

Edmonton SWOT Analysis Major Themes May 2012

Theme #1: Position Edmonton as a global energy hub for investment and support activities.

Theme #2: Position Edmonton as a centre of excellence for clean technologies.

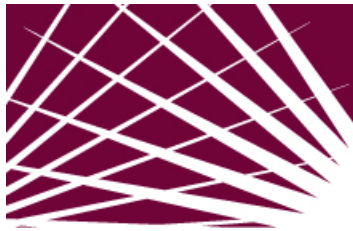
Theme #3: Position Edmonton as a sustainable and livable city.

Theme #4: Foster a supportive business environment.

Theme #5: Address the challenges of attracting and retaining a skilled workforce.

Theme #6: Drive greater levels of innovation and commercialization on the part of business and educational institutions.

Theme #7: Develop a compelling marketing effort that raises the profile and brand of the city nationally and internationally.



Theme #1: Position Edmonton as a global energy hub for investment and support activities

Summary

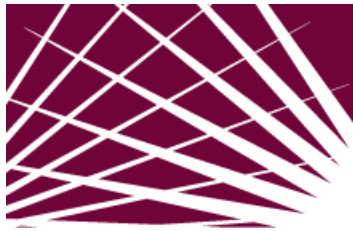
- Realize upstream supply chain opportunities in the oil and gas (oilsands) industry;
- Leverage knowledge and expertise gained in the oil and gas supply chain to enhance exports of goods and services by local companies;
- Collaborate with the AIHA to leverage the Energy and Technology Park to realize downstream chemical cluster opportunities; and
- Attract the Global Centre for Energy proposed by in the Premier's Council for Economic Strategy

STATEMENT OF OPPORTUNITY

Energy remains the economic engine of Alberta's economy. Energy is the largest contributor to provincial GDP and with the world's third largest crude oil reserves, will remain an important contributor to the economy for the foreseeable future. While the primary activities associated with oil and gas extraction and value of energy exports are significant, so too are the upstream and downstream opportunities associated with the energy industry. Provincially, primary activities related to oil and gas extraction account for only a small portion of energy related jobs with more energy related jobs being found in the service sector, construction and manufacturing. It is in these areas where the real energy related opportunities are to be found for Edmonton. Edmonton is uniquely positioned to access opportunities in sectors such as industrial manufacturing, engineering and construction and transportation and logistics. Edmonton is also uniquely positioned to capture value added downstream activities such as chemical manufacturing and additional fabrication processing.

Companies active in servicing and supplying Alberta's energy industry operate in a competitive environment. While energy companies seek low cost suppliers; timeliness, innovation, quality and service are also important factors in procurement decisions. Edmonton's proximity to the oil sands provides it with a key competitive advantage - timeliness of supply. The economic prize for Edmonton is significant. Statistics Canada reports investment in non-conventional oil (oil sands) will increase by 24.6% in 2012 to \$26.9 billion. As of December 2011 the value of major projects in Alberta stood at \$208.8 billion (including projects that have been approved or are already under construction). Oil sands related projects alone stood are valued at \$133.6 billion¹.

¹ Alberta Treasury Board and Enterprise Inventory of Major Projects Report, December 2011

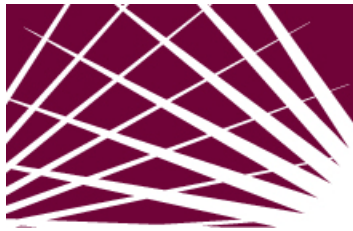


Opportunities in the near term will be found in new oil sands construction while in the medium to longer term opportunities will be found in the ongoing maintenance and repairs of existing facilities.

Over the longer term, domestic sales for the city's industrial manufacturing and construction and engineering sectors are likely to decline in tandem with declining capital expenditures by oil sands companies. As such, the sector's future success could depend on the level of innovation and productivity that emerges in the sector, the ability of the sector to introduce new products to new markets, and the degree to which this expertise can be exported globally. In this regard, the sector will need to find ways to adapt the expertise gained in the oil and gas industry to other potential markets, as well as build and attract the skills necessary to allow the industrial manufacturing sector to diversify its products and markets with new innovations. Evidence can already be found that local firms are seeking export markets. The knowledge and product expertise gained locally provides local firms with a competitive advantage in specific export market segments. In fact exports already account for a quarter of provincial sales in industrial manufacturing.

The City of Edmonton's Northeast Downstream Cluster Demand Analysis reports on the opportunities for Edmonton to capture downstream chemical manufacturing, as well as additional fabrication and processing. These opportunities are not without their challenges including the differential cost of crude oil and bitumen, excess upgrading capacity in the United States, the high cost of labour and reduced access of natural gas liquid feedstock in Alberta. However, the city has the opportunity to build on the previous work and activities of Alberta's Industrial Heartland and designated land in the city's northeast to capture more value from the provinces oil and gas products and create high skill, high wage jobs in Edmonton.

Edmonton can position itself as a global energy hub, not only through seizing upstream and downstream opportunities but also by becoming the host city for the Alberta Global Centre for Energy proposed in the Premier's Council for Economic Strategy. Hosting the Alberta Global Centre for Energy will position Edmonton as global centre of knowledge, research and innovation in energy. Leveraging the skills and investment that is already present in the city and region provides further opportunity to lead in the development and use of alternative energy sources including solar, wind, geothermal and waste heat. Doing so could potentially result in economic diversification but also contribute to improving the city's competitive position globally as it assumes a level of responsibility for the environmental implications of the energy industry.



Theme #2: Position Edmonton as a centre of excellence for clean technologies

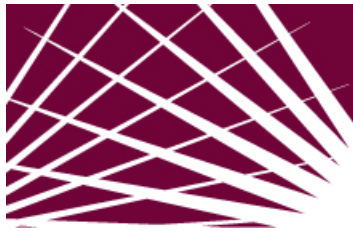
Summary

- Leverage the research and development of post-secondary institutions and energy companies to spin off research in environmental products and services into commercial operations;
- Continue the move towards all city departments being 'green' and local sourcing of environmental products and services;
- Position the city as being proactive in monitoring and reducing greenhouse gas (GHG) emissions;
- Utilize the Energy and Technology park as an anchor in developing and attracting environmental products and services; and
- Utilize City of Edmonton corporations and departments including EPCOR, Capital Power and Waste Management Services (Edmonton Waste Management Centre of Excellence) as leaders in managing water, waste and waste water treatment and alternative power generation to create export opportunities

STATEMENT OF OPPORTUNITY

In Alberta and indeed Edmonton, the clean tech sector is closely related to the energy sector and has seen tremendous growth in the past decade having focused on water supply and treatment products, remediation services, and products aimed at monitoring and reducing greenhouse gas (GHG) emissions. Future growth is expected to be driven by sustained growth of the energy sector; however increased public funding on environmental initiatives, increased private investment, as a result of environmental regulations, and stronger public and political agendas in Canada and abroad aimed at protecting the environment will also contribute to the growth of this sector for years to come. In a recent assessment of the economic development opportunities for environmental products and services in Edmonton it was suggested that while Alberta is the largest business market for these products and services in Canada, the environmental products and services industry is a global growth industry. Today, environmental products and services in the Edmonton market are estimated to be approaching \$3-4 billion.

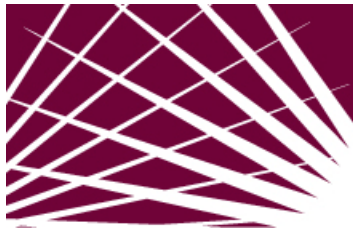
With world class academic and applied research institutions, Edmonton is well positioned to realize opportunities in the clean tech sector and capitalize on its strengths as an emerging centre of excellence in this regard. Edmonton is home to the National Institute for Nanotechnology and at the forefront of nanotechnology related



research which can be applied to the clean technologies sector. City of Edmonton corporations and departments including Epcor, Capital Power and Waste Management Services (Edmonton Waste Management Centre of Excellence) are leaders in managing water, waste and waste water treatment and alternative power generation and have the opportunity to export this knowledge on a global level. Edmonton's Energy and Technology Park will place an emphasis on green and sustainable development serving as an anchor to the advancement of clean technologies in the city. In addition, Edmonton is home to STANTEC one of Canada's largest engineering firms with strengths in water and water engineering and environmental consulting and the Edmonton region is home to a large number of oil field equipment and machinery manufacturers some of which is for the water industry.

The Federal Government, the Province of Alberta, and the City of Edmonton have also invested in innovation and technology to support the development of the environmental industries. The University of Alberta, AMEC, the City of Edmonton and the Alberta Research Council partnered on the development of the Edmonton Waste Management Centre of Excellence. The National Institute of Nano-Technology (NINT), a partnership of the Federal Government, the Province of Alberta, and the University of Alberta, is located on the University of Alberta campus. The oils sands industry has funded a number of new research institutes/centres focused on energy and the environment involving the Faculty of Engineering, University of Alberta, and the Faculty of Science and the Faculty of Agriculture, Life and Environmental Sciences also conduct environmental research.

With the increasing importance on the use and development of 'clean technologies' and its implication for sustainable growth, the city is well positioned through its economic base, workforce and strong research base to capitalize on the opportunities that will advance its economic future both in terms of environmental stewardship and in its support for the incubation and delivery of environmental products and services.



Theme #3: Position Edmonton as a sustainable and livable City

Summary

- Support the Way We Green Strategic Plan in integrating environmental principles and actions in all corporate decisions;
- Move forward with the Master Plan for the City Centre Airport and the Capital City Downtown Plan to transform Edmonton's built form;
- Encourage transit oriented, compact development; and
- Provide services to new residents in easing the settlement process

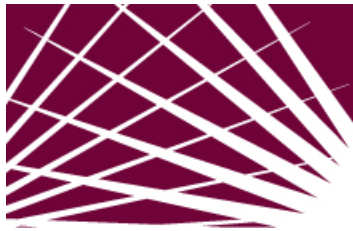
STATEMENT OF OPPORTUNITY

Without question, global economic trends, particularly as they relate to the production and sale of energy, will continue to afford positive benefits for the city of Edmonton in terms of population and employment growth and a strong local economy. However, with success come challenges including the increased need for services and infrastructure to meet the demands of its increasing population, the impact of structural labour force shortages, aggressive national and international competition for needed talent and skilled workers, and the potential impact of rapid growth on the city's built environment and quality of life.

In a recent PricewaterhouseCoopers report, *Cities of the Future: Global Competition, Local Leadership*, the authors emphasized that today's city governments must ensure that they balance the needs of their citizens with the need to grow the local economy, as the quality of place that is offered is often fundamental to the community's continued prosperity. While every city is unique and operates under a different set of economic, environmental and social conditions, it is nonetheless apparent that city leaders around the world need to develop responses to these issues if they are to prosper and grow in a global economy.

Through The Way We Green Strategic Plan, the City of Edmonton has committed to the integrating environmental principles and strategic actions into land use, transportation, social, economic, and financial decisions made at the local level. The plan also represents a strong statement that the City is committed to the triple bottom line approach to sustainable development, which can better position it in a more global economy.

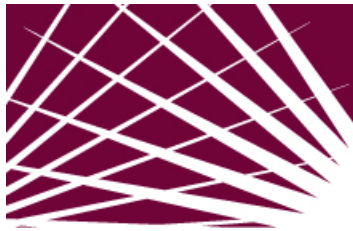
The City's commitment to sustainable development principles and policies is



contributing to the positioning of Edmonton's as a sustainable urban centre. A competitive sustainability agenda is being built around the City's the Way Ahead initiatives (The Way We Green, The Way We Move, and The Way We Build). Coupled with the Province's Alberta Innovates program, there is strong potential for long term economic growth in the city related to sustainable development and environmental products and services. This has led to the presence of a number of innovative firms in the clean technology sector in Edmonton, focused on water technologies and environmental remediation.

Emerging development policies and master planning efforts on the part of the City can also play a key role in further conveying the city's desire to be a sustainable and liveable city. The master plan for the city centre airport redevelopment demonstrates the City of Edmonton's commitment to sustainable development in a real and measured way. Accommodating 30,000 people, the community will use 100% renewable energy, be carbon neutral, and empower residents to pursue a range of sustainable lifestyles choices. The development would place Edmonton at the cutting edge of sustainable urban development and raise the bar for communities around the globe. Edmonton's Capital City Downtown Plan envisions the transformation of the downtown into a more vibrant, attractive, high density, mixed-use and walkable area and in an effort to better integrate transportation and land use in the city, there are also plans to pursue the expansion of light rail transit (LRT) in the city as a means of encouraging more transit-oriented and compact development, increased modal split away from the automobile, and greater transit connectivity and ridership across the Capital Region.

Edmonton's anticipated future growth provides the city with opportunities that other city-regions don't have in terms of designing and creating a city that is both livable and sustainable attracting new residents, visitors and business investment from across the country and around the world for years to come.



Theme #4: Foster a supportive business environment

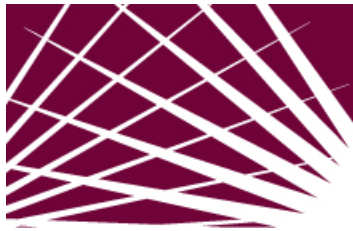
Summary

- Strengthen the entrepreneurial pipeline - understanding who is starting new businesses and which sectors are spawning new businesses;
- Expand broad based incubation services to increase success rates in new businesses;
- Provide business development supports to targeted minority groups such as new Canadians, Aboriginal and Métis and women;
- Raise the profile of small and medium size business in Edmonton - promote what we have and the impact of local, small business;
- Develop programs to increase access to capital necessary for small business growth and development;
- Develop local procurement strategies for the corporation and promote local businesses to support other local businesses; and
- Work with the small and medium enterprise community to develop worker productivity.

STATEMENT OF OPPORTUNITY

Small and Medium Enterprises (SMEs) are a source of creativity and innovation and can reflect the entrepreneurial culture of an economy. SMEs play a strong role in Edmonton's economy with over 94% of all businesses having fewer than 50 employees and almost 55% having fewer than 5 employees. SMEs are also present across all sectors of the local economy. It is estimated that a minimum of 45% of jobs in Edmonton are in businesses of less than 50 employees, inclusive of those self-employed. While the number of SMEs presents the city with an opportunity to leverage existing local business investment for further economic gains, they also present a challenge in the development and implementation of economic development programming and services. Edmonton's SMEs operate in highly competitive local and global environment. Opportunities for the city are to be found in strengthening the entrepreneurial pipeline, strengthening the economic impact of local small business and providing support to small business operated by new Canadians, Aboriginal people and women.

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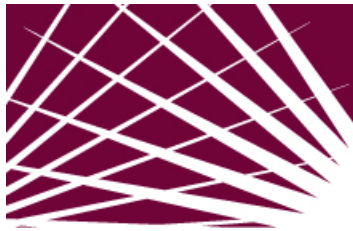
present a challenge in the development and implementation of economic development programming and services. Edmonton's SMEs operate in highly competitive local and global environment. Opportunities for the city are to be found in strengthening the entrepreneurial pipeline, strengthening the economic impact of local small business and providing support to small business operated by new Canadians, Aboriginal people and women.

Fully understanding small business development and success is key component of strengthening the entrepreneurial pipeline. Knowing who is starting new businesses, the sector they are operating in and factors in success, the City will be in a better position to foster and develop SMEs. In addition, with a higher profile in the community and broader understanding in the community at large of the economic impact of small business these same small businesses could secure the support they need to grow and develop. Indeed, local support to small business recirculates financial resources within a community allowing local businesses to support each other through sourcing input goods and services. A strong local market provides an excellent base for a small business to develop and grow.

The Province of Alberta, City of Edmonton, Edmonton Economic Development Corporation and the city's academic institutions provide a number of support programs to SMEs in Edmonton. The Business Link provides broad based business start-up and support to businesses throughout Alberta. Alberta Innovates supports research and innovation across a range of emerging industries in the province. The Edmonton Research Park, TEC Edmonton and NovaNAIT provide not only space to emerging companies but a place for creative entrepreneurs to share ideas and knowledge with each other. Opportunities exist for small business across all sectors. It is crucial that SME support mechanisms are broad based, well known and effective in program delivery.

While Alberta has achieved a very high level of labour productivity in prior years, growth in productivity has been slow in recent years². Business and community stakeholders that participated in the consultation program perceive small businesses in Edmonton as complacent and lacking in motivation to invest in productivity improvements choosing instead to simply hire more people contributing to the increased demand, and cost, of labour. In addition, smaller firms may not have access to capital funding or the knowledge to invest in productivity improvements. Through the creation of a through learning and facilitating access to capital Edmonton has an opportunity to work with and support SMEs in productivity improvements.

² Alberta's Competitiveness, A Primer for Discussion. Price Waterhouse Coopers, June 2010



Theme #5: Address the challenges of attracting and retaining a skilled workforce

Summary

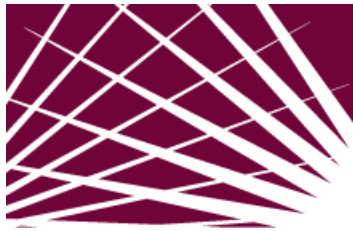
- Support EEDC initiative at workforce attraction; support involvement by more/targeted Edmonton businesses;
- New immigrant support services (TFW, PNP, etc) certification, recognition, upgrade;
- Explore rental housing supply for families;
- Upgrade website marketing to attract workforce;
- Research and communicate the areas of workforce requirements in the area;
- Work with secondary and post-secondary institutions to support labour force development; and
- Workforce development for First Nation and Aboriginal people.

STATEMENT OF OPPORTUNITY

It is well-documented that cities with high levels of human capital - typically measured in terms of the educational attainment of the population - experience higher levels of per capita income, productivity and economic growth. Much like the drive for investment, competition for skilled labour is also increasingly global. Young and educated workers, driven by job opportunities and local amenities, are highly flexible and mobile. As a result, strategies to attract and retain a deep, talented labour pool are becoming prevalent in economic development practice across the globe.

Edmonton is characterized by a skilled, educated, and diverse population as well as a strong work ethic and entrepreneurial spirit that have contributed to the development of small businesses and fresh ideas. Edmonton's excellent secondary and post-secondary learning institutions as well as the ability to attract people from elsewhere in Alberta and other parts of Canada has ensured that the Edmonton business community has access to a comparatively young and technically skilled labour force. In recent years Edmonton has experienced increasing international migration and diversity within its workforce. Through the global economic uncertainties of the last few years Edmonton was able to retain its work force when other jurisdictions lost workers.

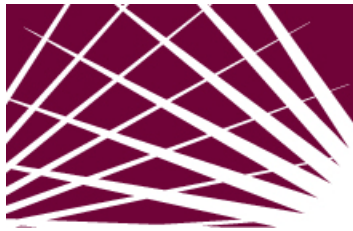
In developing the skills of the existing workforce, there are opportunities to improve the supporting infrastructure crucial to increasing labour force participation and employment for select demographic groups (i.e. women, aboriginal population, and immigrants). This is particularly apparent as it relates to the city's aboriginal



population. Shaping Alberta's Future, prepared by the Premiers Council for Economic Strategy acknowledges that the province's Aboriginal population is the youngest and fastest growing segment of its population but realizes that an equalization of educational opportunities between aboriginal and non-aboriginal population is required for Aboriginal children and young adults to build the skills to participate in the province's shifting economy.

In addition to providing a needed labour force, cities are beginning to recognize that the ability to build on linkages between highly skilled immigrants and their countries of origin can create pipelines of information and knowledge, and further stimulate increased flows of skilled labour and global trade. As reported by the Alberta Competitiveness Council, cities like Edmonton have an important role to play in welcoming and integrating newcomers and ensuring that the province is an attractive location for workers, investors and entrepreneurs from around the world.³ As Edmonton's profile of new immigrants shifts towards people from emerging markets in Asia and Eastern Europe the city as the opportunity to build on these connections and diversify its export base.

³ Alberta Competitiveness Council: Moving Alberta Forward. 2011



Theme #6: Drive greater levels of innovation and commercialization on the part of business and educational institutions

Summary

- Develop information and communications technology (ICT) business and infrastructure;
- Increase access to capital for research, development and commercialization of new products;
- Provide additional supports to innovation and commercialization such as support to research and development, industry collaboration, business incubation and technology transfer; and
- Assist existing businesses to access new markets.

STATEMENT OF OPPORTUNITY

The Province's report *Shaping Alberta's Future* suggests that applying knowledge in new ways to maximize the potential of our natural and human resources and delivering new products and services to market is the correct path to economic diversification. City Council initiated the *Way We Prosper* with 5 council directed outcomes one of which is to support the development of high potential sectors. Realizing opportunities in innovation and commercialization will assist Edmonton in achieving these goals. Opportunities are to be found in information and communications technology (ICT) and providing access to capital for research, development and commercialization of new products.

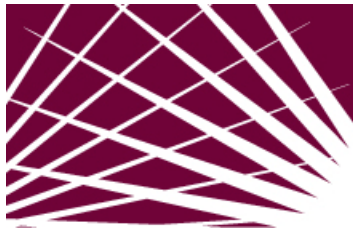
Information and communications technology (ICT) blurs the lines between sectors and has been instrumental in maintaining the manufacturing sector in North America, offering solutions that allow businesses to increase efficiency, productivity, and quality to the extent that price is not the defining factor in production decisions. In addition, ICT advancements have allowed the economy to become more globally connected. The ability to communicate immediately with anyone, anywhere paired with the ability to instantly direct investments, cash flows, and payments has enabled businesses to access opportunities across the globe. Systems have emerged to manage the movement of goods and people at the speed needed to keep up with the flow of information. It is critical for a community to have a strong ICT sector in order to drive innovations and realize opportunities across all sectors.

Investment in and access to capital for research, development and commercialization

of new products is also required to drive innovation and commercialization. A recent provincial report on Alberta’s Competitiveness⁴ by PricewaterhouseCoopers notes that spending on business R&D can lead to the creation of new products and services and without such investments, Alberta is missing out on growth opportunities. This is compounded by the lack of access to venture capital in Alberta to support the commercialization of innovations and business development. Opportunities are to be found in connecting companies to resources available for innovation and commercialization as well as working with the financial community in directing capital towards innovation and developing high potential sectors that might have traditionally been outside of their comfort zone.

Further support such as targeted incentives to support research and development, industry collaboration, business incubation, technology transfer and commercialization might be required to increase the level of innovation and commercialization in the city. These efforts could in turn lead to accessing new markets with existing products, developing new products and services for existing markets and developing new products and services for new markets. A focus on innovation and commercialization will assist in tapping into the full potential of the energy sector as well as developing new sectors of business growth in Edmonton.

⁴ Alberta’s Competitiveness, A Primer for Discussion. Price Waterhouse Coopers, June 2010



Theme #7: Develop a compelling marketing effort that raises the profile and brand of the city nationally and internationally

Summary

- Craft a unique marketing message that aligns more effectively with the unique features and assets of the city and region
- Position the city internationally as the research and supply and services hub for oil and gas in Canada;
- Promote the depth of business diversity in Edmonton including the activities and assets related to environmental products and services, ICT, health, nanotechnology and financial services
- Coordinate the marketing message of diverse agencies throughout the region including EEDC and regional partners.

STATEMENT OF OPPORTUNITY

While Edmonton is a great city, it is virtually unknown internationally, including throughout most of the US. While it is known in Canada, the prevailing image of Edmonton is of a cold, industrial, blue collar city located far from mountains, lakes or other outdoor recreation amenities. Recent environmental campaigns against the oil sands development, pipeline issues in the US and the carbon footprint issues carried by the popular media have exacerbated this image issue.

The residents of Edmonton however, feel Edmonton is a safe, entrepreneurial, growing city with great natural and cultural amenities, a strong public education system, wonderful community spirit and a “get it done” attitude.

When considering the potential for the city to attract new residents and investment from across Canada and the world, an unknown brand (particularly in the international context), or an ineffective marketing effort can be just as damaging. In this regard, Edmonton has the opportunity to craft a unique marketing message that aligns more effectively with the unique features and assets of the city and region and the appeal and distinctiveness to stand-out in an increasingly crowded global marketplace.

Edmonton’s location at the heart of Alberta’s oil and gas sector and the closest large city to the Athabasca Oil Sands effectively positions the city as the research and supply and services hub for oil and gas in Alberta. As such, Edmonton has developed solid sector strengths in areas of industrial manufacturing, engineering and construction and transportation and logistics that are further underpinned by the research and

development activity that is focused on the province’s energy sector and the opportunities related to water and waste water treatment, remediation technologies, waste management, information and communication technologies and financial services.

Edmonton is home to a significant number of innovative and nationally recognized leaders from both the public and private sector (i.e. Epcor, Capital Power, Stantec, PCL, Brick and Rexall), with public and private sector leaders like AIMCO, ATB, CWB, and Servus Credit Unions anchoring the city’s financial sector. The city’s strong public sector presence most notably in health and advanced education has further contributed to the city’s expertise in emerging areas such health research, pharmacy, nutraceuticals, nanotechnology and information and communication technology.

As the Alberta and Edmonton economies expand at a rapid rate, the city must ensure that it is competitively positioned to attract the talent it needs and the investment it wants. Great cities do not wait for the world to come to them, but seek ways to attract and welcome the international market place.