution of major field of study in Port Hope reflects the provincial pattern.

Table 7 – Major Field of Study



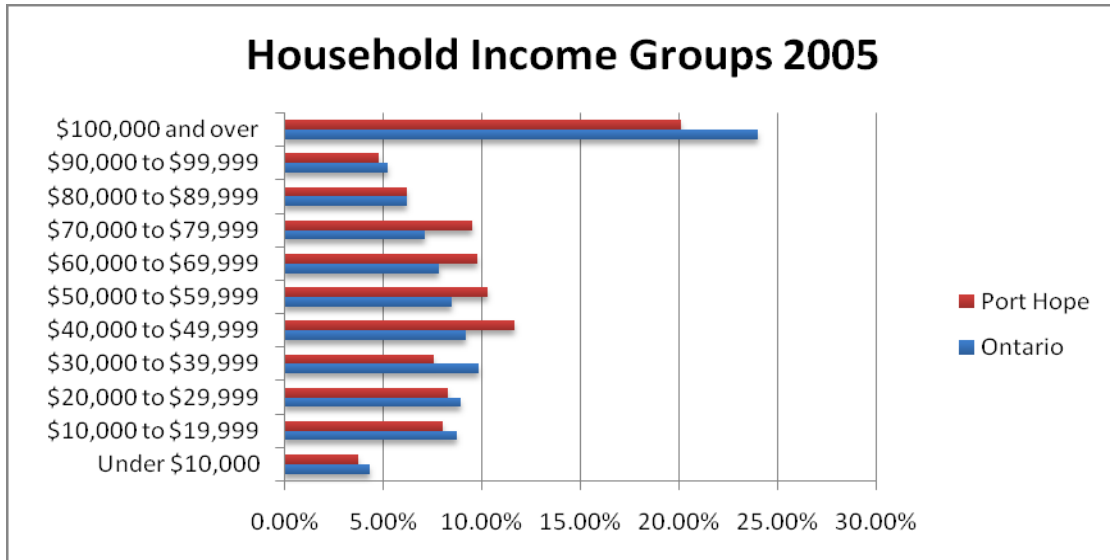
Source: Statistics Canada; 2006 Census of Population.

6.2.5 Household and Personal Income

Tables 8 and 9 below show a comparative income groups Port Hope and Ontario in 2000 and 2005. In common with the Province, income levels have increased during this period.

At \$60,382, the median household income in Port Hope is very close to the Ontario average (\$60,164), and higher than the Northumberland’s average of \$55,802. There are a smaller proportion of people on low incomes than in the Province. Middle-income groups are well represented, with higher representation, while higher income groups are only slightly less prevalent than in the province. ***Port Hope’s income levels suggest its residents are well placed to benefit from comparatively lower living costs, and so contribute to goods and services provided by the local economy.***

Table 9 Household Income Groups Comparison Port Hope and Ontario



Source: Statistics Canada; 2006 Census of Population.

6.3 Labour Force Profile

6.3.1 Labour Force Growth

Table 10 – Comparative Labour Force Growth 2001-2010

	Port Hope	Northumberland	Ontario		Port Hope	Northumberland	Ontario
2001	7,555		5,713,900	% Growth 2001-2010	25.57%		27.89%
2006	8,530	37,890	6,164,245	% Growth, 2001 - 2006	6.10%	7.20%	7.90%
2010	9,487		7,307,300	% Growth, 2006 - 2010	11.22%		18.54%

Manifold Data Mining 2010, Statistics Canada; 2001, 2006, Census of Population.

Port Hope’s labour force grew by 6.1% between 2001 and 2006 outpacing population growth during that period (5%). However, growth during this period lagged both Northumberland County and the Province. The most recent period between 2006-2010 saw the gap widen between labour force growth (11.22%) and population growth (6.75%). This suggests the town’s economy has been successful in absorbing its population increase and its position as a net exporter of labour discussed in the Labour Flow Analysis below. Labour force growth during the period 2001-2010 (25.57%) is only slightly behind that of the Province (27.89%).

6.3.2 Labour Force Participation

Table 11 – Comparative Labour Force Participation

	2010		2006		
	Port Hope	Ontario 000s	Port Hope	Northumber land	Ontario (000s)
Total population 15 years and over	14,759	10,853.60	13,235	66,105	9,819.42
In the labour force	9,487	7,307.30	8,530	40,575	6,587.58
Employed	8,808	6,662.00	8,015	38,135	6,164.25
Unemployed	679	645.30	520	2,440	423.34
Not in the labour force	5,272	3,546.30	4,700	25,535	3,231.84
Participation rate	64.3	67.3	64.5	61.4	67.1
Employment rate	59.7	61.4	60.6	57.7	62.8
Unemployment rate	7.15	8.8	6.1	6	6.4

Manifold Data Mining 2010, Statistics Canada; 2001, 2006, Census of Population

Further evidence of the Port Hope economy's success in absorbing its increasing population is demonstrated by the unemployment rate. In 2006 Port Hope's unemployment rate was 6%, slightly less than the Province. While unemployment has increased to 7.15% (September 2010) it is now significantly less than Provincial unemployment rate of 8.8%. ***Employment has held up well in the light of recent economic conditions and the strong manufacturing component in Port Hope's economy.***

However, the table below shows youth unemployment in Port Hope (17.22%), in common with the Province, is endemic (17.9%). ***The low levels of educational attainment among a segment of young people must be addressed to help this situation. In contrast, there is near full-employment in the 25 years and older age group.***

Table 12 – Comparative Labour Force Activity by Age Group

LABOUR FORCE ACTIVITY 2010 15-24 YEARS		LABOUR FORCE ACTIVITY 2010 25 YEARS AND OVER	
TOTAL POPULATION 15-24 YEARS BY LABOUR FORCE ACTIVITY	2,102	TOTAL POPULATION 25 YEARS AND OVER BY LABOUR FORCE ACTIVITY	12,657
IN THE LABOUR FORCE	1,462	IN THE LABOUR FORCE	8,025
EMPLOYED	1,210	EMPLOYED	7,598
UNEMPLOYED	252	UNEMPLOYED	427
NOT IN THE LABOUR FORCE	640	NOT IN THE LABOUR FORCE	4,632
PARTICIPATION RATE	69.54	PARTICIPATION RATE	63.41
EMPLOYMENT RATE	57.56	EMPLOYMENT RATE	60.03
UNEMPLOYMENT RATE	17.22	UNEMPLOYMENT RATE	5.32

Manifold Data Mining 2010

6.3.3 Labour Force by Industry

Table 13 - Labour Force by Industry Share

Sectors (NAICS)	Labour Force April 2010	% Employment 2010
TOTAL LABOUR FORCE 15 YEARS AND OVER	9,487	
INDUSTRY - NOT APPLICABLE	135	1.42%
ALL INDUSTRIES	9,352	
11 Agriculture, forestry, fishing and hunting	187	1.97%
21 Mining and oil and gas extraction	54	0.57%
22 Utilities	348	3.67%
23 Construction	625	6.59%
31-33 Manufacturing	1,589	16.75%
41 Wholesale trade	267	2.81%
44-45 Retail trade	1,079	11.37%
48-49 Transportation and warehousing	369	3.89%
51 Information and cultural industries	237	2.50%
52 Finance and insurance	208	2.19%
53 Real estate and rental and leasing	134	1.41%
54 Professional, scientific and technical services	498	5.24%
55 Management of companies and enterprises	12	0.13%
56 Administrative and support, waste management and remediation services	454	4.78%
61 Educational services	552	5.82%
62 Health care and social assistance	1,048	11.04%
71 Arts, entertainment and recreation	146	1.54%
72 Accommodation and food services	750	7.91%
81 Other services (except public administration)	456	4.81%
91 Public administration	340	3.59%

Manifold Data Mining 2010

Table 13 shows the composition of Port Hope's labour force by industry sector in 2010. Of the 9,352 classified by industry sector, the highest proportion of Port Hope's labour force are employed in manufacturing (16.73%), retail trade (11.37%), closely followed by health and social assistance (11.04%).

When combining employment in retail, accommodation and food service employment and other services, nearly one quarter of Port Hope's labour force (24.1%) are employed in service industries. **Generally a low skill, low wage field with uncertain prospects, this is a possible cause for concern especially when considered in the light of Port Hope's population with little or no educational credentials.** However, some of this concern is mitigated by the relatively low employment growth in these fields compared to other sectors indicated in Table 14b below.

6.3.4 Labour Force Growth by Industry

Manufacturing employment declined between 2001 and 2010 by 9.7%. However, 2006 and 2010 saw a recovery with an increase of 18.2%.

Industries showing the most growth were in real estate rental and leasing, (49%), Utilities (36.4%) and mining and oil and gas extraction (35.5%- relatively small numbers). Numerically, the largest labour force additions were found in manufacturing (244), retail trade (204), health care and social assistance, accommodation and food service (140) and construction (140). The labour force declined in only two industries – other services (except public administration) and management of companies and enterprises (18%), both of which cannot be considered key sectors.

Some industries have seen dramatic growth during the decade that has been attributable to gains between 2001 and 2006. ***Employment in mining and oil and gas extraction more than quadrupled. There was a two-fold increase in administrative and support waste management and remediation services and information and cultural industries.***

Other industries have also seen double digit increases in employment over the last decade including professional, scientific and technical services (65.8%). The only industries showing decline during this period are public administration (13.9%), manufacturing (9.7%) and finance and insurance (11.6%).

Table 14a – Labour Force Numbers by Industry Port Hope 2001-2010

Industry (NAICS)	Labour Force 2001	Labour Force 2006	Labour Force 2010
All Industries			
11 Agriculture, forestry, fishing and hunting	150	185	187
21 Mining and oil and gas extraction	10	40	54
22 Utilities	250	255	348
23 Construction	370	485	625
31-33 Manufacturing	1,760	1,345	1,589
41 Wholesale trade	155	215	267
44-45 Retail trade	910	875	1,079
48-49 Transportation and warehousing	285	310	369
51 Information and cultural industries	120	190	237
52 Finance and insurance	235	205	208
53 Real estate and rental and leasing	50	90	134
54 Professional, scientific and technical services	300	450	498
55 Management of companies and enterprises	10	15	12
56 Administrative and support, waste management and remediation services	220	375	454
61 Educational services	495	530	552
62 Health care and social assistance	720	880	1,048
71 Arts, entertainment and recreation	110	130	146
72 Accommodation and food services	635	610	750
81 Other services (except public administration)	385	470	456
91 Public administration	395	340	340

Manifold Data Mining 2010, Statistics Canada; 2001, 2006, Census of Population.

Table 14b – Labour Force Growth by Industry Port Hope 2001-2010

Industry (NAICS)	2001-2010		2006-2010	
	Employment Growth	Actual Change 2001 – 2010	Employment Growth	Actual Change 2006 – 2010
11 Agriculture, forestry, fishing and hunting	24.51%	37	0.95%	2
21 Mining and oil and gas extraction	442.05%	44	35.51%	14
22 Utilities	39.13%	98	36.40%	93
23 Construction	68.94%	255	28.88%	140
31-33 Manufacturing	-9.69%	-171	18.17%	244
41 Wholesale trade	72.00%	112	24.00%	52
44-45 Retail trade	18.55%	169	23.29%	204
48-49 Transportation and warehousing	29.39%	84	18.95%	59
51 Information and cultural industries	97.41%	117	24.68%	47
52 Finance and insurance	-11.58%	-27	1.35%	3
53 Real estate and rental and leasing	168.14%	84	48.96%	44
54 Professional, scientific and technical services	65.84%	198	10.56%	48
55 Management of companies and enterprises	22.93%	2	-18.04%	-3
56 Administrative and support, waste management and remediation services	106.18%	234	20.96%	79
61 Educational services	11.52%	57	4.16%	22
62 Health care and social assistance	45.51%	328	19.06%	168
71 Arts, entertainment and recreation	32.95%	36	12.50%	16
72 Accommodation and food services	18.12%	115	22.96%	140
81 Other services (except public administration)	18.57%	71	-2.87%	-14
91 Public administration	-13.86%	-55	0.07%	0

Manifold Data Mining 2010, Statistics Canada; 2001, 2006, Census of Population.

6.4 Employment by Industry

Table 15 - Jobs by Industry Share - 2006

Sectors (NAICS)	# jobs '06	% Employment 2006
All industries	6,610	
11 Agriculture, forestry, fishing and hunting	190	2.87%
21 Mining and oil and gas extraction	20	0.30%
22 Utilities	170	2.57%
23 Construction	260	3.93%
31-33 Manufacturing	1,670	25.26%
41 Wholesale trade	120	1.82%
44-45 Retail trade	770	11.65%
48-49 Transportation and warehousing	150	2.27%
51 Information and cultural industries	45	0.68%
52 Finance and insurance	135	2.04%
53 Real estate and rental and leasing	95	1.44%
54 Professional, scientific and technical services	370	5.60%
55 Management of companies and enterprises	15	0.23%
56 Administrative/Waste Mgmt/Remediation Services	145	2.19%
61 Educational services	425	6.43%
62 Health care and social assistance	760	11.50%
71 Arts, entertainment and recreation	110	1.66%
72 Accommodation and food services	615	9.30%
81 Other services (except public administration)	385	5.82%
91 Public administration	160	2.42%

Statistics Canada; 2001, 2006, Census of Population.

Manufacturing has the greatest share of jobs in Port Hope with just over a quarter of jobs (25.3%). This is followed by jobs in the retail trade (11.6%) and health care and social assistance (11.5%) both of which represent just under half the number of manufacturing jobs. ***Accommodation and food services also account for a significant number of jobs with 9.2% of the total (i.e. Tourism related).***

6.4.1 Employment Growth by Industry

Table 16 – Employment Growth by Industry Port Hope 2001-2006

Sectors (NAICS)	# jobs '01 Port Hope and Hope T	# jobs '06 Port Hope and Hope T	Employment Growth Port Hope and Hope T	Actual Change (# jobs) Port Hope and Hope T
All industries	6,040	6,610	9.44%	570
11 Agriculture, forestry, fishing and hunting	140	190	35.71%	50
21 Mining and oil and gas extraction	0	20	na	20
22 Utilities	80	170	112.50%	90
23 Construction	110	260	136.36%	150
31-33 Manufacturing	1,870	1,670	-10.70%	-200
41 Wholesale trade	120	120	0.00%	0
44-45 Retail trade	745	770	3.36%	25
48-49 Transportation and warehousing	150	150	0.00%	0
51 Information and cultural industries	45	45	0.00%	0
52 Finance and insurance	170	135	-20.59%	-35
53 Real estate and rental and leasing	60	95	58.33%	35
54 Professional, scientific and technical services	205	370	80.49%	165
55 Management of companies and enterprises	10	15	50.00%	5
56 Administrative/Waste Mgmt/Remediation Services	105	145	38.10%	40
61 Educational services	440	425	-3.41%	-15
62 Health care and social assistance	635	760	19.69%	125
71 Arts, entertainment and recreation	75	110	46.67%	35
72 Accommodation and food services	530	615	16.04%	85
81 Other services (except public administration)	315	385	22.22%	70
91 Public administration	230	160	-30.43%	-70

Statistics Canada; 2001, 2006, Census of Population.

Port Hope added 570 new jobs between 2001 and 2006, which represented 9.4% growth. Of the twenty 2-digit NAICS sectors, eleven recorded notable gains of more than 15%. These included:

- construction – 150 jobs (136.4%),
- utilities – 90 jobs (112.5%),
- professional, scientific and technical services - 165 jobs (80.5%),
- accommodation and food services – 85 jobs (16%),
- other services except public administration – 70 jobs (22.2%), and
- agriculture, forestry, fishing and farming – 50 jobs (35.7%).

Job losses were led by the public administration sector, which fell by 30.4%, followed by finance and insurance (20.6%) and manufacturing (10.7%). Manufacturing job losses were felt across many industries as highlighted in Table 17 below. However, there were some notable gains in:

- Textile furnishings mills,
- Veneer, plywood and engineered wood product manufacturing,
- Architectural and structural metals manufacturing,
- Agricultural, construction and mining machinery manufacturing, and other miscellaneous manufacturing.

Table 17 – Employment Change by Manufacturing Industries – Port Hope

Sectors (NAICS)	# jobs '06	Employment Growth	Actual Change (# jobs 2001-2006)
31-33 Manufacturing	1,870	-10.70%	-200
3141 Textile furnishings mills	0	na	10
3212 Veneer, plywood and engineered wood product manufacturing	15	166.67%	25
3219 Other wood product manufacturing	85	-5.88%	-5
3251 Basic chemical manufacturing	180	-13.89%	-25
3255 Paint, coating and adhesive manufacturing	85	-29.41%	-25
3261 Plastic product manufacturing	910	-23.08%	-210
3314 Non-ferrous metal (except aluminium) production and processing	315	-26.98%	-85
3323 Architectural and structural metals manufacturing	15	33.33%	5
3327 Machine shops, turned product, and screw, nut and bolt manufacturing	0	na	15
3328 Coating, engraving, heat treating and allied activities	20	-50.00%	-10
3329 Other fabricated metal product manufacturing	15	66.67%	10
3331 Agricultural, construction and mining machinery manufacturing	120	41.67%	50
3332 Industrial machinery manufacturing	10	-100.00%	-10
3339 Other general-purpose machinery manufacturing	10	50.00%	5
3341 Computer and peripheral equipment manufacturing	10	-100.00%	-10
3352 Household appliance manufacturing	10	-100.00%	-10
3362 Motor vehicle body and trailer manufacturing	10	100.00%	10
3363 Motor vehicle parts manufacturing	25	0.00%	0
3391 Medical equipment and supplies manufacturing	10	-100.00%	-10
3399 Other miscellaneous manufacturing	0	na	20

Statistics Canada; 2001, 2006, Census of Population

Professional & technical services jobs all showed significant increases especially:

- Accounting, tax preparation, bookkeeping and payroll services
- Architectural, engineering and related services
- Specialized design services
- Management, scientific and technical consulting services
- Scientific research and development services
- Advertising and related services

6.4.2 Labour Flow Pattern

Table 18 – Labour Flow Analysis by Industry Labour Force 15 years and over, Port Hope 2006

<i>Industry (NAICS)</i>	<i>Jobs in Port Hope</i>	<i>Labour Force</i>	<i>Net exp(-)/imp(+) of labour</i>
Total All Industries	6610	7995	-1385
11 Agriculture, forestry, fishing and hunting	190	185	5
21 Mining and oil and gas extraction	20	40	-20
22 Utilities	170	255	-85
23 Construction	260	485	-225
31-33 Manufacturing	1,670	1,345	325
41 Wholesale trade	120	215	-95
44-45 Retail trade	770	875	-105
48-49 Transportation and warehousing	150	310	-160
51 Information and cultural industries	45	190	-145
52 Finance and insurance	135	205	-70
53 Real estate and rental and leasing	95	90	5
54 Professional, scientific and technical services	370	450	-80
55 Management of companies and enterprises	15	15	0
56 Administrative and support, waste management and remediation services	145	375	-230
61 Educational services	425	530	-105
62 Health care and social assistance	760	880	-120
71 Arts, entertainment and recreation	110	130	-20
72 Accommodation and food services	615	610	5
81 Other services (except public administration)	385	470	-85
91 Public administration	160	340	-180

Labour flow analysis provides some insight into the differential between jobs actually in Port Hope and the resident labour force. Differentials identified can facilitate efforts to retain jobs in the community.

As noted earlier, the labour force in Port Hope has grown faster than the population. It is therefore not surprising that Port Hope is a net exporter of labour (1385 individuals).

The industries in which Port Hope was the largest net exporter of jobs in 2006 were:

- Administrative and support, waste management and remediation services (230 jobs)
- Construction (225 jobs)
- Public administration (180 jobs)
- Transportation and warehousing (160 jobs)
- Information and cultural industries (145 jobs)
- Health care and social assistance (120 jobs)

These differences can be explained in the context of employment opportunities in neighbouring communities such as Cobourg (new hospital), Peterborough (regional administration centre), and Pickering (waste management). More recent opportunities through the Port Hope radioactive waste cleanup program could well have absorbed more local labour since this data was compiled in 2006.

Manufacturing, by far, provides the most opportunity for residents outside Port Hope, demonstrating the municipality's regional strength as an employer in this industry.

6.4.3 Labour Force by Occupations

Table 19 – Comparative Employment by Occupation, 2001, 2006 and 2010

Occupations – NOCs	Port Hope			Northumberland		Ontario	
	2001	2006	2010	2001	2006	2001	2006
Total experienced labour force 15 years and over	7,985	8,385	9,348	37,600	40,040	5,992,765	6,473,735
Management occupations	715	635	670	3,555	3,445	685,390	666,485
Business; finance and administration occupations	1,025	1,155	1,345	4,825	5,400	1,097,835	1,204,490
Natural and applied sciences and related occupations	405	405	460	1,555	1,865	422,510	451,930
Health occupations	435	485	546	1,790	2,165	286,305	340,690
Occupations in social science; education; government service and religion	505	725	829	2,595	2,970	455,825	546,385
Occupations in art; culture; recreation and sport	190	290	284	875	1,070	171,840	200,980
Sales and service occupations	1,975	1,970	2,221	9,100	9,585	1,371,250	1,522,820
Trades; transport and equipment operators and related occupations	1,435	1,585	1,784	6,845	7,350	845,130	911,250
Occupations unique to primary industry	315	350	348	1,870	2,055	164,365	165,085
Occupations unique to processing; manufacturing and utilities	990	770	860	4,600	4,125	492,320	463,610

Manifold Data Mining 2010, Statistics Canada; 2001, 2006, Census of Population.

Occupational composition in Port Hope provides some insight into the nature of skills deployed in the labour force. The occupational categories showing the highest concentration in 2010 are:

- Sales and service occupations (2,221)
- Trades; transport and equipment operators and related occupations (1,784)
- Business; finance and administration occupations (1,345)

This reflects occupational concentration in Northumberland County and to a large extent the Province where Business; finance and administration occupations have the second highest concentration and Trades; transport and equipment operators and related occupations, the third highest.

Table 20 – Top Occupational Groupings in Port Hope (and numbers in each) in 2010

Top 15 Occupations in Port Hope	
E1 TEACHERS AND PROFESSORS	379
G9 SALES AND SERVICE OCCUPATIONS, N.E.C.	989
B5 CLERICAL OCCUPATIONS	629
J2 ASSEMBLERS IN MANUFACTURING	427
G2 RETAIL SALESPERSONS AND SALES CLERKS	378
H7 TRANSPORTATION EQUIPMENT OPERATORS AND RELATED WORKERS, EXCLUDING LABOURERS	341
C1 TECHNICAL OCCUPATIONS RELATED TO NATURAL AND APPLIED SCIENCES	319
H4 MECHANICS	315
H1 CONSTRUCTION TRADES	304
A2 MANAGERS IN RETAIL TRADE, FOOD AND ACCOMMODATION SERVICES	244
A3 OTHER MANAGERS, N.E.C.	239
H8 TRADES HELPERS, CONSTRUCTION AND TRANSPORTATION LABOURERS AND RELATED OCCUPATIONS	239
H3 MACHINISTS, METAL FORMING, SHAPING AND ERECTING OCCUPATIONS	236
B0 PROFESSIONAL OCCUPATIONS IN BUSINESS AND FINANCE	232
J1 MACHINE OPERATORS IN MANUFACTURING	206

Encouragingly, five of the top fifteen occupations are highly skilled, and professional and managerial positions. Such occupations in Port Hope are explored in the Creative Occupations section below. **Five occupation groups are associated with manufacturing industry. Low skilled jobs comprise just four of the top occupation groups.**

Table 21 – Occupation Growth Port Hope 2001-2010

Occupations - NOCs	Port Hope		% Change	Port Hope		% Change
	2001	2006	2001-2006	2010	2006-10	2001-2010
Total experienced labour force 15 years and over	7,985	8,385	5.01%	9,348	11.49%	17.07%
Management occupations	715	635	-11.19%	670	5.48%	-6.32%
Business; finance and administration occupations	1,025	1,155	12.68%	1,345	16.47%	31.24%
Natural and applied sciences and related occupations	405	405	0.00%	460	13.56%	13.56%
Health occupations	435	485	11.49%	546	12.50%	25.43%
Occupations in social science; education; government service and religion	505	725	43.56%	829	14.36%	64.19%
Occupations in art; culture; recreation and sport	190	290	52.63%	284	-2.10%	49.42%
Sales and service occupations	1,975	1,970	-0.25%	2,221	12.76%	12.48%
Trades; transport and equipment operators and related occupations	1,435	1,585	10.45%	1,784	12.58%	24.35%
Occupations unique to primary industry	315	350	11.11%	348	-0.52%	10.54%
Occupations unique to processing; manufacturing and utilities	990	770	-22.22%	860	11.75%	-13.08%

Manifold Data Mining 2010, Statistics Canada; 2001, 2006, Census of Population

The fastest growing occupations between 2001-2010 were social science; education; government service and religion occupations (64.2%), art; culture; recreation and sport occupations (49.4%) and health occupations, which grew by a quarter during that period. Significant growth was also seen in two of the largest occupational groupings - Business; finance and administration which increased by 31.2% and Trades; transport and equipment operators and related occupations which grew by 24.3%. In contrast, Sales and Service occupation only saw 12.5% growth. **The relatively higher recent growth in occupation groups outside the low skilled groups is encouraging.**

Management occupations and Occupations unique to processing, manufacturing and utilities declined by 6.3% and 13.1% respectively. This pattern was also evident in the Province as a whole and Northumberland County (2001 and 2006). All other occupations exceeded 10% growth between 2001 and 2010.

However, overall decline in the decade was offset by more recent gains in manufacturing and utility occupations (11.7%) and managerial occupations (5.5%) between 2006 and 2010.

6.4.4 Creative Economy Occupations

Table 22 – Creative Economy Occupations in Port Hope 2001-2010

Occupations (NOC-S)	2010	2006	2001	Change 2001- 2010
LABOUR FORCE BY OCCUPATION				
ALL OCCUPATIONS	9,348	8,385	7,985	17.07%
CREATIVE OCCUPATIONS	2772	2220	2020	37.23%
Proportion Creative Occupations	29.65%	26.48%	25.30%	
A0 SENIOR MANAGEMENT OCCUPATIONS	42	100	65	-34.95%
A1 SPECIALIST MANAGERS	144	120	150	-4.12%
A2 MANAGERS IN RETAIL TRADE, FOOD AND ACCOMMODATION SERVICES	244	235	290	-15.76%
A3 OTHER MANAGERS, N.E.C.	239	160	220	8.81%
B0 PROFESSIONAL OCCUPATIONS IN BUSINESS AND FINANCE	232	225	80	189.87%
B1 FINANCE AND INSURANCE ADMINISTRATION OCCUPATIONS	99	85	55	80.43%
C0 PROFESSIONAL OCCUPATIONS IN NATURAL AND APPLIED SCIENCES	141	85	200	-29.46%
C1 TECHNICAL OCCUPATIONS RELATED TO NATURAL AND APPLIED SCIENCES	319	225	210	51.83%
D0 PROFESSIONAL OCCUPATIONS IN HEALTH	42	40	80	-46.98%
D1 NURSE SUPERVISORS AND REGISTERED NURSES	186	0	10	1757.41%
D2 TECHNICAL AND RELATED OCCUPATIONS IN HEALTH	141	105	80	76.73%
E0 JUDGES, LAWYERS, PSYCHOLOGISTS, SOCIAL WORKERS, MINISTERS OF RELIGION, AND POLICY AND PROGRAM OFFICERS	281	215	150	87.33%
E1 TEACHERS AND PROFESSORS	379	360	280	35.50%
F0 PROFESSIONAL OCCUPATIONS IN ART AND CULTURE	135	100	75	80.66%
F1 TECHNICAL OCCUPATIONS IN ART, CULTURE, RECREATION AND SPORT	148	165	75	97.88%

Manifold Data Mining 2010, Statistics Canada; 2001, 2006, Census of Population

Port Hope is demonstrating some encouraging shifts in its labour force skill set. An examination of creative economy occupations of Port Hope residents provides further insight into this shift. While the proportion employed in creative occupations lags the province (34.7%), Port Hope moved in the right direction with that proportion increasing from 25.03% in 2001 to 29.65% in 2010.

Of the 37.2% employed in creative occupations, the highest concentrations are found in:

- Teachers and Professors (379 residents or 13.7% of creative occupations)
- Technical Occupations related to natural and applied sciences (319 residents or 11.5% of creative occupations)

- Judges, lawyers, psychologists, social workers, ministers of religion and policy and program officers (281 residents or 10.1% of creative occupations)
- Managers in retail trade, food accommodation services, other managers, and professional occupations in business and finance also have significant numbers (244, 239, and 232 respectively)

The strongest growth was by far, seen in nurse supervisors from 10 in 2001 to 186 in 2010. This is a reflection of the new health and medical facilities in Port Hope and the surrounding areas. Professional occupations in business and finance grew strongly (189%). There is also a cluster of six occupation categories that grew by over 50%, including technical occupations in natural and applied sciences (51.8%).

Professional occupations in natural and applied sciences, Professional occupations in health, managers in retail, food and accommodation services and senior management occupations declined between 2001 and 2010.

It should be noted that there were significant gains in professional and technical occupations in natural and applied sciences during the most recent period, 2006-2010 with 56 professional and 94 technical labour force additions in natural and applied sciences.



Summary of Findings – Economic Base Analysis

The following is a summary of key tenets arising from the economic base analysis. They represent the potential building blocks for the development of an economic development strategy.

STRATEGIC SUSTAINABLE GROWTH

Port Hope population increased by 11.9% during the last decade, growing faster during the four year period 2006-2010 (8.64%) than the preceding five years between 2001-2006 (6.6%). Population growth is reflected in consistent growth in housing activity suggesting housing stock kept pace with demand to ensure continued affordability, an important attraction factor. Population forecasts predict growth in the 15%-40% range (Northumberland County) between 2009-2036.

AN OLDER SOCIETY – TURN KNOWLEDGE INTO OPPORTUNITY

Future challenges of an ageing society are more pronounced in Port Hope. Already with a greater proportion of seniors than the Provincial average, Ontario population projections suggest the proportion of seniors in Northumberland will be over 35% in 2036, among the highest in the Province. Added to which, Port Hope has a relatively higher proportion of 45-64 year olds (2006) in comparison to Ontario. As a result, health institutions in Port Hope will become a knowledge base in elder care to much greater extent than many other areas. Addressing the needs of an older society will be a key component of future strategic plans.

YOUTH RETENTION INITIATIVES ARE CRITICAL

A relatively high proportion of 45-64 year olds (2006) presents a short and medium term threat of labour force decline. This situation is compounded by a significantly lower proportion of younger people in the 20-44 age group than in Ontario. The proportion of 0-19 year olds is only slightly less than that of the Province. All of which highlights the importance of Port Hope's initiatives to retain young people.

BUSINESS IMMIGRATION

Port Hope has a relatively small stable and long-standing immigrant community. Koreans are the largest visible minority group. Business Immigration initiative activities should keep this group in mind. An audit of community amenities and support groups would be helpful in this regard.

A VOCATION TRAINED WORKFORCE

48% of Port Hope's population aged over 15 and over has some form of secondary education. There is an emphasis on vocational education. Those with a college, CEGEP or other non-university diploma or certificate, account for the majority of those pursuing post-secondary education (22.3%). The number with apprenticeship or trade diplomas at just over 10%, are double that of the Province (5.3%). In terms of fields of study, the largest proportion are engineering graduates, which is in line with the local economic structure. There are proportionately fewer individuals with a University certificate, diploma or degree in Port Hope (12.5%), than Ontario (20.7%).

YOUTH EDUCATION INITIATIVES

There are a number of issues that are a cause for concern among Port Hope's youth and young people in Port Hope. Too many are relying on little or no education credentials. Youth unemployment in Port Hope at 17.22% is compounded by this situation. Fewer young people in the 15-34 age group than the 35-64 age group have a university degree, diploma or certificate (9.44%), under half that of the Province (19.39%). There are a significantly lower proportion of younger people in the 20-44 age group than the Province. Investment in young people is critical. They must be provided with the tools and education to in a knowledge based, technology intensive economy.

INCOME LEVELS PROVIDE PURCHASING POWER

At \$60,382; the median household income in Port Hope is very close to the Ontario average (\$60,164). Income is well distributed with relatively few in very low-income groups. Port Hope residents are therefore well placed to benefit from comparatively lower living costs, and so contribute to goods and services provided by the local economy.

LABOUR FORCE GROWTH VS POPULATION

The labour force in Port Hope grew by 25.57% between 2001-2010, growing by 6.1% between 2001 and 2006 it outpaced population growth during that period (5%). The period 2006-2010 saw the gap widen between labour force growth (11.22%) and population growth (6.75%). As a result, Port Hope is a net exporter of labour (1385 individuals) to a greater or lesser extent in most sectors.

EMPLOYMENT HAS HELD UP WELL IN THE LIGHT OF RECENT ECONOMIC CONDITIONS

Unemployment increased from 6% in 2006 to 7.15% in September 2010. It is now significantly less than Provincial unemployment rate of 8.8% where as in 2006 it was almost the same. Employment has therefore held up well in the light of recent economic conditions and its strong manufacturing presence. There is near full-employment in the 25 years and older age group. Analysis of the Labour force and jobs in Port Hope revealed that there are few sectors in decline.

MANUFACTURING DOMINANCE

The highest proportion of Port Hope's labour force are employed in manufacturing (16.73%). This is also true of jobs in Port Hope accounting for just over a quarter of jobs (25.3%). While the manufacturing labour force declined between 2001 and 2010 by 9.7% the most recent period (2006-2010) saw gains of 18.2% and there were notable job gains (2001 to 2006) in some manufacturing sub-sectors. Manufacturing, by far, provides the most opportunity for residents outside Port Hope, demonstrating the municipality's regional strength as an employer in this industry.

GROWING SECTORS

There are key sectors that demonstrated significant growth at varying stages of the decade - utilities (36.4% - 2006-10) mining and oil and gas extraction (quadrupled 2001-2010) and professional, scientific and technical services (65.8% - 2001-2010). Resident jobs in Port Hope also grew in these areas including the technical sectors.

A SIGNIFICANT PRESENCE OF LOW SKILL, LOW WAGE OCCUPATIONS

Nearly one quarter of Port Hope's labour force (24.1%) are employed in service industries. Sales and service occupations are the largest occupational category in Port Hope. Generally a low skill, low wage field with uncertain prospects, this is a possible cause for concern.

CREATIVE ECONOMY OCCUPATIONS ARE GROWING

Five of the top fifteen occupations are highly skilled, and professional and managerial positions. Port Hope's labour force is demonstrating some encouraging shifts in its skill set. The number of creative economy occupations grew by 37.2% between 2001 and 2010. The proportion of creative economy occupations has steadily increased from 25.03% in 2001 to 29.65% in 2010. There were significant gains in professional and technical occupations in natural and applied sciences during the most recent period 2006-2010.

7 INDUSTRY SECTOR ANALYSIS

7.1 Location Quotient (LQ) Analysis

The OMAFRA location quotient (LQ) analysis tool provides an indication of the concentration of labour force and employment activity in Port Hope as compared to the overarching region (Ontario). A sector or sub-sector with an LQ greater than 1.0 denotes a higher concentration in Port Hope than Ontario as shown in the tables below.

In terms of two digit NAICS analysis, the highest labour force concentration is found in the following sectors:

- Agriculture, forestry, fishing and hunting
- Mining and oil and gas extraction (mining includes processing)
- Utilities
- Management of companies and enterprises
- Other services (except public administration)

The labour force in utilities and mining and oil and gas extraction industries has grown during the decade and in the most recent period 2006-2010, while agriculture saw the most growth between 2001-2006 but it should be noted that self-employment in this sector rocketed as shown in the Canadian Business Patterns analysis.

While these industries provide some pointers to Port Hope's sector strengths, a deeper examination at the three and four digit level provides a more comprehensive analysis on true sectors strengths, and more importantly, potential strengths. The manufacturing industry registers an average location quotient at the two-digit NAICS level. However, there are clear strengths in niche areas as set out in Table 23.

Similarly, the table also shows professional, scientific and technical services, administrative/waste management and remediation services, and arts, entertainment and recreation have low location quotient values but again demonstrate strengths in particular aspects.

Table 23 – Location Quotient NAICS Labour Force Port Hope

Sector	LQ Classification	Attributable to:
HIGH		
Agriculture, forestry, fishing and hunting	1.61	Farms (1.4) Support activities for agriculture and forestry (1.77) Support activities for farms (1151 to 1152) (2.26)
Mining and oil and gas extraction	1.28	Non-metallic mineral mining and quarrying (2.07) Support activities for mining and oil and gas extraction (3.83)
Utilities	4.07	Electric power generation, transmission and distribution (5.45 - Very High) Water, sewage and other systems (1.69) Non-residential building construction (1.46)
Management of companies and enterprises	1.43	
Other services (except public administration)	1.26	
AVERAGE WITH VERY HIGH/HIGH COMPONENTS		
Construction	1.04	Heavy and civil engineering construction (1.84) Utility system construction (3.07) Land subdivision (2.79) Highway, street and bridge construction (1.51)
Manufacturing	1.22	VERY HIGH: Textile and fabric finishing and fabric coating (7.36) Basic chemical manufacturing (8.94) Paint, coating and adhesive manufacturing (5.95) Non-ferrous metal (except aluminium) production and processing (8.6) Agricultural, construction and mining machinery manufacturing (8.35) HIGH: Food Manufacturing 3112 Grain and oilseed milling 3.46 Textile mills – (2.07) Veneer, plywood and engineered wood product manufacturing (4.68) Converted paper product manufacturing (1.65) Chemical manufacturing – (2.22) Plastics and rubber products manufacturing – (4.09) Clay product and refractory manufacturing (3.75) Architectural and structural metals manufacturing (2.03) Boiler, tank and shipping container manufacturing (1.41) Other fabricated metal product manufacturing (1.86) Machinery manufacturing (1.34) Other electrical equipment and component manufacturing (1.74) Transportation equipment manufacturing (1.42)
Transportation and warehousing	0.81	Charter bus industry (11.58 – very high)
LOW WITH HIGH COMPONENTS		
Professional, scientific and technical services	0.77	Accounting, tax preparation, bookkeeping and payroll services (1.38) Management, scientific and technical consulting services (1.07) Scientific research and development services (1.84)
Administrative/Waste Mgmt/Remediation Services	0.55	Other support services (2.02) ~562 Waste management and remediation services (2.52) Waste treatment and disposal (2.69)
Arts, entertainment and recreation	0.77	Promoters (presenters) - performing arts, sports, similar events (2.34 high) Other amusement and recreation industries (1.29 – high)

Source: OMAFRA Labour Flow Analysis Tool

Table 24 below shows industries where there is average or low labour force concentration with no sub-sector strengths of note.

LQ Classification	2006
Average	
	Retail trade 1.00
	Information and cultural industries 0.9
	Educational services (0.99) Health care and social assistance 1.15
	Public administration 0.78
	Accommodation and food services 1.24 Limited-service eating places (2.13 – high)
LOW	
	Wholesale trade 0.56
	Finance and insurance 0.52
	Real estate and rental and leasing 0.57

Source: OMAFRA Labour Flow Analysis Tool

7.2 Location Quotient Analysis – Jobs in Port Hope

Table 25 below provides further analysis in regards to Port Hope’s employment base. In 2006, the industries with the highest employment concentration were:

- Agriculture, forestry, fishing and hunting (LQ 1.6)
- Utilities (LQ 3.26)
- Manufacturing (LQ 1.7)
- Management of companies and enterprises (LQ 1.64)
- Accommodation and food services (LQ 1.41)
- Other services (except public administration) (LQ 1.26)

With the exception of manufacturing, all these sectors experienced an increase in employment between 2001 and 2006. However, it should be noted that some manufacturing sub-sectors identified with high LQs (textile furnishings mills, other fabricated metal product manufacturing, and motor vehicle body and trailer manufacturing) added jobs during this period.

While construction, arts, entertainment and recreation, Health care and social assistance and mining and oil and gas extraction have average LQs overall, there are significant niche sub-sectors with a high LQ as shown in table 26 below. Similarly, while Professional, scientific and technical services and administrative/waste mgmt/remediation services show low LQs overall, they too have notable niche areas in scientific research and development services and management, scientific and technical consulting services (1.07) and waste treatment and disposal. All these sectors grew overall during 2001-2006.

Table 26 – Location Quotient NAICS - Employment Port Hope

Sector	LQ Classification	Attributable to:
HIGH		
Agriculture, forestry, fishing and hunting	1.60	Farms (1.67) Support activities for forestry (4.73)
Utilities	3.26	High in all sub-sectors
Management of companies and enterprises	1.64	
Accommodation and food services	1.41	Limited-service eating places (2.13)
Other services (except public administration)	1.26	
Manufacturing	1.70	VERY HIGH: Basic chemical manufacturing (25.37) Paint, coating and adhesive manufacturing (10.21) Non-ferrous metal (except aluminium) production and processing (48.6) Agricultural, construction and mining machinery manufacturing (20.93) Plastics products manufacturing – (11.48) HIGH: Textile furnishings mills (2.91) Other wood product manufacturing (4.68) Glass and glass product manufacturing (1.72) Steel product manufacturing from purchased steel (1.37) Foundries (1.94) Boiler, tank and shipping container manufacturing (2.38) Other fabricated metal product manufacturing (2.08) Motor vehicle body and trailer manufacturing (2.68) Ship and boat building (4.84)
AVERAGE WITH VERY HIGH/HIGH COMPONENTS		
Construction	1.04	Heavy and civil engineering construction (1.84) Utility system construction (3.07) Land subdivision (2.79) Highway, street and bridge construction (1.51)
Arts, entertainment and recreation	0.79	Promoters (presenters) of performing arts, sports and similar events (2.36) Other amusement and recreation industries (1.29) Heritage institutions (1.61)
Health care and social assistance	1.13	Out-patient care centres 1.38 Home health care services 2.98 Other ambulatory health care services 1.66 Nursing and residential care facilities 2.82
Mining and oil and gas extraction	0.78	Non-metallic mineral mining and quarrying (2.52)
LOW WITH HIGH/AVERAGE COMPONENTS		
Professional, scientific and technical services	0.75	Accounting, tax preparation, bookkeeping and payroll services (1.4) Scientific research and development services (1.85) Management, scientific and technical consulting services (1.07)
Administrative/Waste Mgmt/Remediation Services	0.55	Other support services (2.04) Waste treatment and disposal (2.53)

Source: OMAFRA Labour Flow Analysis Tool

Table 27 below shows industries where there is average or low labour force concentration.

LQ Classification	2006
Average	Educational services (0.92) Retail trade (0.99) Other services (except public administration) (1.22)
Low	Wholesale trade (0.37) Transportation and warehousing (0.56) Information and cultural industries (0.24) Finance and insurance (0.37) Real estate and rental and leasing (0.69)

Source: OMAFRA Labour Flow Analysis Tool

7.3 Canadian Business Patterns Data Review

The data is collected from Statistics Canada survey program updates and from Canada Revenue Agency's (CRA). Included are all Canadian businesses, which meet at least one of the three following criteria:

- Have an employee workforce for which they submit payroll remittances to CRA; or
- Have a minimum of \$30,000 in annual sales revenue; or
- Are incorporated under a federal or provincial act and have filed a federal corporate income tax form within the past three years.

The data provided in this product reflects counts of statistical locations by industrial activity (North American Industry Classification System), geography codes, and employment size ranges. The indeterminate category includes businesses with no payroll deduction account with CRA, but may still have a workforce of contracted workers, family members or business owners.

7.3.1 Key Business Characteristics

A detailed analysis of the Business Patterns Data between 2002 and 2008 provides some insight into business growth and decline during this six-year period and the composition of Port Hope's business community. Combined with the overall industry analysis, the data is an important component in building a picture of potential opportunities and challenges for input into the strategic planning process.

Number of Business Establishments

There are a total of 976 businesses recorded in Port Hope, 580 or nearly 60% of these fall into the self-employed category.

Of the total 976 businesses recorded, the highest concentration is in the following sectors:

Table 28 Business Establishments 2008		
Sector	Number of Businesses	Percent of total
Professional, Scientific and Technical Services	117	12%
Retail Trade	115	11.8%
Construction	100	10.2%
Other Services (except Public Administration)	87	8.9%
Real Estate and Rental and Leasing	81	8.3%
Agriculture, Forestry, Fishing and Hunting	76	7.8%
Health Care and Social Assistance	60	6.1%

Source: Canadian Business Patterns 2008

As the numbers below suggest, numerically, there is no overwhelmingly dominant sector in businesses with employees:

Table 29 All Businesses Excluding Indeterminate (Self-Employment) 2008		
Sector	Number of Businesses	Percent of total
Retail Trade	54	13.64%
Other Services (except Public Administration)	51	12.88%
Health Care and Social Assistance	44	11.11%
Professional, Scientific and Technical Services	41	10.35%
Accommodation and Food Services	37	9.34%
Construction	32	8.08%
Manufacturing	23	5.81%

Source: Canadian Business Patterns 2008

Self-employment is most prevalent in the following sectors:

Table 30 Self-Employment (Indeterminate) 2008		
Sector	Number of Businesses	Percent of total
Professional, Scientific and Technical Services	76	13.10%
Construction	68	11.72%
Real Estate and Rental and Leasing	68	11.72%
Retail Trade	61	10.52%
Agriculture, Forestry, Fishing and Hunting	59	10.17%
Other Services (except Public Administration)	36	6.21%
Finance and Insurance	35	6.03%

Source: Canadian Business Patterns 2008

7.3.2 Growth Trends

Table 1 shows business establishment growth by two digit NAICS codes between 2002 and 2008.

Overall, the total number of business establishments in Port Hope increased by 73% from 564 in 2002 to 976 in 2008. The increase in the indeterminate category or self-employed during this period had a significant impact with double the number of businesses in 2008. ***Even excluding self-employed, the increase in the number of businesses is still significant at 42%.***

Table 31 - Number of Business Establishments by Industry, Port Hope 2002 and 2008

DATE	December 2002			December 2008			% increase total	% increase Indet.	% increase sub-total
	Total	Indeterminate	Sub	Total	Indet	Sub			
INDUSTRIES (NAICS)									
All Industries	564	286	278	976	580	396	73.05%	102.80%	42.45%
11 - Agriculture, Forestry, Fishing and Hunting	6	3	3	76	59	17	1166.67%	1866.67%	466.67%
21 - Mining and Oil and Gas Extraction	1	1	0	2	1	1	100.00%	0.00%	100.00%
22 - Utilities	2	0	2	4	2	2	100.00%	200.00%	0.00%
23 - Construction	46	34	12	100	68	32	117.39%	100.00%	166.67%
31-33 - Manufacturing	24	6	18	37	14	23	54.17%	133.33%	27.78%
41 - Wholesale Trade	24	10	14	44	26	18	83.33%	160.00%	28.57%
44-45 - Retail Trade	97	43	54	115	61	54	18.56%	41.86%	0.00%
48-49 - Transportation and Warehousing	21	17	4	40	29	11	90.48%	70.59%	175.00%
51 - Information and Cultural Industries	11	7	4	14	10	4	27.27%	42.86%	0.00%
52 - Finance and Insurance	17	10	7	48	35	13	182.35%	250.00%	85.71%
53 - Real Estate and Rental and Leasing	47	36	11	81	68	13	72.34%	88.89%	18.18%
54 - Professional, Scientific and Technical Services	77	52	25	117	76	41	51.95%	46.15%	64.00%
55 - Management of Companies and Enterprises	11	8	3	30	25	5	172.73%	212.50%	66.67%
56 - Administrative and Support, Waste Management and Remediation Services	21	10	11	37	25	12	76.19%	150.00%	9.09%
61 - Educational Services	4	2	2	16	8	8	300.00%	300.00%	300.00%
62 - Health Care and Social Assistance	40	7	33	60	16	44	50.00%	128.57%	33.33%
71 - Arts, Entertainment and Recreation	22	12	10	21	13	8	-4.55%	8.33%	-20.00%
72 - Accommodation and Food Services	38	9	29	45	8	37	18.42%	-11.11%	27.59%
81 - Other Services (except Public Administration)	54	19	35	87	36	51	61.11%	89.47%	45.71%
91 - Public Administration	1	0	1	2	0	2	100.00%	0.00%	100.00%

Source: Canadian Business Patterns 2008 and 2002

Excluding self-employed and those sectors with 10 or fewer establishments, the industries in the table below have experienced the highest growth rates:

Table 32 - Highest Growth (Sectors with more than 10 Establishments)		
Sector	Growth	Attributable to:
Agriculture, Forestry, Fishing and Hunting	466.67%	Spread across livestock, crops and support activities
Transportation and Warehousing	175.00%	Very significant: General Freight Trucking, Local Moderately significant: General Freight Trucking, Long Distance, Less Than Truck-Load, Other Freight Transportation Arrangement
Construction	166.67%	Residential Building Construction, Plumbing, Heating and Air-Conditioning Contractors, Land Subdivision, Site Preparation Contractors. Note: Tile/Terrazzo contractors eliminated
Finance and Insurance	85.71%	Spread across personal finance, insurance
Professional, Scientific and Technical Services	64.00%	Modest gains in some categories, Other Scientific and Technical Consulting Services New businesses - Other Scientific and Technical Consulting Services, Advertising Agencies
Other Services (except Public Administration)	45.71%	Food service, Personal services, auto repair, Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance

Source: Canadian Business Patterns 2008

The increase in self-employed businesses was consistent across most categories with the following showing gains over 100%

Table 33 - Highest Growth Self Employment		
Sector	Growth	Attributable to:
Agriculture, Forestry, Fishing and Hunting	1866.67%	Very significant: Dairy Cattle and Milk Production, Beef Cattle Ranching and Farming, All Other Miscellaneous Crop Farming, Animal Combination Farming Moderately significant: Soybean Farming, Hog and Pig Farming
Finance and Insurance	250.00%	Miscellaneous Intermediation, Portfolio Management, All Other Financial Investment Activities, All Other Non-Depository Credit Intermediation
Management of Companies and Enterprises	212.50%	Holding Companies
Wholesale Trade	160.00%	Wholesale Trade Agents and Brokers Handful of new businesses between Industrial Machinery, Equipment and Supplies Wholesaler-Distributors, Professional Machinery, Equipment and Supplies Wholesaler-Distributors, All Other Machinery, Equipment and Supplies Wholesaler-Distributors, Recyclable Metal Wholesaler-Distributors.
Administrative and Support, Waste Management and Remediation Services	150.00%	Landscaping Services
Manufacturing	133.33%	Other Printing, All Other Miscellaneous Manufacturing
Health Care and Social Assistance	128.57%	Local healthcare delivery
Construction	100%	Residential Building Construction, Site Preparation Contractors

Source: Canadian Business Patterns 2008

Table 34 Number of Business Establishments by Industry and Size - Port Hope December 2008

EMPLOYMENT SIZE RANGE	Subtotal	1-4	5-9	10-19	20-49	50-99	100-199	200-499	500 +
SECTORS (NAICS)									
Total	396	214	86	52	23	11	7	3	0
11 - Agriculture, Forestry, Fishing and Hunting	17	8	3	5	1	0	0	0	0
21 - Mining, Quarrying, and Oil and Gas Extraction	1	0	0	1	0	0	0	0	0
22 - Utilities	2	1	0	1	0	0	0	0	0
23 - Construction	32	16	13	3	0	0	0	0	0
31-33 - Manufacturing	23	6	5	5	2	1	3	1	0
41 - Wholesale Trade	18	12	3	2	0	1	0	0	0
44-45 - Retail Trade	54	24	17	7	4	1	1	0	0
48-49 - Transportation and Warehousing	11	6	1	2	1	1	0	0	0
51 - Information and Cultural Industries	4	2	1	1	0	0	0	0	0
52 - Finance and Insurance	13	9	1	0	3	0	0	0	0
53 - Real Estate and Rental and Leasing	13	10	2	1	0	0	0	0	0
54 - Professional, Scientific and Technical Services	41	33	5	2	1	0	0	0	0
55 - Management of Companies and Enterprises	5	1	1	2	0	1	0	0	0
56 - Administrative and Support, Waste Management and Remediation Services	12	8	2	1	0	1	0	0	0
61 - Educational Services	8	6	1	0	0	0	0	1	0
62 - Health Care and Social Assistance	44	16	14	6	3	3	2	0	0
71 - Arts, Entertainment and Recreation	8	5	0	0	2	1	0	0	0
72 - Accommodation and Food Services	37	10	11	10	4	1	1	0	0
81 - Other Services (except Public Administration)	51	41	6	3	1	0	0	0	0
91 - Public Administration	2	0	0	0	1	0	0	1	0

Source: Canadian Business Patterns 2008

The vast majority of businesses in Port Hope are small with fewer than 10 employees. Excluding self-employed there were 300 businesses, or 75.7% of the total are in this category with fewer than ten employees. 54% have between 1 and 4 employees and 21.7% have between 5 and 9 employees. When combined with the 580 businesses in the self-employed category, which, by definition is small, there are a total of 880 small businesses or 90.1% all businesses in Port Hope.

The industries with the largest number of establishment employing less than 10 people are:

- Other Services (except Public Administration) - 47 businesses
- Retail Trade - 41 businesses
- Professional, Scientific and Technical Services – 38 businesses
- Health Care and Social Assistance – 30 businesses
- Construction – 29 businesses
- Accommodation and Food Services – 21 businesses

There are 10 larger companies with over 100 employees, comprised of 3 in manufacturing, 2 in health care and social assistance, 1 in accommodation and food service and 1 retailer.

7.3.3 Creative Businesses

The number of creative businesses in Port Hope increased from 50 to 81 during the period between 2002 and 2008 representing an increase of 38%. A 45% increase was seen in the number of business establishments and 35% increase in self-employment. *There were gains in all categories.*

Table 35 – Creative Businesses in Port Hope

Time Period	December 2002			December 2008		
	Total	Indeterminate	Subtotal	Total	Indeterminate	Subtotal
Total Creative Businesses	50	34	16	81	52	29
Architectural Services	3	1	2	5	3	2
Landscape Architectural Services	0	0	0	2	1	1
Motion Picture and Video Production	3	3	0	5	4	1
Interior Design Services	1	1	0	3	2	1
Engineering Services	8	8	0	6	4	2
Environmental Consulting Services	3	1	2	5	2	3
Other Scientific and Technical Consulting Services	2	2	0	6	4	2
Research and Development in the Physical, Engineering and Life Sciences	0	0	0	1	1	0
Technical and Trade Schools	0	0	0	1	0	1
Administrative Management and General Management Consulting Services	14	8	6	17	13	4
Human Resources Consulting Services	2	1	1	3	1	2
Other Management Consulting Services	3	3	0	5	5	0
Professional and Management Development Training	0	0	0	4	2	2
				0	0	0
Advertising Agencies	0	0	0	3	1	2
Public Relations Services	0	0	0	1	1	0
Media Buying Agencies	0	0	0	0	0	0
Media Representatives	0	0	0	1	1	0
Fine Arts Schools	0	0	0	2	0	2
Theatre (except Musical) Companies	2	2	0	2	1	1
Musical Groups and Artists	1	1	0	2	2	0
Independent Artists, Visual Arts	7	3	4	3	2	1
Independent Writers and Authors				3	2	1
History and Science Museums	1	0	1	1	0	1

Source: Canadian Business Patterns 2008

Summary – Canadian Business Patterns

Business sector composition in Port Hope is corroborated by the findings of the environmental scan and location quotient analysis. Key findings pertinent to economy strategy over and above the environmental scan are set out below.

SIGNIFICANT GROWTH IN BUSINESS STOCK ESPECIALLY SELF-EMPLOYMENT

The total number of business establishments and self employed in Port Hope increased by 73% from 564 in 2002 to 976 in 2008. ***Excluding the self-employed, the increase in the number of businesses is still significant at 42%.***

SELF EMPLOYMENT GROWING VERY FAST

580 or nearly 60% of businesses fall into the self-employed category, which doubled and so had a significant impact on overall numbers. ***There was growth in all sectors with eight recording gains of over 100%.***

DOMINATED BY SMALL BUSINESS AND SELF EMPLOYMENT

The vast majority of businesses in Port Hope are small with fewer than 10 employees. 75.7% of the total are in this category. When these are combined with the self-employed 90.1% all businesses in Port Hope are small. ***This emphasizes the importance of incubator facilities such as IDEAHUB. Nurturing is a key consideration in resource deployment in Port Hope. There will be potential stars among small businesses and self-employed. It is important to identify ambitious and innovative small businesses and self-employed individuals. Growth has been seen across many different sectors adding new synergies and opportunities to the business mix which can only be positive.***

KEY SECTOR GROWTH

Numerically, there is no overwhelmingly dominant sector in businesses with employees. However, there were some notable growth areas in regards to pointers on target sector recommendations below.

- ***Professional, Scientific and Technical Services is an important sector in terms of business representation especially among those with less than 10 employees. New businesses emerged between 2002 and 2008 in the Other Scientific and Technical Consulting Services, and Advertising Agencies' categories.***
- ***Agriculture, Forestry, Fishing and Hunting businesses are growing rapidly in both businesses and self-employment in many aspects of agriculture.***

CREATIVE ECONOMY BUSINESSES

The number of creative businesses in Port Hope increased from 50 to 81 during the period between 2002 and 2008 representing an increase of 38% and 45% - 35% split between business establishments and self-employed respectively. While comprising a relatively small proportion of businesses (8.3%), potential niche areas will be sought in the target sector analysis part of this study.

7.4 Target Sector Recommendations

The following sector recommendations are identified in light of the Location Quotient analysis and Canadian Business Patterns analysis.

Energy

- Nuclear and power generation

Waste Management (Specialized)

- Low-Level Waste Management Centre of Excellence
- Spin off professional services element into manufacturing waste management products and the supply chain

Agriculture

- Ag-Bio Economy – products and processes.
- Renewable energies for rural areas – small hydro, geo-thermal, biofuels

Manufacturing Verticals – Advanced Manufacturing (Nuclear, Automotive Renewal, Aerospace)

The Future of Manufacturing - Advanced Materials

- Upgrade capabilities -Based on presence in textiles, coatings, metals, paper, and glass

Cleantech

- Cleantech – new and renewable energy supply chain for example - wind, solar
- Energy efficient buildings – materials and processes

Target Sector Capabilities

A closer examination of the company capabilities and regional research capabilities in the target sector section will shed light on how to harness these recommendations in the next section. It is recommended that further detailed research be undertaken in specific target sectors.

8 Target Sector Assessment

8.1 Methodology

8.1.1 Sector Asset Audit

The sector asset audit covered key elements of Port Hope's manufacturing ecosystem: companies, regional educational institutions and programs, research and development activities, and business and professional support. The detailed results of this exercise are shown in the appendices. This information was then utilized in the recommended sector attributes.

8.2 Advanced Manufacturing

8.2.1 Manufacturing in Port Hope

Manufacturing employs more people in Port Hope than any other sector accounting for nearly 17 % of the labour force and just over a quarter of jobs. The sector has held up well in the light of overall contractions felt by this sector in the Province. While the manufacturing labour force declined by 9.7% between 2001 and 2010, the period 2006-2010 saw gains of 18.2%. Manufacturing is a significant employer for residents outside Port Hope, demonstrating the municipality's regional strength in this industry. However, it is an industry that is undergoing significant global shifts.

There is a global realignment of manufacturing activity. Production involving low skill sets is moving to lower cost destinations such as India, China and Mexico. In the meantime, manufacturing in the developed world is shifting towards high-skill, high value production. With an emphasis on lean and agile manufacturing processes, there is a move towards more entrepreneurial businesses with flexible production of customized products. IDEAHUB is already a step in this direction and will be important in developing agile and dynamic firms employing advanced manufacturing techniques. This scenario demands a workforce with a high level of technical and problem solving skills. Addressing the skills and education needs of Port Hope's younger workforce, as identified earlier, is therefore critical.

Going forward, it is important that Port Hope develops its manufacturing sector in alignment with industry trends.

8.2.2 Advanced Manufacturing Trends

A review of current thinking in this sector identified the following technology trends¹ to be significant in 2010 and beyond:

- Green manufacturing processes - waste reduction, energy conservation and revenue from waste.
- Technologies - microelectronic mechanical systems (MEMS) robotics, sensors, wireless.
- Advanced Materials:
 - Nanotechnology, composites, photonics, polymers and new plastics
 - Coatings - UV / EB, Powder, Nanotechnology, Waterborne, High-Solid, Functional Coatings
 - Bio-materials - Bioplastics and Biopolymers
- Technology processes – product life cycle management (PLM), RFID, mobile to machine (M2M) communications.
- Operations processes – lean, nimble manufacturing.

¹ Canadian Manufacturers and Exporters, BioAuto Council, SME and others

The adoption of emerging technologies, materials and processes are key to a sustainable and robust advanced manufacturing sector.

8.3 Water Technologies

The Water Technologies Industry – The Blue Tech Space

Mounting global pressures are driving radical change and creating opportunities for technology development. The need for radical change is caused by:

- Increasing population
- Climate change
- Groundwater depletion
- Water scarcity
- Rising energy costs and GHG emissions.
- Urbanization – over 50% now live in cities
- Ageing infrastructure in the developed world
- A requirement for new infrastructure in the developing world and
- Resource depletion

The industry is now entering a new period of disruptive transformation. Current water systems are inefficient and wasteful and are making way for a new vision of a sustainable water system defined by leading water technology consultants, E2O as:

- Energy generation from wastewater – key technologies are Anaerobic Membrane Bioreactors, Microbial Fuel Cells and Advanced Primary Treatment.
- Nutrient Recovery and recycling – current systems consume energy and chemicals and produce a waste product. New systems will recover nutrients for re-use; produce a fertilizer product with a value, with revenues helping to offset treatment costs.
- Water Re-use - currently just 5% of the wastewater, which is collected and treated, is re-used. Technologies include: Aquifer Replenishment, Membranes and UV, Advanced Oxidation, AquaPure and HiPox.

The Ontario government through its proposed Water Opportunities Act and Water Conservation Act sets a goal of Ontario becoming North America's leader in clean water technology. The Act intends to encourage the creation and export of innovative clean water technology, promote water conservation, attract economic development and create jobs.

8.4 Target Sector Themes

The target sector themes consider synergies with Port Hope's economic base, sector strengths, and new and emerging sectors as identified in the Environmental Scan, Industry Sector Analysis and the sector asset audit and current advanced manufacturing trends.

Low Level Waste Management – Capitalize on Vision 2010 and Port Hope Area Initiative

- Waste management centre of excellence
- Spin off professional services element into manufacturing waste management products and the supply chain

An Energy Hub

- Nuclear
- Power generation
- New and Renewable Energies such as wind, solar, biofuels

Advanced Materials

- Build on strengths in textiles, coatings, metals, paper, and glass
- Bio-materials

Energy Efficient Buildings

- Materials and processes

Growth and Presence in Agriculture:

- Ag-Bio Economy – products and processes.
- Renewable energy especially biofuels.
- Renewable energies for rural areas – small hydro, geo-thermal.

Water Technologies – Synergies with Waterfront Development & PHAI

A closer examination of Port Hope's economic ecosystem provides a situational analysis on possibilities in these sectors.

Implementation will involve collaboration between local companies, interest groups, stakeholders and regional education institutions among others.

8.5 Low Level Waste Management – Capitalize on Vision 2010 & PHAI

The Port Hope Area Initiative, a \$260 million federal government cleanup of low-level radioactive waste in Port Hope and Clarington, presents a raft of waste management related opportunities.

Opportunity Areas

- Cameco Waste Management Centre of Excellence
- Professional services sector development
- Revenue from waste - energy and materials
- Manufacturing waste management products and supply chain opportunities
- Engineering support services

8.5.1 Waste Management Centre of Excellence

Cameco's site remediation plan will include the removal of contaminated soils, drummed materials, old structures, new construction (buildings, additions, renovations) and site and environmental improvements. The construction of a new long-term waste management facility at the closed low-level radioactive waste management facility and adjacent property is also planned.

A Centre of Excellence will provide a research centre and technical services. The presence of such a Centre of Excellence in hazardous waste management has the potential to facilitate opportunities in other areas of this sector. While a professional services team has been assembled, spin offs can occur through local offices and employees as a result of ongoing work after the project is completed.

8.5.2 Revenue from Waste

From Waste to Worth: The Role of Waste Diversion in the Green Economy is part of the Government of Ontario's dialogue with Ontarians on how to continue to improve waste diversion in Ontario. There is a strong push from all levels of government to increase waste diversion rates. Overall, Canada diverts 22% of waste from disposal with domestic diversion at about 39%, while commercial diversion is only about 12% leaving room for improvement.

In the meantime, leading edge companies are implementing sustainable manufacturing processes. Where once disposal of unwanted materials was an overhead, processes are now moving towards turning waste into revenue. Companies providing services and technologies in this area are set to grow. Two initiatives in Port Hope are examples of this trend.

- **Cameco 2010 Vision Project – Waste Management Program.** The Cameco project proposes to release items such as light bulbs, electronics, wood and plastics for material utilization through the existing facility waste management program.
- **Renewable Energy Management Inc. (REM) – Waste to Energy** - this project will use advanced technology to convert waste into a synthetic gas, largely methane, which is burned in a standard steam boiler to produce energy, while excess heat is used to dry the next batch of waste. The resulting ash is clean and can be sold as a construction material.

Queen’s University is a participant in **The NSERC Waste-to-Energy Research (W2E) Network Proposal**. Research areas will focus on Municipal Solid Waste-to-Energy, Agricultural Residuals-to-Energy, Wood Residuals-to-Energy, and a Regional Strategy and Model for Optimal Bioenergy Generation, Transmission and Utilization. This is a significant initiative where Eastern Ontario will be a regional case study for the rest of Canada.

According to Industry Canada there is very little domestic production of recycling equipment, and US imports meet the needs of end-users. New products are developing around waste diversion and recycling which could present manufacturing and supply chain opportunities.

8.6 An Energy Hub

Port Hope has a long history in energy. Through its strengths, Port Hope can deploy a pragmatic energy strategy that combines traditional and new energies.

Focus Areas

- Nuclear
- Power generation
- New and Renewable Energies - wind, solar
- Bio-energy

8.6.1 Nuclear

The increase in demand for energy worldwide combined with clean energy issues has resulted in significant shifts in the nuclear industry’s operating and business environment. As a result, opportunities for new build and refurbishment are set to grow. By 2020 Ontario will need to replace about 80% of its electrical generation due to growth in demand and ageing plants. There are a number of existing and planned major refurbishment and new build projects at Darlington and Pickering. The Canadian nuclear industry is also expanding to meet international demands of current and future refurbishment projects.

Port Hope is located at the heart of the nuclear corridor, with Pickering (OPG) to the west and Peterborough (GE-Hitachi/Rolls-Royce) to the north. Spin-off opportunities will occur through refurbishment in professional services and supply chain. Opportunities arising from new build will emerge with the planned new build.

Port Hope is home to two global leaders in the industry:

- Cameco is pivotal in the world’s nuclear supply chain. It is the world’s largest uranium producer, accounting for 20% of production. Its Uranium conversion and fuel fabrication facility is in Port Hope and has a substantial international customer base.
- ESCO is a leading global provider of highly engineered consumable products and solutions for challenging industrial applications, including resources, and power generation markets.

Port Hope can also leverage nuclear specific education and research facilities in the region:

- Eleven nuclear programs at bachelor, master and doctorate level are available at UOIT and Royal Military College.
- Queens University is part of the University Network of Excellence in Nuclear Engineering (UNENE). This is an alliance of universities, nuclear power utilities, research and regulatory agencies for the support and development of nuclear education, research and development capability in Canadian universities.

8.6.2 Power Generation

Port Hope's strength in nuclear goes hand in hand with power generation. The municipality has strong relationships with Ontario Power Generation, the owners of Wesleyville Generation Station. The 1,700 acre site is located on the major 500 kV network with the ability to connect to the province's high voltage electricity grid.

Veridian Corporation is responsible for distributing electricity to more than 90,000 customers in the Cities of Pickering and Belleville, the Town of Ajax and Port Hope (Ward 1), and the communities of Uxbridge, Bowmanville, Newcastle, Orono, Beaverton, Sunderland and Cannington.

New opportunities exist in connection with Smart Grid technology. As the current generation of power grids approach the end of their useful life, public and private institutions are calling for the construction of new grids--a Smart Grid that incorporates new technologies to allow for affordable and efficient power supply and the integration of power generated from renewable energy sources. The vision of the Smart Grid, as defined by the U.S. Department of Energy in its Grid 2030 vision, is "a 21st century electric system that connects everyone to abundant, affordable, clean, efficient, and reliable electric power anytime, anywhere." The online publication NanoMarkets expects to see unparalleled opportunities for manufacturers of advanced materials and specialized power devices and cables. This would compliment an advanced materials focus.

Education programs are provided by Durham College in power engineering and energy audit. ePOWER, the Centre for Energy and Power Electronics Research is located at Queen's University.

8.6.3 Bio-energy

There is considerable regional strength in bioenergy to the extent it is Eastern Ontario's strongest new energy offering. The agriculture sector has grown significantly over the last 10 years. This has been driven by entrepreneurial or self-employment activity. Ways to harness bioenergy through this growth should be explored. Provincial incentives exist under the Ontario Biogas Systems Financial Assistance program. Farms in Eastern Ontario have been active participants.

Regional educational institutions produce nearly 2,000 graduates (2008) in related programs, with over 9,000 in the pipeline from the universities. This is supplemented by important research:

- **The Sustainable Bio-economy Centre (SBC) at Queen's University**
Focusing on bioenergy and other biomass opportunities within the Great Lakes region, the SBC vision is to build a coordinated and inclusive community, dedicated to developing the bio-economy within Great Lakes region.
- **The University of Guelph, Kemptville Campus**
The campus has worked with Queen's University on the Lafarge-Performance Plants Inc. clean energy initiative. The Campus is working on the development of sustainable biofuel production systems for Eastern Ontario, in particular, the burning of biomass as a fuel source, focusing on growing crops such as switchgrass and miscanthus.

8.6.4 Solar and Wind Energy

The Ontario Feed in Tariff (FIT) program has created international awareness as a desirable location to establish a green energy facility.

Eastern Ontario is highly regarded as a solar farm location due to its higher levels on sunlight than most areas in the province. Supply chain opportunities could be more limited since Thin Film Photovoltaics companies require semi-conductor manufacturers, which are not present in Port Hope. There is a local retailer and installer through Solarworks Canada Inc.

Supply chain opportunities are likely to be more prevalent in wind energy as major contracts are awarded to the likes of Acciona, Samsung and Siemens.

Any investment activity in this area is likely to be connected with existing companies expanding into this market.

The region's education institutions have been very pro-active in responding to new skill set requirements:

- **St Lawrence College** was one of the first to introduce a program in renewable energy technology. Study topics cover Solar Photovoltaics, Solar Thermal, and Wind Energy. The Wind Turbine technician program has been designed specifically to provide support for Ontario's growing wind farm business activity.
- **Durham College** offers a renewable energy technician program
- **Queen's Faculty of Engineering and Applied Science** provides a master's program in applied sustainability.
- **The Applied Sustainability Research Group at Queen's University**, lead by Professor Joshua Pearce, covers understanding and improving photovoltaic materials and device physics to make more efficient and less expensive solar cells.

8.7 Advanced Materials Technologies

Innovative advanced materials technologies make a direct and positive impact on economic growth, the environment and quality of life, via improved processes and products. Advanced materials are a pervasive technology that cuts across a wide range of market sectors. Energy generation and supply, automotive, aerospace and defense, healthcare, packaging, technical textiles and construction are sectors, which rely on, or are strongly underpinned by, advanced materials technology. Port Hope has strengths in some of these sector verticals and when considered in the light of its capabilities in textiles, coatings, metals, paper, and glass there are potential opportunities.

Opportunity Areas

- Capitalize on capabilities in textiles, coatings, metals, paper, and glass
- Bio-materials – includes automotive opportunities
- Aerospace – OAC future platforms initiative

8.7.1 Advanced Materials

Port Hope's company base includes both local and internationally renowned companies that are leaders in the field:

- **AkzoNobel's** (Chemcraft International) industrial finishes enhance and protect virtually thousands of products. Whether they're made from steel, aluminum, plastic or wood. The Swedish company is R&D driven with nine Centers of Excellence strategically located around the globe to serve key markets and customers.
- **Polyframe Molding Inc.** manufactures polystyrene picture frame moldings with automated systems.
- **A.B.C. Electro Powder Coating Ltd.** is a local company providing Powder coating services.
- **CPK Interior Products** manufactures instrument panels, door panels and consoles.

Royal Military College, Queen's University and the University of Ontario Institute of Science and Technology (UOIT) offer fifteen materials science engineering programs at Bachelor's, Masters and Doctorate level. A MSc program in Materials Science is offered jointly by the University of Ontario Institute of Technology (UOIT) and Trent University. Materials Science is a broad multi-disciplinary area of science that lies at the intersection of physics and chemistry and includes many sub-fields including nanotechnology, electronic materials, surface science, biomaterials, and materials characterization.

The regional education institutions have significant depth in this area and provide potential opportunities for collaboration:

- **The Trent Centre for Materials Research** focuses on the materials properties of potential benefit to industry, and the training of highly qualified personnel.
- **Queen's-RMC Centre for Advanced Materials and Manufacturing**
AMMG is a multi-disciplinary and industry driven centre with a mission to support and promote research and education in the field of advanced materials and manufacturing.

- **Advanced Design and Manufacturing Institute (ADMI)**
Queen's University is collaborating with McMaster University, the University of Toronto, the University of Western Ontario and the University of Waterloo to offer a Professional Master's Degree in Design and Manufacturing.
- **The Canadian Design Engineering (CDEN) /RCCI network** facilitates the joint development of multi-discipline design-related courseware modules and put in place the mechanisms to ensure that the practice of design will be central to the education of the next generation of engineers.
- **Royal Military College Department of Physics** - Research in Material Sciences pertains both to theoretical and applied physics. Research groups include Nanocomposites, and Polymer Characterization.

8.7.2 Bio-materials

Biomaterials can be defined either as materials applied to a biological system or materials derived from a biological source. In the context of biologically derived materials, biopolymers offer the prospect of a renewable source of new materials.

Opportunities could exist in the automotive sector. The recent Ontario BioAuto Council's annual conference - DRIVING THE CLEAN TECH REVOLUTION IN GREEN CHEMICALS & HIGH PERFORMANCE MATERIALS - featured speakers from major manufacturers discussing the use of bioplastics (Ford Motor Company) and biopolymers (Toyota). Other topics included Low Cost Carbon Fibre Composites for Light-Weighting Vehicles, Propylene Glycol Renewable Resin for SMC: A Bio Resin Alternative, Biobased Nylon Resins and Segetis L-Ketal Technology.

- CpK Interior Products has recently been acquired by Chrysler and manufacture Vinyl and Urethane Plastic, could be potential candidates in this field.
- Trent University is actively involved in biomaterials with its Biomaterials Research Program. This has a vital role to help make Canadian agriculture sustainable with leading research to create new uses of agricultural commodities.
- UOIT - Automotive Centre of Excellence (ACE-Global) is also in close proximity.

8.7.3 Aerospace

Ontario Aerospace Council Future Major Platforms Technology Working Group identified key technologies necessary to participate in OEM supply chains. These included advanced materials such as thermosets, and liquid composite molding. Their initiative includes collaborative opportunities with its member companies.

ESCO is a leading global provider of highly engineered consumable products and solutions for challenging industrial applications, which include aerospace.

Port Hope has suppliers for manufacturing services such as Bromely Fabricators and B&H Tedford Machining who provide custom fabrication services.

There are 170 programs in aerospace, materials science engineering and science programs which supply over 1700 graduates and technicians annually. Specialist aerospace programs include:

Royal Military College (RMC), offers Aerospace Engineering programs at Bachelor's, Masters and Doctorate level in English and French.

Queen's University's Mechanical engineering program incorporates an aerospace specialty.

Loyalist College is to introduce new aerospace programs to compliment the thriving local aerospace cluster around CFRB Trenton.

8.8 Energy Efficient Buildings

Creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's life cycle is now mainstream. Siting to design, construction, operation, maintenance, renovation, and demolition processes are designed to reduce the overall impact of the built environment on human health and the natural environment. Efficient use of energy, water, and other resources, protecting occupant health and improving employee productivity and reducing waste, pollution and environmental degradation are key themes.

Port Hope has experienced consistent growth in this sector over the last ten years and there may be future opportunities to attract companies in the deployment of green building technologies.

- The Cameco project includes buildings that may be eligible for LEED certification (Leadership in Energy and Environmental Design).
- Sterling Truss Plant are Foundation, Structure and Building Exterior Contractors
- Viceroy Homes designs, engineering and manufacturing of custom home packages for both owner/builder clients and professional contractors.

There are programs at Fleming College in Sustainable Building Design and Construction and Sustainable Renovations. Sustainability research activities are undertaken through the Applied Sustainability Research Group at Queen's University.

8.9 Capitalize on Growth and Presence in Agriculture – an Ag-Bio Initiative

Biomaterials and biofuels have been discussed as potential opportunity areas. The growth of the agricultural sector over the last ten year presents potential in the ag-bio economy through products, processes and energy derived from agriculture.

Opportunity Areas

- Ag-Bio Economy – products and processes.
- Renewable energy especially biofuels.
- Renewable energies for rural areas – small hydro, geo-thermal.

In addition there are small scale opportunities in new energies designed for rural areas. Regional educational institutions support geothermal and small hydro.

- **University of Ontario Institute of Technology (UOIT) Thermal Energy Storage System** is Canada's leading geothermal energy installation and the second largest in North America. It is comprised of 400 boreholes drilled 35 stories deep. Delivering 8 megawatts of energy the system is powerful enough to cool or heat the equivalent of 1,000 homes.
- **St. Lawrence College** - programs and research at Energy House cover small hydro and geothermal.

8.10 Water Technologies

The current policy environment afforded by the proposed Water Opportunities Act and Water Conservation Act sets the stage for attracting investment and job creation. New disruptive technologies are set to revolutionize the industry. Port Hope can be poised to take advantage of this environment through its own facilities.

Port Hope's water treatment plant and sewage treatment plant feature cutting edge technologies. State-of-the-art membrane filtration is utilized at the water treatment plant, which allows for a higher level of treatment. It is the Future of Water Purification and the single most significant technology advancement in the past decade.

Support at regional level is available through:

- Ontario Onsite WasteWater Association – Cobourg
- Ontario Municipal Water Association (OMWA) – Belleville
- Ontario Centre for Environmental Technology Advancement (OCETA)

Durham College's Water Treatment Technician program produced 36 graduates in 2009.

There is significant research activity in this field:

Waste Water

- **Queen's Natural FLOWS (Functional Low-tech On-site Wastewater Systems) Research Group** develops innovative technologies and systems to protect water quality in the receiving environment.
- **The Centre for Alternative Wastewater Treatment (CAWT)** at Fleming College is focused on achieving a scope of constructed wetland research that does not presently exist in Canada.

Water Quality

- **Worsfold Water Quality Centre at Trent University**
The Centre houses many state-of-the-science analytical instruments for determining trace quantities of substances found in natural aquatic environments including rivers, streams and drinking water.
- **Institute for Watershed Science at Trent University**
The Watershed Science Centre is a unique interdisciplinary and inter-institutional alliance for integrated science, facility sharing, expert consultation, management services, training and technology transfer on watershed ecosystem management, health, protection and rehabilitation.
- **The Canadian Water Network (CWN)**
Queen's, and RMC are institutional members of The Canadian Water Network (CWN) was created as one of Canada's Networks of Centres of Excellence (NCE), to build a network that develops opportunities related to the provision of safe, clean water.
- **University of Ontario Institute of Technology** – partnering in innovative research to understand how the changing water quality and chemistry in these lakes influence energy and contaminant transfer to other organisms such as fish.

9 Implementation Action Plan Recommendation

PRIMARY TARGET SECTORS

Innovative Waste Remediation Services

The Municipality of Port Hope has unique opportunity and assets to further its potential for investment and job creation through its historic connection to the nuclear industry. The clean-up of low-level nuclear fuel by-products currently under way through the “Port Hope Area Initiative” is already demonstrating significant employment growth in the research, scientific and technical sector. This expertise can be built upon and exported as the project proceeds. The skillsets, technological capabilities and partnerships derived from this exercise can be applied to other technical applications including.

- Low level nuclear
- Water remediation
- Other waste applications

The IDEAHub will be a catalyst to support investment in knowledge-based employment for the region.

RECOMMENDED ACTIONS

Build upon established relationships with PHAI

Facilitate new opportunities for Port Hope’s long-term advantage related to clean-up

Communicate initiative to technical businesses in GTA through participation in associated trade shows and business development activities

Promote assets of IDEAHub to support investment to prospects through direct marketing, government investment officers

Nuclear Energy – Centre of Innovation Excellence

CAMECO is one of Port Hope’s largest and longest standing industrial employers. The revival of the nuclear industry with planned new build at Darlington and refurbishments at other facilities guarantees that nuclear energy will continue to play a significant role in Ontario’s electricity generation and Port Hope is well-positioned geographically and technically to build on its traditional industry. There is potential to establish a recognized centre of innovation excellence in this industry sector.

RECOMMENDED ACTIONS

Facilitate discussions with CAMECO, UOIT, Ministry of Energy and Industry Canada to gain support

Identify framework and funding opportunities

Sustainable Energy – Advanced Manufacturing

Manufacturing jobs are on the increase in Port Hope. After a decline in the first part of the last decade there has been a significant increase in those employed in manufacturing jobs – both in Port Hope and for those living in Port Hope who commute outside the municipality. Sustainable or “Green” Energy will continue to grow and Port Hope should focus on attracting Tier 2 and 3 Tier suppliers involved in the manufacture of components for the power industry

- Nuclear
- Alternative (Wind, Solar, Bio)
- Engineering, Research & Development

RECOMMENDED ACTIONS

Broaden awareness and willingness of Port Hope to accommodate new industry (especially to new business park and IDEAHUB) through participation in the following industry organizations through membership or proactive involvement in regular trade events.

Canadian Nuclear Association (Annual Conference - Prospects)

The **Canadian Nuclear Association (CNA)** is a non-profit organization established in 1960 to represent the nuclear industry in Canada and promote the development and growth of nuclear technologies for peaceful purposes. Nuclear energy in Canada generates about 15% of Canada's electricity and over half of Ontario's without polluting the air. It directly employs about 21,000 people and another 10,000 indirectly in industry, government and other organizations. Canada's nuclear industry also supports 40,000 jobs in companies that provide supplies or services to the nuclear industry.

Organization of CANDU Industries (Supplier Days – 100 industry members)

With its mandate of “Promoting a Healthy Nuclear Industry”, 2009 marks the 30th anniversary of the **Organization of CANDU Industries (OCI)**. Started with just a handful of founding members in 1979, OCI currently has an active membership of 150 Canadian companies supplying goods and services for nuclear reactors in domestic and export markets. OCI has a long-standing reputation of providing a forum for the exchange of information related to technical and quality issues as experienced by the nuclear supply chain. The world is currently experiencing a nuclear renaissance. OCI and its ever-growing membership are primed and ready to support both the domestic and export markets for nuclear energy.

Canadian Nuclear Society (Scientific, Technical expertise & Contacts)

The **Canadian Nuclear Society (CNS)** promotes the exchange of information on all aspects of nuclear science and technology and its applications. This includes nuclear power generation, fuel production, uranium mining and refining, management of radioactive wastes and used fuel. Other topics include medical and industrial uses of radionuclides, occupational and environmental radiation protection, the science and technology of nuclear fusion, and associated activities in research and development.

SECONDARY SECTOR

Port Hope is fortunate to have one of Ontario's largest undeveloped power generation sites within its border. The Wesleyville G.S. site has enormous potential for future development as a nuclear, natural gas or alternative power generation facility. The land holdings also provide opportunity for commensurate energy development.

Green Energy – Generation

- Wesleyville
- Energy from Waste

RECOMMENDED ACTIONS

Maintain proactive relationship with Province of Ontario (Ministries of Economic Development & Trade, Energy, Ontario Real Estate Corporation, Infrastructure, Innovation) to promote new job creation opportunities at Wesleyville site. Participation in selected Green Energy trade shows leveraging opportunities through organizations like the Ontario East Economic Development Commission.

Agriculture

Agriculture related business has seen significant growth in Port Hope and will provide continued opportunities, particularly in Ward 2. Generally there is a lack of awareness of this important employment sector.

RECOMMENDED ACTIONS

Active engagement in regional agricultural business development activities is highly recommended along with enhanced communications of the importance of this sector.

Tourism

Service industry jobs, many related to, or supporting tourism are on the increase in the Port Hope region. Port Hope's unique architectural charm, waterfront opportunities and proximity and access from major markets combined with a plethora of unique visitor experiences provide excellent base for continued tourism growth and development.

RECOMMENDED ACTIONS

Continue support of new events and festivals and increased marketing to draw external visitors to Port Hope and develop 2011 Tourism Action Plan with consideration of leveraged opportunities to work with Northumberland County and the new Regional Tourism Organization. It is important that Port Hope maintain a strong presence and influence to ensure adequate resources and profile for Municipality of Port Hope's tourism assets.

10 Budget & Resource Considerations

Provided under separate cover.

11 Case Studies

Two key regions with significant strengths in the nuclear sector have been examined as case studies to shed light on best practice and relevant lessons for Port Hope. These are:

- West Cumbria, North West England, UK and
- Tennessee Valley Corridor, TN, US

11.1 West Cumbria –Britain’s Energy Coast²

11.1.1 West Cumbria – Location and Characteristics



West Cumbria is a sub-region located in North West England. It is 300 miles (480 km) north of London and 121 miles (195 km) north of Manchester.

West Cumbria is a £2.8 billion economy, with a population of 167,000 people, 2.4% of the total North West population of 7 million. It covers an area of 2,000 sq km, almost a third of the Cumbrian sub-region and 14% of North West England.

- Area comprised of small towns large, sparsely populated rural areas and small urban centres. Whitehaven and Workington are the two largest towns.
- Part of the sub-region is within the Lake District National Park (LDNP), a world class tourist brand.
- Significant presence of relatively older retired population
- Economy is dominated by the nuclear sector.
- Major nuclear assets and internationally competitive expertise and skills in a range of related activities, including **environmental remediation**, engineering and decommissioning.

² Adapted from Britain’s energy coast / a Masterplan for West Cumbria

- Management and storage of radioactive waste and other nuclear materials is a significant activity. It generates controversy, international interest and considerable public comment and impacts on the image of West Cumbria.
- Outside nuclear, three quarters of the workforce are employed in manufacturing, distribution, hotels and restaurants and public services.
- In manufacturing, the private sector is largely dominated by a small number of large employers, which includes Alcan where job losses have been involved.
- Diversification into new technologies and innovation within West Cumbria not been successful with limited exploitation of IP and few new spin off businesses.
- Low graduate level skills and retention with lower than average levels of educational participation amongst young people due to a perceived lack of Opportunity. There is the threat of losing skills advantage in the future workforce.

11.1.2 Master Plan

The Masterplan focused on three most important factors and drivers of the West Cumbrian economy:

- Business and Enterprise
- Skills and Research
- Connectivity and Infrastructure

The plan was underpinned by considerable collaboration between the private sector, public sector nuclear agencies and associations, together with local, regional and national government.

11.1.3 Vision

As host to the world's single largest concentration of nuclear facilities, with 36% of the UK's civil nuclear industry at Sellafield, the area has an internationally unique skills base and technological expertise. West Cumbria can become a globally competitive energy and environmental cluster by building on existing strengths in the energy sector, environmental remediation, and decommissioning and diversify from reliance on existing jobs at Sellafield into an economy which is competitive in the wider energy and environmental sector. The area has the potential to deliver the critical elements of a national energy strategy that makes a significant contribution to UK energy and environmental needs.

The result is Britain's Energy Coast™ (www.britainsenergycoast.com)- a £2 billion package of regeneration projects that will establish the West Coast of Cumbria as a major national hub for low carbon and renewable energy generation.

11.1.4 Goals

The plan was developed around a long term, twenty year vision of what West Cumbria should be in 2027:

West Cumbria will be a confident place that prides itself on its strong economy providing opportunities for all and offering a lifestyle of choice. It will:

- be globally recognized as a leading nuclear, energy, environment and related technology business cluster, building on its nuclear assets and its technology and research strengths
- be a strong, diversified and well connected economy, with a growing, highly skilled population with high employment
- project a positive image to the world, and be recognized by all as an area of scientific excellence, outstanding natural beauty and vibrant lifestyle, which attracts a diverse population and visitor profile
- Provide opportunities for all its communities, where geography is not a barrier to achievement and where deprivation, inequality and social immobility have been reduced.

11.1.5 Sector Profile

West Cumbria is the UK's most important location for nuclear and related advanced engineering, with around a third of the UK's civil nuclear sector. The nuclear industry provides around 40% of West Cumbria's GVA. The Sellafield site accounts for over 12,000 direct jobs. There are also 2,630 indirect jobs with the combined total accounting for 22% of West Cumbria's workforce.

West Cumbria's strengths are built around the following pillars:

Research and Technology - There is a major concentration of research skills and facilities in nuclear and related technologies, with growing potential for commercialization into new markets. These include the British Nuclear Fuels Technology Centre, the core of a proposed National Nuclear Laboratory at Sellafield, Westlakes Science Park, a significant centre for knowledge transfer and innovation in existing and spin-off markets through the proximity of the knowledge base, research and supply chain partners.

Decommissioning Expertise through a national £80bn decommissioning program

Radioactive Waste. The area has internationally competitive skills and experience in radioactive waste handling, storing and packaging. West Cumbria holds 70% of the nation's higher activity waste.

Power Generation

West Cumbria has strong skills and assets in Nuclear Power Generation. At Sellafield, the Nuclear Decommissioning Authority owns enough uranium and plutonium to power two 3rd Generation 1.6 Gigawatt reactors for 60 years with no Government funding required.

West Cumbria's coast provides good opportunities for other renewable energy generation (e.g. wind, tidal). The concentration of expertise and local support for power generation and related infrastructure provides an opportunity to gain competitive advantage.

Environment and Tourism

West Cumbria's coastal environment and proximity to the Lake District provide a high quality of life and a strong and well recognized brand and image. Tourism is an important industry for West Cumbria, generating around £400m in annual revenue.

11.1.6 Business and Enterprise Successes

The Nuclear Decommissioning Authority's location has helped establish West Cumbria as the UK hub for decommissioning and provided opportunities to grow the business into international markets.

A significant number of other inward investments were achieved on the back of the NDA investment. Several major US multinationals set up offices in the area. Much of this stems from the work undertaken by West Lakes Renaissance (WLR) and Invest in Cumbria. This included activities targeting Canada with participation at the Canadian Nuclear Association national conference in 2009. The Organization of Candu Industries (OCI) was involved in supply chain opportunity missions to Sellafield in 2007 in conjunction with UKTI Canada and NDA. These organizations also participated in the major Waste Management shows in the US.

Westlakes Science and Technology Park and the work of the Nuclear Opportunities Group, under the coordination of Westlakes Renaissance with the involvement of local and regional stakeholders, played an important role in maximizing decommissioning business exploitation, and supply chain development.

11.1.7 Action Plan - Building on Successes

The following initiatives are being deployed to build on these successes:

- Program of enterprise support, including high growth companies and enterprise skills and start up program.
- Inward investment support and procurement support for local contractors.
- Develop Technical support for companies to achieve proof of concept and develop new techniques/ products, building on facilities at BTC/NNL and Westlakes Science Park.
- Develop enterprise culture initiatives for adults, especially those over 50, to encourage them to consider enterprise as an alternative to being an employee.
- Development of high quality hotel and conference offering, increasing business and leisure town centre accommodation offer.
- Program of Commercialization support to maximize IP exploitation and spin out benefit to existing techniques and processes from within Sellafield.
- Consideration of a Local-central Government partnership on solutions for the long-term of Nuclear Management.

11.1.8 Skills and Research

The skills and research plan was developed around successes and lessons learnt from existing initiatives.

- Working with partners, the Northwest Regional Development Agency to develop a strong evidence base of existing and future business and individual needs at all levels of skills and research.
- Strategically located new facilities to drive education progression rates, maximize links between institutions, ensure appropriate skills are available (including through work based training and distributed learning), and to maximize the interaction between research and businesses.
- Enterprise training in schools and enabling children to understand the opportunities within local enterprise will be important.
- Significant initiatives based on linking existing and new provision with population centres, business and research locations.
- The new University of Cumbria, was established to address:
 - Poor economic performance of the county over the past decade.
 - Current and historic low level of post secondary participation, and poor progression post 16.
 - Geographical barriers limiting access to education especially acute in West Cumbria.
 - Low graduate level skills and retention.

Action Plan

A key theme was increasing enterprise training and enabling children to understand the opportunities within local enterprises combined with the presence significant public sector nuclear institutions.

- Deliver key public sector institutions - National Nuclear Skills Academy and Nuclear Academy North West Nuclear Academy
- Deliver Dalton Institute, providing world class teaching and laboratory facilities Deliver a skills development program for Sellafield and supply chain workers
- Deliver new University of Cumbria and provision in West Cumbria for priority skills e.g. project management through links with other institutions
- Deliver National Nuclear Laboratory, Headquartered in West Cumbria, with remit to support commercialization and product development with business
- Bring forward Building Schools for the Future and Academies
- Strengthening Enterprise training in schools

- The University of Cumbria will design and deliver programs to meet the demands made by the specific needs of identified groups at risk providing
- progression opportunities to post-secondary education and adults returning to education after a period of economic inactivity.

11.2 The Tennessee Valley Corridor

The Tennessee Valley Corridor, Inc., is a non-profit organization that promotes the Tennessee Valley Corridor as one of the nation’s premier science and technology centre through leveraging the Corridor’s research institutions and technology assets to maximize regional economic development and new job creation. It is located in Oak Ridge Tennessee covering areas in the states of Alabama, Kentucky, North Carolina, Virginia, and Tennessee. These areas have consistently received awards and accolades as top business climate locations.

11.2.1 Success Factors

In 2004, Tennessee Valley Corridor was recognized as an outstanding economic development organization designed to “enhance regional competitiveness.” by the U.S. Department of Commerce Economic Development Administration alongside the Research Triangle Partnership in North Carolina.

Key factors in this success have been attributed to:

- **Institutions that Collaborate** — Major research universities, the nation's only multi-purpose national science laboratory, a major DOE national security complex and NASA space flight centre, plus booming DoD research & engineering installations — all work together
- **Skills Strength and Technology-Driven Talent** — the area has the South's highest concentrations of scientists, engineers and PhDs with 50 local Corridor colleges and universities
- **World-Class Innovation** — Recognition in research, innovation and scientific application — in advanced manufacturing, aerospace, automotive, energy, environment, homeland security, med-tech, nanotech, national security, supercomputing, transportation
- **Political Leadership and Regional Cooperation** — federal leaders have teamed with pro-business state and local governments — working together to attract and deploy billions in research funds to meet national needs and advance regional success.
- **Lower Business Costs** — one of the lowest-tax burdens in the nation — affordable utilities through TVA — and a series of SmartParks designed with technology support systems geared to help businesses succeed and expand.
- **Innovation business support** — entrepreneurs can turn ideas into products with the help and support of regional tech transfer, business incubation and venture capital support.
- **Quality of life - Affordable Family Living** — lower housing costs, lower personal tax burdens, easier commutes, comparable schools, the most visited national park in the US— and enough music, lakes, mountains, museums, whitewater, food and hospitality

11.2.2 Tennessee Valley Nuclear Energy Coalition (TVNEC).

As the Corridor continues to be a leader in America's energy innovation and nuclear renaissance, the TVNEC works to meet America's rising need for new sources of safe, clean and abundant energy.

The TVNEC has created a steering committee comprised of industry and government agency representatives to guide the examination of three specific market areas:

- Develop a supplier base in the region to support the life extension of existing nuclear plants and future new construction;
- Establish a heavy - and perhaps ultra - heavy forgings capability in the region to support new plant construction; and
- Deploy a new generation of small nuclear reactors drawing on the research expertise in Chattanooga, TN, Huntsville, AL, Oak Ridge, TN and regional support of this initiative.

The Steering Committee will organize and host a series of discussion forums to evaluate these market opportunities,, to elicit key information from potential entrants into the nuclear supply chain, and to help generate private sector awareness and interest in the initiative.

An executable business plans for each of these market opportunities will be developed. Support from public and private sector entities in the region will be enlisted to carry out the recommended actions in each area.

11.3 Lessons for Port Hope

Key themes emerging from these case studies are set out below. These themes can be extended to other sectors. The Municipality is has already involved in similar initiatives in some cases.

- Overall vision and goals are part of a national energy (sector) strategy.
- The initiatives are pan-regional with a trickle down effect to communities like Knoxville and Sellafield.
- Significant public sector support through the presence of R&D intensive nuclear agencies, which, as anchor institutions have spin off success. Organizations such as the Canadian Nuclear Safety Commission could play a role in this regard. Current uncertainties in AECL's future configuration make a roadmap difficult at this point, but may also provide opportunity.
- There is considerable collaboration between public, private sector, interest groups, academia and government.
- R&D driven initiatives. Port Hope is in a region of significant institutional educational and R&D expertise that should be leveraged in future initiatives.
- Investment attraction initiatives in conjunction with regional (NWDA/Invest in Cumbria) and national (UKTI) economic development organizations with involvement from nuclear agencies and associations (in Canada).
- Diversification into synergistic areas in environmental and green energy and manufacturing using strengths in nuclear as a starting point.
- Highly targeted and specific education and skill development initiatives that have resulted in new facilities. Grass roots activities in schools that reach out to children to help them understand opportunities in the local economy. This is a critical area in which Port Hope must act urgently.
- Tourism is seen hand in hand with attracting high quality personnel (Quality of Life).

12 Research & Background Resource Summary

Research Data

Northumberland County – Occupational Competitive Analysis (2006)	OMAFRA
Northumberland County – Labour Force Analysis (2006)	OMAFRA
Northumberland Workforce Gap Analysis (Preliminary data)	TCI
Labour Force by Industry/Occupations 2010	Manifold Data
Canadian Business Patterns - Port Hope, 2002-2008	Stats Canada
CMHC Housing Starts	CMHC
Census of Population, 2001-2006	Stats Canada
Municipality of Port Hope Manufacturers’ Directory	

Reports & Studies

Municipality of Port Hope Community Profile 2010	
Economic Development Activity Reports	
Municipality of Port Hope Corporate Strategic Plan 2009	
2006 Municipality of Port Hope Economic Development Strategic Plan	
2006 Cobourg Economic Strategy	
2009 Downtown Commercial Retail Survey Results Report	
Growth Management Strategy Municipality of Port Hope 2002	
Municipality of Port Hope Official Plan (2009 Updates)	
Tourism Action Plan 2010	
Canadian Nuclear Industry – Contributions to the Canadian Economy 2008	
Operational Protocol - Port Hope Area Initiative	
CAMECO Vision 2010	
Municipality of Port Hope Leisure Services Master Plan, 2010	
Municipality of Port Hope Consolidated Waterfront Master Plan, January 2009	
Importance of Tourism in the Municipality of Port Hope, 2009	

Canadian Manufacturers and Exporters, BioAuto Council, SME and others

Britain's energy coast / a Masterplan for West Cumbria

Tennessee Valley Authority – various reports

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