



Southeast Asia Trade & Investment Overview

Section II

Key Sector Opportunities for PEI Firms

Thunder Lake Management Inc.

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OPPORTUNITIES FOR PEI FIRMS

INTRODUCTION

Section II narrows the focus to key opportunities in the ASEAN Four that align with PEI's priority sectors of Bioscience, Information and Communications Technology, Aerospace, and Agri-food and Agriculture. Some extra sectoral information relevant to PEI's interests has been identified and included. Specifically, there are additional sections on Financial and Professional Services, including the Education and Training sector. Detailed sector overviews in Section I may be consulted for further information.

PEI'S PRIORITY SECTORS AND ASEAN OPPORTUNITIES

As the trade data analysis in Section I showed, PEI's current exports to the ASEAN Four are narrowly based in agriculture and aerospace. These sectors hold significant potential for further export growth. In addition, there are many opportunities for export diversification into other PEI priority sectors.

THAILAND

Current exports are focused on seed and table stock as well as frozen French fries which account for a combined total of \$5.1M or 77.3% of total exports in 2012. Turbo propellers at 11.9% of total exports represent the second largest value sale in 2012. These appear to have significant potential for further growth.

BIOSCIENCE

There is potential for basic R&D as well as collaborative work with emerging Thai biotechnology firms. BIOTEC's research programs could link into industrial collaboration in the areas of Food Biotechnology (improve and upgrade the processing and quality of fermented food); and Bio-resources Technology (increasing the value of commercial products, such as food and feed products, enzyme products, drug and bioactive compounds, and bio-control products).

INFORMATION AND COMMUNICATIONS TECHNOLOGIES

There are significant opportunities related to the creation, development and deployment of digital products for gaming, animation and e-learning. In addition, there appears to be some potential for operations management and support services. Data management opportunities also exist associated with new build data centres.



AEROSPACE

Thailand relies on imported aerospace and defence products, including aircraft, parts, maintenance services, and airport/ ground support equipment. The demand for aircraft and parts is increasing as the national flag carrier, Thai Airways, is renewing its fleet over the next six years, along with the Thai military's modernisation plans. The defence industry continually seeks to upgrade air combat capabilities. Demand is strong for advanced defence systems such as fighter jets, helicopters, armored vehicles, surveillance equipment, unmanned vehicles, warships and defence electronics.

Current demand also includes communication equipment, avionics, parts used in maintaining and servicing aircraft, safety and security equipment and services, passenger and baggage screening machines, ground support vehicles, and air-field lighting systems.

These developments bode well for aviation services sub-sector growth for both commercial and defence segments, including aerospace maintenance, repair & overhaul (MRO) as well as parts and components for aircraft such as communication equipment, avionics, and parts used in maintaining and servicing aircraft.

AGRI-FOOD AND AGRICULTURE

Key target market consumer segments for the agri-food sector are affluent Thai consumers, expatriates, and international tourists. The Thai food processing sector is important because it depends on imported commodities and ingredients to manufacture products for domestic and export consumption.

Food processing companies generally import higher value-added ingredients not available locally. Opportunities include food processing equipment and packaging equipment. As local companies adjust to changes in the food processing industry, there is a need for expertise and innovation in the food processing and packaging industries.

Imported meat, fruit, wine, dairy products and grocery items are now mainstream products in many Thai food retail outlets. Among products not currently present in the market in significant quantities but have good sales potential are seafood including halibut and other finfish.

The large food service sector (hotels, resorts, restaurants and institutional contracts) are heavy users of imported food for food preparation and ready-to-eat meals.

EDUCATION AND TRAINING SERVICES

Improving English language competency is high on the government agenda, and growing interest in upgrading vocational skills suggest education and training suppliers will do well in Thailand. Key opportunities include teacher training for English language; English language provision; vocation skills; and consultancy services.



Thai universities are popular among students in Laos, Cambodia and Burma. More Thai universities are offering international courses to attract these students. There may be opportunities for working in collaboration with PEI institutions to develop courses to meet increasing demand. UPEI can take advantage of its university MOU arrangements in Thailand.

BIOENERGY

Thai Government policy has been the main driver for renewable energy development in Thailand, in particular solar energy, wind energy, micro hydro, biomass, biogas and waste to energy. Areas where there are opportunities in the biomass and biogas sector include both mechanical components (biomass boilers; belt conveyors, spiral wound gaskets, sleeve and bearing sets; new technologies that will increase production in biomass in particular from bagasse and wood waste) and biogas technologies and processes that are not available in Thailand. Expertise in alternate energy systems is relevant in this market.

MALAYSIA

Frozen French fry sales have grown over 260% in the last five years. They now account for 60.5% of total exports to the country. Soybeans and soy oil exports represent 13.9% of total exports to Malaysia. Soy products appear to be an emerging market for PEI. Turbo propellers account for 12.0% of exports and in 2012 appear for the first time in the last five years.

BIOSCIENCE

The National Biotechnology Policy focuses on three priority areas: Agriculture Biotechnology, Healthcare Biotechnology and Industrial Biotechnology. The Policy has three phases, and Phase II (2010-2015) puts emphasis on the business aspects, such as developing expertise in drug discovery; development based on natural resources; new product development; technology acquisition; and licensing.

Agriculture Biotechnology centres on food processing; seed development; health products; plant research; cell culture; and microbial pesticides and other micro-organisms. Agricultural biotechnology companies tend to focus on value-added food and crops. Healthcare biotechnology highlights new drug candidates and cost effective outsourcing services for bio-drug development. A key growth area is R&D to discover novel and bioactive compounds from herbal and medical plants and other natural resources. Bio-generics and vaccines are areas of interest; local pharmaceuticals manufacturers are conducting ongoing research in bio-generics.

Specific areas of national interest are being pursued: the main causes of death in Malaysia are: heart diseases (16% incidence); septicemia (14%); cancer (11%); and, pneumonia (11%). Close to 8% of the country's adult population suffer from diabetes. In addition, women comprise about 63% of the nation's obese adult population; the rate for men is



significantly lower at 37%. Disease treatment work in PEI's bioscience cluster is relevant to these areas, notably aging, and obesity and possibly other areas.

INFORMATION AND COMMUNICATIONS TECHNOLOGY

The push for broadband penetration – including high speed broadband and wireless broadband technologies - will create a large demand for telecommunication products, solutions, and content. The mobile entertainment segment is the primary contributor of content revenue growth; it is likely to be driven by mobile gaming and music-based content. There is a growing demand for digital media/e-commerce such as network security, e-learning and edutainment solutions, telecommunications, e-government and e-health. Content applications for PDAs/mobile phones, as well as customised features for mobile phones offer potential.

Cloud computing is expected to gain momentum with growing investment in data centres and ICT infrastructure. This model is becoming an important part of most organisations' IT strategy and is one of the government's top ten strategic technology priorities.

Industry-specific applications such as banking and customer service solutions are in demand, including technologies that improve efficiencies and cost competitiveness; risk and compliance management and governance; and business intelligence, business process and document management solutions.

E-health shows significant market potential. E-health covers all forms of electronic health care from informational, educational and commercial products to direct services offered by professionals, non-professionals, businesses and consumers. Malaysia's Hospital Information System (HIS) is linking public and private facilities to ensure all health information is processed centrally to control the transfer of patient information between providers. The emphasis on ICT infrastructure as well as application usage and adoption will provide extensive opportunities associated with the HIS.

The government is providing incentives to create an IT services talent pool with the needed skill sets. Opportunities exist in: IT/technical training; System integration and consultancy services; Software/hardware development; Data centre/storage; Web services; and Software outsourcing.

AEROSPACE

Malaysia Airlines and discount airline Air Asia are rapidly upgrading their fleets. The Royal Malaysian Air Force operates various types of combat aircraft as well as cargo, search and rescue and small transport craft. In addition, the country's oil sector has a large fleet of helicopters and smaller craft servicing oil fields and offshore platforms.

Locally based airlines provide opportunities for those in the aircraft delivery supply chain, as well as aircraft maintenance and airport infrastructure. An expansion of Malaysia's MRO capability will increase demand, including the need for more



specialised machinery that addresses a wider variety of aircraft, comprehensive engineering, design services and critical testing.

Malaysia is expected to invest more than C\$26B from 2012 to 2017 to meet its defence requirements, with the capital expenditure component rising from 22% to 25% during that period. Around 70% of the demand for safety and security equipment will need to be met by imports.

AGRICULTURE AND AGRI-FOOD

Subsectors with high growth potential include aquaculture, seaweed farming, swiftlet farming (for bird's nest soup), herbal products, fruits and vegetables and premium processed food. Consumer awareness of nutrition value and food fortification for healthcare has created demand for functional, minimally processed fresh, organic and natural foods. Demand for convenience foods and processed commodities also are rapidly growing. The dearth of ingredients and lack of facilities and technology to transform food inputs into ready-to-use products is a significant challenge, and an important opportunity.

Substantial demand exists for all kinds of seafood, ranging from local fish (e.g. carp, tilapia) to more expensive gourmet delicacies (e.g. abalone, oyster and lobster). Consumers are increasingly purchasing frozen fish and seafood as a substitute for fresh supplies. Imports include frozen scallops, oysters, mussels, king crab, frozen prawns, and selected fin fish for western style menus. Malaysia is import-dependent for wine. There is potential for to export Icewine, but Malaysians favour red wines, suggesting that premium red wines may have an opportunity for niche sales in Malaysia.

In the food service market, hotels and resorts, restaurants, and the institutional sub-sectors represent the best potential for exporters.

Opportunities for agricultural product and service sales in the Malaysian market are diverse, including dairy (liquid milk, whey and natural milk products, butter and fats, cheese and yoghurt). Opportunities exist for business in beef cattle, genetics, vocational training, machinery and abattoir set-ups, and animal feed and nutrition.

FINANCIAL AND PROFESSIONAL SERVICES

These sectors are less liberalized and therefore more difficult to enter. The financial sector is skewed toward Islamic banking, effectively limiting opportunities for much smaller PEI firms. However, some areas of professional services are opening and may offer opportunity associated with public infrastructure projects.

Foreign law practices are able to partner with local law firms in Malaysia. If architectural services are opened further to foreign firms, this could be a market with significant growth potential. Foreign engineers may be licensed by the Board of Engineers only for specific projects and must be sponsored by the Malaysian company carrying out the project. Foreign accountants and auditors are allowed to own a practice in Malaysia.



EDUCATION AND TRAINING

Malaysia is aggressively pursuing the goal of becoming a regional hub for higher education. Education and skills training is a national priority and will raise demand for educational services. The Malaysian Government has announced R&D funding for its five Research Intensive Universities over the next three years. In order to ensure future innovation is maximised, these universities are being actively encouraged to collaborate with overseas universities.

Business opportunities exist in teacher training for English, Math & Science; upgrading of qualifications for pre-school teachers; and corporate and institutional training. SMEs suffer from low productivity, skills deficits and related issues. Though not the only factor affecting labour productivity, education and training are critical to improving it. Entrepreneurial training delivered through government channels may represent a new training sector opportunity.

SINGAPORE

Frozen French fry sales dominate the PEI export profile, accounting for 45.6% of total exports. Soybeans appear in 2012, accounting for 6.7% of total sales. As in Indonesia, soybeans are a new export product in the last five years. Turbo jet propellers and parts associated with the MRO market now account for 1.4% of exports.

Market opportunities exist in many sectors, including aircraft parts, pollution control equipment, medical devices and diagnostic products, game and animation products, university education services, and franchising.

BIOSCIENCE

A quarter of Singaporeans will be over 65 years by 2030. This is driving demand for quality medical care, while containing costs and maintaining Singapore's edge as the leading provider of high technology medicine in the region. Private hospitals had double digit growth in international patients in 2011, and continue to expand with new hospitals and medical centres. By 2013, over 1 million foreign patients are expected to take advantage of the Singaporean health system.

The market opportunities for healthcare in Singapore are varied and wide-ranging, focused broadly on:

- eHealth applications
- clinical trials
- research and development
- aged care products and services (training, infrastructure, long term care)
- medical devices

There is scope for sales associated with diagnostic chemicals, vaccines and nutraceutical products. An area for further development might be the need for more research into



providing quality management in the healthcare sector to ensure an outcome that is both efficient and cost-effective.

INFORMATION AND COMMUNICATIONS TECHNOLOGY

The ICT industry is a key driver of the Singapore economy, accounting for almost a quarter of the value of Singapore's GDP. The government invested \$960 million in ICT projects in fiscal 2012 and is investing the same amount in fiscal 2013.

There are excellent opportunities to sell new applications and solutions to Singapore, as it is traditionally an early adopter of innovations. Within IT, the hardware sector is the largest, followed by software and telecommunications. Opportunities include equipment, content, software and technologies for broadband, wireless broadband, and 4G.

Best prospects include government projects, security solutions, business analytics, data centers and cloud computing, and solutions for the following industries: healthcare, education, manufacturing, logistics, tourism, transport, entertainment and finance.

Interactive and Digital Media offer opportunity and encompass digital content for production of electronic games, animation, visual effects, licensing and merchandising, content-hosting and financing. Opportunities for overseas training in digital media and animation are worth considering. Other Ocean Group, as well as other digital interactive media suppliers could find compelling opportunities in this market.

Electronic Arts, the world's largest developer and publisher of interactive entertainment, established its Asian Regional Headquarters (RHQ) and online game development studio in Singapore in 2007. The studio has localised and customised popular EA games for the Asian markets, distributing them in at least eight different languages.

AEROSPACE

Singapore's aerospace industry is divided into two major segments: 90% of the aerospace companies are involved in MRO services and 10% in manufacturing activities.

With the expected growth of more regional budget carriers, airline operators, and expected growth in air traffic in the region, the demand for MRO services will increase. Sales prospects for products and services related to aircraft repair and overhaul, such as repair equipment for landing gears and propellers, engine and fuel systems, avionics systems and test equipment are expected to remain strong over the next few years.

There are opportunities to sell parts, technology and services to high net-worth individuals, casinos, resort operators, flight chartering companies, airline leasing companies, aerospace companies, and other airline operators in Singapore. Singapore has world-class aerospace design and manufacturing OEMs and suppliers. Products designed and manufactured in Singapore include engine casings, engine gears, valves, seat actuators, electrical power systems and galley equipment. In addition, Singapore is well positioned to expand market share in business aviation, regional training and asset management.



A large government aerospace and defence budget means that there are business opportunities for Canadian suppliers with an interest in marketing their niche products, systems and services to defence and commercial customers.

AGRI-FOOD AND AGRICULTURE

Singapore's per capita food consumption levels are among the highest in the region. For food manufacturers, this means the market is not only receptive to new products; it is prepared to pay for new food experiences. There is growing interest in products that provide specific nutritional benefits/value (especially for children). There is an awareness of country of origin related to provision of safe, clean, and green products.

There is a growing trend to private label/house brand products in supermarkets. Supermarkets are importing more products directly, through traders, agents, and consolidators. There is demand for fruit and vegetable juices, processed fruit and vegetables, and high growth rates for imported fresh vegetables.

EDUCATION AND TRAINING

Top performing Singaporean students as well as the majority of foreign students seek higher education overseas. There are around 20,000 students (mainly undergraduates) studying overseas today, largely in Australia, the US and UK.

Western universities have found success in recruiting full-time students (both local and overseas) and have begun offering external degrees and executive education programs to Singaporeans and international executives working in the region. In addition to attracting more Singaporean students, some universities and colleges have focused on targeting foreign students studying at the high school and university levels in Singapore.

Some foreign universities have collaborated with local institutions and organisations to offer partial or full degree programs. Singaporean students are increasingly attracted to programs that allow them to complete at least part of their course work in Singapore and help alleviate the costs of overseas programs. The following degree courses are becoming increasingly important and are expected to see increased demand from Singaporean and third-country students studying in Singapore: Life Sciences and Healthcare; Supply Chain Logistics; Hospitality and Tourism; Media and Animation; Sports Science and Medicine; and Wealth Management and Financial Planning.

The Singaporean labour force is not adequate to run the economy and as a result has to import about 2 million foreign workers and professionals to run its factories, companies and services. This opens the door to opportunities to deliver technical training for corporate clients, as well as more traditional liberal arts offerings.



INDONESIA

Almost 75% of total PEI exports in 2012 were accounted for by potatoes (fresh and frozen, seed and table stock) and turbo-propellers associated with the aerospace sector. Both products groups have grown substantially over the last five years. Soybeans made an initial appearance in the export mix in 2012. This product represents 1.0% of total exports for 2012.

BIOSCIENCE

With the middle class expected to reach 74 million this year, Indonesia offers a large market for the health and medical sector. Private hospitals are trying to keep up with developments in high-tech medical equipment, devices and testing protocols, and are a source of import demand. Indonesia's medical device market was worth C\$795M in 2012, predicted to continue growing at about 15% per year. Foreign manufacturers accounted for 90% of all medical device registrations in 2012.

Demand for quality health products is expected to steadily increase, particularly in terms of: Therapies and treatment equipment for cancer; Clinical laboratory equipment for circulatory problems, infections, parasites and respiratory problems; Dental equipment; Diagnostic and surgical equipment, including for plastic surgery; Dermatology sector; Health food supplements, vitamins and over the counter drugs; and Healthcare management (IT) systems.

INFORMATION AND COMMUNICATION TECHNOLOGY

Indonesia's telecommunications infrastructure market has good potential for wireless equipment, services and content provider companies. The Indonesian IT market is expected to grow 17% annually over the 2011- 2015 period. The market potential for providing enterprises with ICT services in Indonesia is expected to reach C\$3 billion by 2015, while the market potential for consumer services is estimated at approximately C\$1.5 billion. IDC data shows the information technology services market to be worth C\$1 billion by 2013, with an annual growth rate of roughly 20%. In e-health, carriers are exploring provision of health consultation via mobile which will benefit people living in rural areas, while health facilities are aiming to increase their web presence by providing an interactive web health consultation within their websites.

Indonesia is the fastest growing mobile telephone market in the Asia Pacific region. The mobile market surpassed 260 million subscriptions in 2012, with penetration running at more than 100%. By 2015, it is expected that there will be more than 320 million subscriptions for service.

Mobile contents having success include: praying time reminder applications (Indonesia is predominantly Muslim), news updates and social applications that let users rate local venues/restaurants/shops. Carriers are looking for mobile applications that are unique and/or can be tailored to local interests.



The 2012 Information and Electronic Transaction Law has bolstered the data centre business by requiring enterprises that handle electronic transactions to establish data centres and data recovery centres inside the country. This opens up both product and service demand, including data management technologies. Opportunities in this area may be of interest to Discovery Garden.

In 2011, IDC found that more than 50% of end user organisations in Indonesia were either actively searching and/or planning to adopt public cloud services within the next 12 to 24 months. IDC expects an increasing number of companies to begin to better understand the value and mechanics of cloud computing.

AEROSPACE

As the Indonesian air force builds its fighter fleet, there are opportunities for manufacturers to sell a broad range of military aircraft, vehicles, communications systems, spare parts, and maintenance services. On the civil side, with inadequate land transport infrastructure and strong economic growth, demand for commercial air services is strong. The number of airlines operating in the market has expanded to 27 plus another 10 in the process of obtaining licences. Implementation of an open skies policy in ASEAN in 2015 is expected to stimulate more competition in the region. The Indonesia Air Carriers Association predicts a 52% increase in passengers by 2015 as airlines boost their fleets and new carriers enter the market.

Indonesia's aviation market is growing at 20% per year. Aircraft, replacement parts and service are valuable and significant markets, as well as airport construction and development, air traffic control and airport logistics services and ground support equipment. The dramatic growth seen in this sector has created demand for equipment and services across the aviation industry spectrum.

To serve and connect areas served by shorter runways, airlines have to use narrow-body aircraft such as regional jets or turbo-prop aircraft. Canadian regional jets and turbo-prop STOL aircraft can readily address this need.

This links to the MRO subsector which has great promise. The market is estimated to be worth C\$1B per year and is growing at roughly 15% annually. Domestic facilities account for only about 30% of MRO services, with an estimated annual expenditure of C\$610M spent overseas. By 2016, the MRO domestic market is predicted to be worth more than C\$2.0B.

AGRI-FOOD AND AGRICULTURE

There is significant market potential for processed food and food ingredients for the Indonesian food industry. Indonesia is reported to have 800,000 businesses involved in the production of food and drinks ranging from multinational companies to traditional home industries. Indonesian consumers prefer international brands and imported products, including for their children. The Indonesian Food and Beverage Producers



Association (GAPMMI) have estimated that overall food and beverage sales nationwide will rise by 10% to C\$78.9B in 2013.

Indonesia's growing food industry will continue to demand wheat, food-use soybeans, beef, dairy products including skim milk powder and whey powder, flavorings, potatoes, fruit concentrates, bakery ingredients, baker's premixes, and dried peas. The supply of services to the food processing sector also provides an opportunity through licensing arrangements for food products.

Trends include ready-to-cook and ready-to-eat foods with the best market prospects for sauces and seasonings, canned foods, frozen vegetables, and snack foods. Niche markets exist for frozen pizzas, frozen meat and poultry, delicatessen items, biscuits, confectionery, breakfast cereals, cooking and salad oils, and non-alcoholic beverages such as juice and energy drinks.

In the hotel, restaurant and institutional area, market prospects for suppliers include prime beef; French fries; pastry products; sauces and seasonings; oil and vinegars; cereals; canned seafood and other canned foods; snacks for hotel bars and room service; reasonably-priced wines; liquor; beer; soft drinks, and juices. Also in demand are fish and seafood, nuts and pulses, organic foods, grocery products, gourmet food, and ready-to-drink tea, coffee, and functional beverages.

FINANCIAL AND PROFESSIONAL SERVICES

There is growing demand for financial and professional services. The burgeoning middle class offers opportunities in banking products, insurance, and the capital market. Significant growth in Islamic banking is expected. In pursuit of advanced IT services and products for customers, many banks will increase spending to enhance risk management, information analysis and compliance.

Due to seaport congestion the government plans to construct new ports in Jakarta, Batam, and Papua. Opportunities exist for companies with experience in port architecture, construction and engineering, as well as logistics and container management. Opportunities also exist in areas of law, accountancy, and management consultancy.

EDUCATION AND TRAINING

A growing economy reflects a growing need for a skilled work force, and the Government of Indonesia currently allocates 20% of the state budget for education. With a population of approximately 248 million, 30 million in the middle and upper class, and 60% under the age of 30, the potential for student recruitment is substantial. Options for recruitment beyond a typical four-year program include transfers from Indonesian schools after two years as well as exchanges. Additional opportunities exist in Indonesia for the delivery of post-secondary education. The need for well-trained teachers is also evident.



OBSERVATIONS & RECOMMENDATIONS

Key Observations

The findings in this study indicate substantial commercial promise for PEI firms in the ASEAN Four markets.

In its April, 2012 Speech from the Throne, the PEI government set goals to increase employment levels to 75,000 jobs and grow the provincial GDP to \$6 billion by 2016. To achieve these goals, the government is realigning economic development strategy and programs to strengthen the focus on private sector job creation, export market development and investment attraction.

The province also will focus agricultural support programs on export market development and food branding; develop new markets for the fisheries and aquaculture sectors; recruit new aerospace companies to Prince Edward Island; further build bioscience and information technology as important sectors for Prince Edward Island; and expand strategic focus on the growing financial services sector.

In many respects, these objectives can be advanced by developing closer trading relationships with the ASEAN Four. The opportunities to build on existing sales in the agriculture and agrifood sector are significant. There are many opportunities in all four countries for agriculture and agrifood exporters as well as opportunities for companies providing services, including education and training, to the food and beverage sector. With a reputation for high quality food products, PEI could find acceptance in these markets. The Island Abbey Foods branded products might be a good fit in markets where they can be positioned for health conscious consumers.

Seafood opportunities are available in each of the ASEAN Four states. In Thailand, there is good sales potential for seafood including halibut and other finfish. Currently, these products are not present in the market in significant quantities. Malaysia has a very high per capita consumption of fish and seafood, and substantial demand exists for all kinds of seafood, including delicacies (e.g. abalone, oyster and lobster). As the cost of fish and seafood increases, Malaysian consumers are increasingly purchasing frozen fish and seafood as a substitute for fresh supplies. Imports include frozen scallops, oysters, mussels, king crab, frozen prawns, and selected fin fish for western style menus.

In Indonesia, the prospects are good in the Hotel, Restaurant and Institutional Market for suppliers of fish and seafood, including canned products. While there has been a long term decline in per capita seafood consumption in Singapore, there is a trend in consumer preference toward imported frozen products due to the modern lifestyle demand for food convenience.

According to the Economist Intelligence Unit (EIU), between 2001 and 2010, IT services spending in Asia doubled from US\$45.6B to US\$90.7B. Despite the sombre global economic outlook, the EIU forecasts that IT services spending in Asia will reach US\$141.3B by 2016. There are opportunities for the PEI ICT industry in the ASEAN



Four, and quite likely further afield in the region. The data management and digital content subsectors appear to be among the most promising. PEI's gaming and animation industry could find new buyers for their products and expertise in these markets.

Technical and scientific collaboration could lead to new R&D activity for PEI's Bioscience cluster. There are opportunities for collaborative R&D on bioactive compounds, and work on health challenges such as diabetes, obesity, and aging. Markets exist for diagnostic chemicals and test preparations, vaccines, and health supplements. These are all areas in which PEI has a proven record of success. In addition, there may be opportunities in the bio-energy sector, especially in Thailand.

The aerospace sector is interesting for several reasons. Vector Aerospace has MRO contracts in Indonesia and other countries in the region, as well as service operations in Australia. The company's regional centre is in Singapore. Despite the location, PT-6A engines are sent from Southeast Asia to Summerside for MRO servicing. Thus, to the extent that the company expands operations in Asia, it brings home benefits to PEI. For PEI's aerospace cluster, the ASEAN Four represent a significant export opportunity. This includes not only the MRO work at Slemon Park, but also the sale of components and services in ASEAN countries.

Education and Training, though not a priority PEI sector, does represent an important export development opportunity in the ASEAN Four. This involves not only student recruitment to PEI's post-secondary institutions. It also holds promise for firms that can deliver English language, digital media, animation, and technical training in-market for both corporate and government clients.

There are also other niche opportunities that could be explored. In Indonesia, for example, emerging opportunities include biofuel processing and renewable energy technology and services. In some cases, due to the large and growing consumer markets in these countries, franchising may be appropriate in the retail food subsector.

Recommendations

There is exceptional business opportunity for PEI in each of the ASEAN Four. It is appropriate and timely to undertake systematic market development activities in the ASEAN to convert opportunity into reality. The following are recommendations for consideration by Trade Team PEI:

- A reconnaissance visit is needed to confirm export potential and initiate contacts with key private, sector and government players. This should be pursued at an early date.

A spring reconnaissance mission by Trade Team PEI will sharpen the perspective on key opportunities and will help shape plans for follow-on business missions. That said, an initial multi-sector business mission comprised of sector association representatives could be a good starting point. In addition to PEI's priority sectors, the group should include representatives from the Education & Training



- sector. Apart from providing first hand market exposure and intelligence gathering, the sector representatives will be able to help narrow the focus further to specific opportunities.
- Conducting a dedicated market development effort with limited financial and human resources is very challenging. In the current environment of fiscal restraint, Trade Team PEI may need to focus those scarce resources on the most promising sector opportunities in Southeast Asia. Beyond an initial reconnaissance mission, it appears there are strong grounds for preliminary planning toward single sector missions for Agrifood, Aerospace, and Education at the appropriate time. In no particular order, the best business development opportunities appear to be:
 - *Agriculture & Agrifood* is very promising in the fresh and frozen markets in the processing, retailing, food service, and institutional segments. Fish and seafood are in demand in all four states with Malaysia and Indonesia the large markets and Singapore a high end opportunity;
 - *Aerospace & Aviation* is a rapidly growing sector with Singapore as the leading market though opportunities are extensive in each country. The entire Aerospace cluster in PEI has technologies, services, and expertise in demand among the ASEAN Four; and
 - *Education & Training*, while not a PEI priority sector, holds opportunities for both in-market training and student recruitment that are exceptional. Training is in demand for teachers, health workers (nurses), entrepreneurs, digital media, tourism, financial planning, and English as a second language. The strongest market for student recruitment is Singapore; in the other three there may be a slight emphasis on demand oriented to in-market training services.
 - The identified opportunities will be captured only with the provision of appropriate government assistance to PEI's exporting companies. Among the measures that could be further considered are:
 - It would be useful to consider measures that could help get more PEI firms over the perceptual hump of "Inaccessible Asia". The distance between Canada and Southeast Asia, time zone challenges, and the lack of direct flights may dissuade some SMEs from pursuing business in the ASEAN region. Hosting opportunity workshops may reduce this concern.
 - Supporting additional research and analysis on specific subsectors identified by PEI firms that are considering an initial foray into the market.
 - Developing mechanisms to support and assist with the identification of agents, distributors, and representatives, as well as the establishment of a local presence.



- It would be helpful to craft a PEI/ASEAN Market Development Strategy to guide efforts over the next 3 to 5 years.
- In addition, there should be a specific Agriculture and Agri-food Strategy developed to support PEI entry into ASEAN food markets. The opportunity to build on the presence of PEI potato products should not be missed. Similarly, products that are new to the PEI product mix, such as organics, should be covered. Despite the significant opportunities in this sector, PEI registers no exports for livestock, hogs and pigs, or wines to any of the ASEAN Four in the last 5 years; there may be niche plays worth examining. Finally, very low values are associated with some products in the fish and seafood sector (tuna for example).

Market Development Considerations

Finally, there are some market development opportunities that not only increase exports but also re-vision existing capacity in the province. A few of these are presented here.

1. There may be a good export opportunity in ASEAN for the Atlantic Beef Plant. Ultimately, this would entail securing halal certification for the plant's products. Considering that the global halal food market is valued at more than \$1 trillion, there is the prospect that all of ABP's production could be sold offshore. Other Canadian producers are looking at similar opportunities. The proposed ProNatur (formerly Keystone Processors and Natural Prairie Beef) beef plant in Winnipeg expects to secure halal certification and export over 30% of its product to Muslim countries. The slaughter plant is projected to process 250 head per day. So far, politics and competing plant proposals in Manitoba have delayed construction.
2. There is significant demand for education and training products in the ASEAN Four that should not be ignored. Improving English language competency, technical and vocational skills training, SME management training, and student recruitment at the secondary and post-secondary levels are opportunities that can be found in Thailand, Malaysia, Singapore, and Indonesia. UPEI has MOUs with institutions in the Philippines and Vietnam, but among the ASEAN Four, it is only involved with Thailand.

In Thailand's education system, English language instruction and increasing foreign collaboration in the fields of science and engineering are part of the government's economic plans. Science and engineering may be an entry point for UPEI to engage with Thai counterparts. UPEI has four MOU's with Thai universities and affiliated veterinary faculties: Al Bayan University, Mahidol University and the Faculty of Veterinary Science, and the Faculty of Veterinary Medicine Kasetsart University. The pursuit of science and technology related workshops and seminars at Chiang Mai University and other institutions could open the door to collaboration between PEI/Atlantic and Thai scientists.



Other opportunities might be designed in the area of exchange trips for Thai and other ASEAN university professors to UPEI and Holland College, training of Ministry of Education officials and science teachers on how to creatively teach science to primary and secondary school pupils, and possibly build links and share expertise with ASEAN institutions on climate change, aquaculture, and alternate energy.

In the area of student recruitment, PEI will need to do its homework. In the education and training sector, perceived Canadian weaknesses will be PEI millstones. A lack of sustained promotion, misperception about Canada among ASEAN publics, and lack of targeted government and industry support have combined to limit Canadian success in these markets. Against these challenges, there are strengths PEI can field: relatively low tuition fees, high education standards, a multicultural society, a lower cost of living compared to other western jurisdictions, very high quality of life, post-graduation work permit possibilities, and an open (non-discriminatory) immigration policy. It will be necessary to engage both UPEI and Holland College to present a compelling vision to ASEAN audiences of educational opportunity in PEI.

3. PEI's unbalanced two-way trade relationship with the ASEAN Four is a situation that offers an important trade development opportunity. As a rule, long term two-way trade growth depends upon trading partners enjoying mutual benefits from the relationship. PEI has an opportunity to achieve greater export results and a higher profile in these countries by helping the ASEAN Four to showcase their products in Canada. With a PEI lead, this could be pursued via a reverse trade show on an Atlantic-wide basis.
4. In terms of investment attraction to PEI, a focus on the largest ASEAN investors in Canada would be efficient: Singapore and Malaysia. A review of investment in Canada by the ASEAN Four since 1987 shows that these two countries have considerable public and private resources, and the demonstrated willingness to invest in Canada. Further work will be needed to develop a better understanding of their sectoral investment interests, and the approaches that could attract inward investment to PEI.