



January
2003

prepared for Cape Breton's Economic
Development Stakeholders

Cape Breton

Industry Targeting Assessment

presented by

**Deloitte
& Touche**

Fantus Corporate Real Estate Solutions

Today's Topics

- ◆ **Project Background**
- ◆ **Industry Targeting Process Overview**
- ◆ **Assessing Cape Breton's Business-Attraction Strengths**
- ◆ **Screening Potential Target Industries**
- ◆ **Profiles of Recommended Target Industries**
 - ❖ Value-Added Wood Product Manufacturing
 - ❖ Marine Bioceuticals
 - ❖ Lower-Tech Pharmaceutical Production
- ◆ **Next Steps**

Project Background

- ◆ **Cape Breton is transitioning to a more diverse economic base from one historically focused on coal and steel operations.**
- ◆ **The area's economic development stakeholders have undertaken several important initiatives to facilitate this process, including:**
 - ❖ Proactive redevelopment of the Sydney Steel Corporation (SYSCO) site;
 - ❖ Attracting and securing several new call-center operations, representing 2,000 new jobs; and
 - ❖ Positioning the area for the potential economic benefits derived from development of the Scotian Shelf natural gas resources.
- ◆ **To further these successful initiatives, and to continue to develop a new vision for Cape Breton's economic development, Cape Breton seeks an industry targeting strategy to further promote the area for business investment.**

Project Objectives

◆ Deloitte & Touche Fantus was retained to:

- ❖ Assess the business-attraction strengths and competitive challenges of Cape Breton, specifically for its major industrial parks;
- ❖ Identify three target industry sectors exhibiting a high degree of 'fit' with Cape Breton's locational strengths; and,
- ❖ Identify companies within these industry sectors that are suitable targets for future marketing efforts.

The goal of this project is to better enable Cape Breton's economic development stakeholders to succeed in the highly competitive business-attraction area.

Our Qualifications and Perspective

- ◆ **Deloitte & Touche Fantus' qualifications and experiences include:**
 - ❖ Thousands of site-selection engagements for corporate clients across a broad spectrum of operation types, industries, and geographies.
 - ❖ Specialized services for our corporate clients in facility rationalization, supply chain consulting, business process design, and labor market analysis.
 - ❖ Hundreds of economic development consulting engagements involving:
 - ◆ Competitiveness assessments;
 - ◆ Incentive strategy development; and,
 - ◆ Industry targeting.

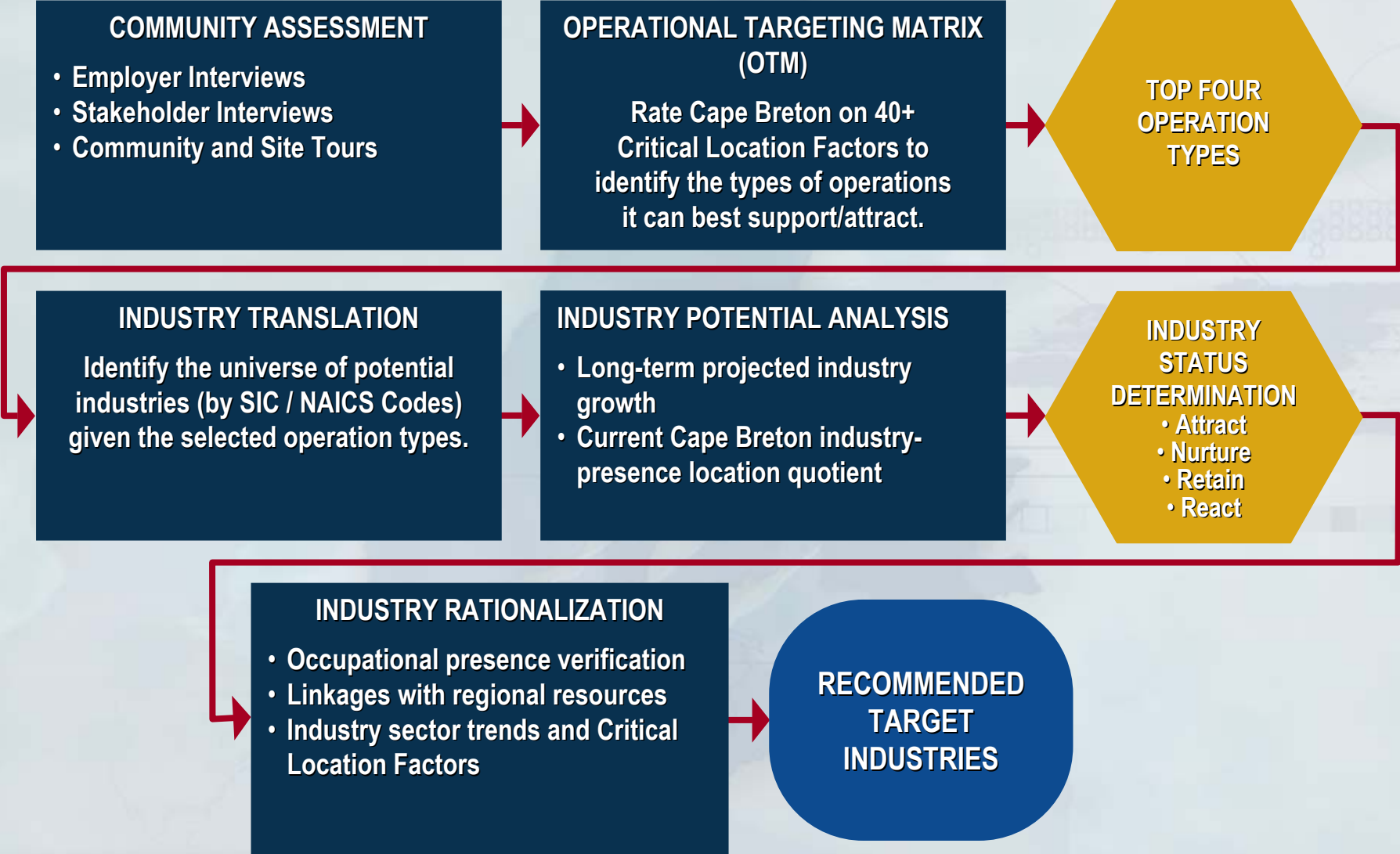
- ◆ **This experience base gives us unique insight into what drives corporate location decisions, and the ways that communities can position themselves to improve their competitiveness.**

Industry Targeting Process Overview

Industry Targeting Overview

- ◆ **Our targeting methodology for Cape Breton is designed to answer the following questions:**
 - ❖ *How do the factors that drive location and investment decisions vary by industry? And by facility type?*
 - ❖ *What types of facilities can best leverage Cape Breton's operating cost and condition strengths?*
 - ❖ *Which industries are preferred targets for Cape Breton's marketing efforts based on their projected performance and operating requirements?*
 - ❖ *What companies within these industries may be better suited for expansion or location in Cape Breton?*

Industry Targeting Process Overview



Key Definitions

- ◆ **Operation** – A facility or function, not industry specific, with unique critical location factors. We identified 13 different functional facility types (each with unique critical location factors), ranging from International Headquarters to Life Sciences R&D to Light Assembly.
- ◆ **SIC (Standard Industry Classification)** – 1 to 6 digit coding system defined in 1987 and utilized by the federal government to organize businesses into logical groups. The larger the number of digits, the higher the specificity. Most business-based data are currently provided utilizing this system.
- ◆ **NAICS (North American Industry Classification System)** – This system is in the process of replacing the SIC system. Not all data types are yet available in this coding system. It will not be fully implemented until 2005.
- ◆ **Industry** – 282 two- and three-digit SIC groupings defined by the U.S. Bureau of Labor Statistics. Employment and output projections, and occupation-matching information is provided utilizing this system. (Canada uses the NAICS system.)
- ◆ **Target Industry** – One or more SIC codes organized into a specific industry.
- ◆ **SOC (Standard Occupation Classification)** – Coding system utilized by U.S. and Canadian government agencies to identify and report on trends in over 700 occupations.
- ◆ **Location Quotient (LQ)** – The relative concentration of skills, employment, etc., of a particular geographic region versus the average nationwide concentration in Canada. A LQ equal to 1.0 indicates that the regional concentration of skills, employment, etc. equals the national average.



Assessing Cape Breton's Business-Attraction Strengths

Business-Attraction Strengths Assessment

- ◆ **Cape Breton's business-attraction strengths dictate the types of facilities and industries it can best attract/support.**
- ◆ **The first half of our targeting process identifies Cape Breton's compelling locational advantages and translates them into appropriate operation types.**
 - ❖ Conversely, potential weaknesses are also used to eliminate certain facility types from further consideration.
- ◆ **Our business-attraction assessment consists of two primary components:**
 - ❖ Community Assessment; and,
 - ❖ Operational Targeting Matrix.

Community Assessment

- ◆ **Our Community Assessment activities mirror those we perform in finalist communities for our corporate clients:**
 - ❖ Interviews with select area employers from various industries
 - ◆ Tesma Precision Finished Components
 - ◆ Stora Enso
 - ◆ Copol International
 - ◆ Ocean Nutrition
 - ◆ DynaGen
 - ◆ EDS
 - ◆ Stream International
 - ◆ VM Productions
 - ◆ Laurentien Energy / SYDPORT
 - ❖ Meetings with economic development stakeholder groups and education institutions
 - ◆ Enterprise Cape Breton Corporation
 - ◆ NS Treasury and Policy Board
 - ◆ Sydney Steel Corporation
 - ◆ Strait & Area Chambers of Commerce
 - ◆ Nova Scotia Business, Inc.
 - ◆ Sydney Area Chamber of Commerce
 - ◆ University College Cape Breton
 - ◆ Nova Scotia Community College
 - ◆ Human Resources Development Canada
 - ◆ Straights-Highlands RDA
 - ❖ Tour of major industrial parks/sites, transportation infrastructure, and residential areas in the Strait and Sydney regions.

Community Assessment (continued)

- ◆ **Our discussions focused on the types of issues that can only be explored on the ground in a community.**
- ◆ **Operating experiences and satisfaction levels of existing employers**
 - ❖ Labor availability, productivity and potential constraints
 - ❖ Utility and transportation infrastructure
 - ❖ Access to customers, materials/supplies, and services
 - ❖ Industry perspectives and prospects for the area
- ◆ **Community and economic development initiatives**
 - ❖ Infrastructure upgrades
 - ❖ Industrial site development plans
- ◆ **Quality of life, image and amenities**
 - ❖ Housing
 - ❖ Recreation

Cape Breton's Primary Business-Attraction Advantages

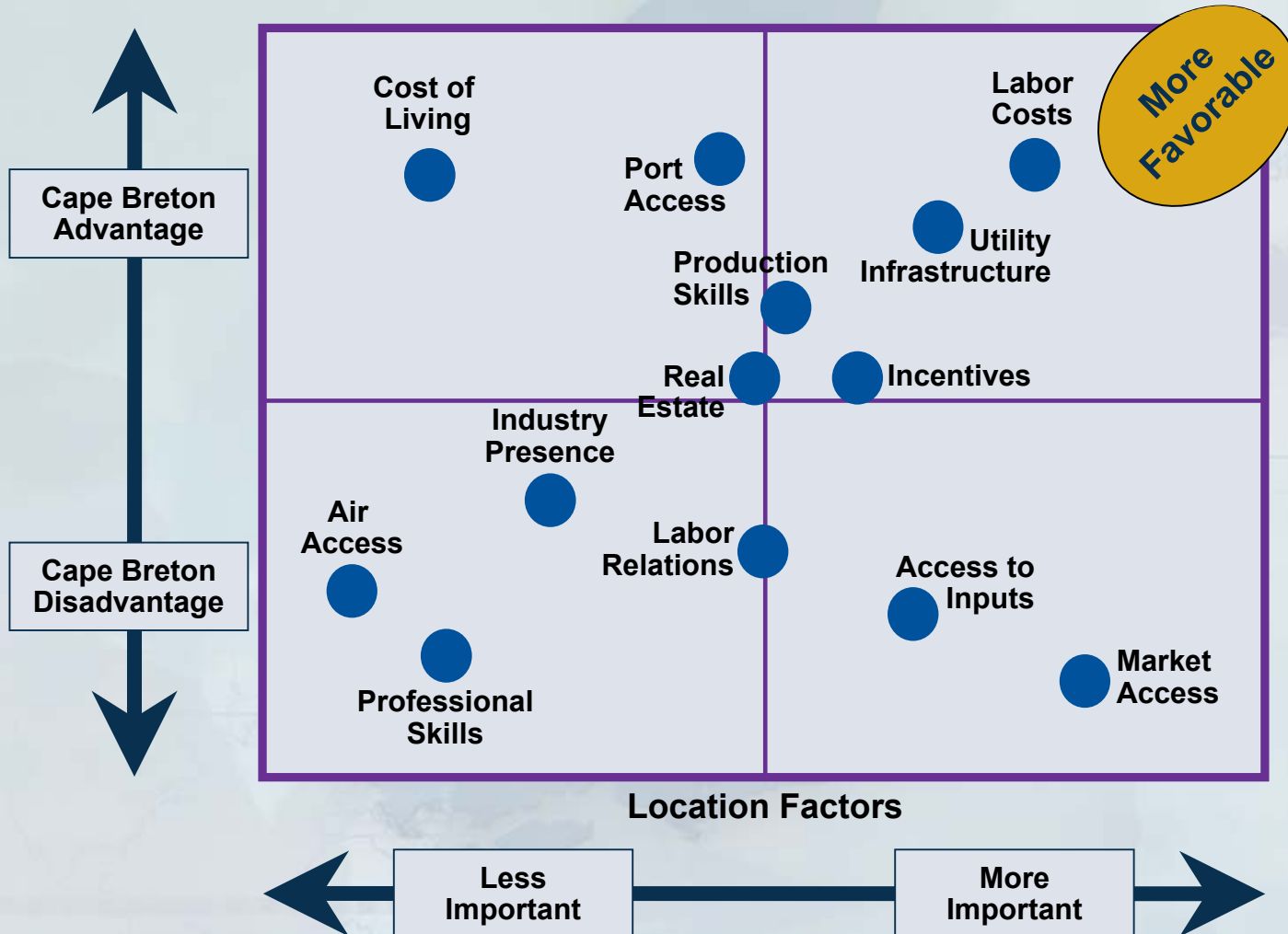
- ◆ **Available, high-quality workforce offering a wide range of production skills at cost-competitive wages**
- ◆ **Strong utility infrastructure able to supply the energy needs of heavy manufacturing**
- ◆ **Favorable transportation infrastructure to facilitate the movement of bulk materials via road, rail and port infrastructure**
- ◆ **Close proximity to Europe in terms of port access versus other North American location**
- ◆ **Strong industrial incentive potential to facilitate industrial investment and expansion**
- ◆ **Pro-industrial and pro-business mindset to attract and secure investment**
- ◆ **Favorable quality of life attributes, highlighted by a low cost of living, moderate climate, outdoor recreation opportunities, and a unique culture/heritage**

Cape Breton's Competitive Challenges

- ◆ **Considerable distance from North America's main industrialized areas and population centers (centers of supply and demand)**
 - ❖ Access to customers and suppliers is most often the #1 factor influencing location strategy decisions.
- ◆ **Narrow industrial and services base, at present**
 - ❖ The arrival of EDS and Stream has helped diversify the employment base.
- ◆ **Limited professional skills base, coupled with potential constraints on recruitment of high-skilled professionals in some industries**
 - ❖ High-skilled professionals often prefer to locate in larger urban centers where their industry is well established.
- ◆ **Limited air-transportation access and services**
- ◆ **History of high union participation and activity levels**

Cape Breton's Competitiveness for Manufacturing

How are Cape Breton's advantages and disadvantages viewed by manufacturing prospects?



Operational Targeting Matrix (OTM)

- ◆ **Following the Community Assessment, we rated Cape Breton's business-attraction capabilities according to our Operational Targeting Matrix (OTM).**
- ◆ **The OTM is a tool developed by Deloitte & Touche to evaluate a community's ability to support/attract a diverse spectrum of facility types:**
 - ❖ Food processing
 - ❖ High-tech manufacturing
 - ❖ Life sciences manufacturing
 - ❖ Light manufacturing/assembly
 - ❖ Heavy manufacturing
 - ❖ Regional / national distribution
 - ❖ Local distribution
 - ❖ Lower-skill customer contact center
 - ❖ Moderate-skill customer contact center
 - ❖ Higher-skill customer contact center
 - ❖ Global headquarters
 - ❖ Regional headquarters
 - ❖ Life sciences research & development
 - ❖ Technology research & development
- ◆ **Each of these operation types requires a unique combination of operating conditions and costs to compete successfully.**

Operational Targeting Matrix (continued)

- ◆ The OTM employs over 40 operating parameters to assess the ‘fit’ between a community and a particular type of facility.
- ◆ A sampling of the factors utilized in the OTM includes:
 - ❖ Production skills presence
 - ❖ Professional skills presence
 - ❖ Labor availability
 - ❖ Labor costs
 - ❖ Labor relations
 - ❖ Utility infrastructure
 - ❖ Real estate assets
 - ❖ Environmental setting
 - ❖ Transportation infrastructure
 - ❖ Quality of life; amenities
 - ❖ Industry clusters
 - ❖ Incentives

Appropriate Operation Types for Cape Breton

Based on our Community and OTM Assessment, Cape Breton appears best suited to support/attract four operation types

◆ Light manufacturing, including assembly

- ❖ Operations making higher-value products, the production cost of which is weighted more toward direct labor as opposed to transportation.

◆ Heavy manufacturing

- ❖ To be competitive, these operations should be able to access their inputs locally while leveraging Cape Breton's existing manufacturing skill base, lower labor costs, and rail and port facilities.

◆ Select technology and life sciences product manufacturing

- ❖ Facilities producing high-value / low-weight products, without the need to be close to research and development centers.

◆ Non-financial customer contact centers

- ❖ Cape Breton's demonstrated success in attracting call centers speaks to its excellent supply of cost-effective labor for these operations.

We utilized our Industry Potential Screening methodology to evaluate which industries are more likely to deploy operations of these types.

A Note on Call Centers and Customer-Contact Operations

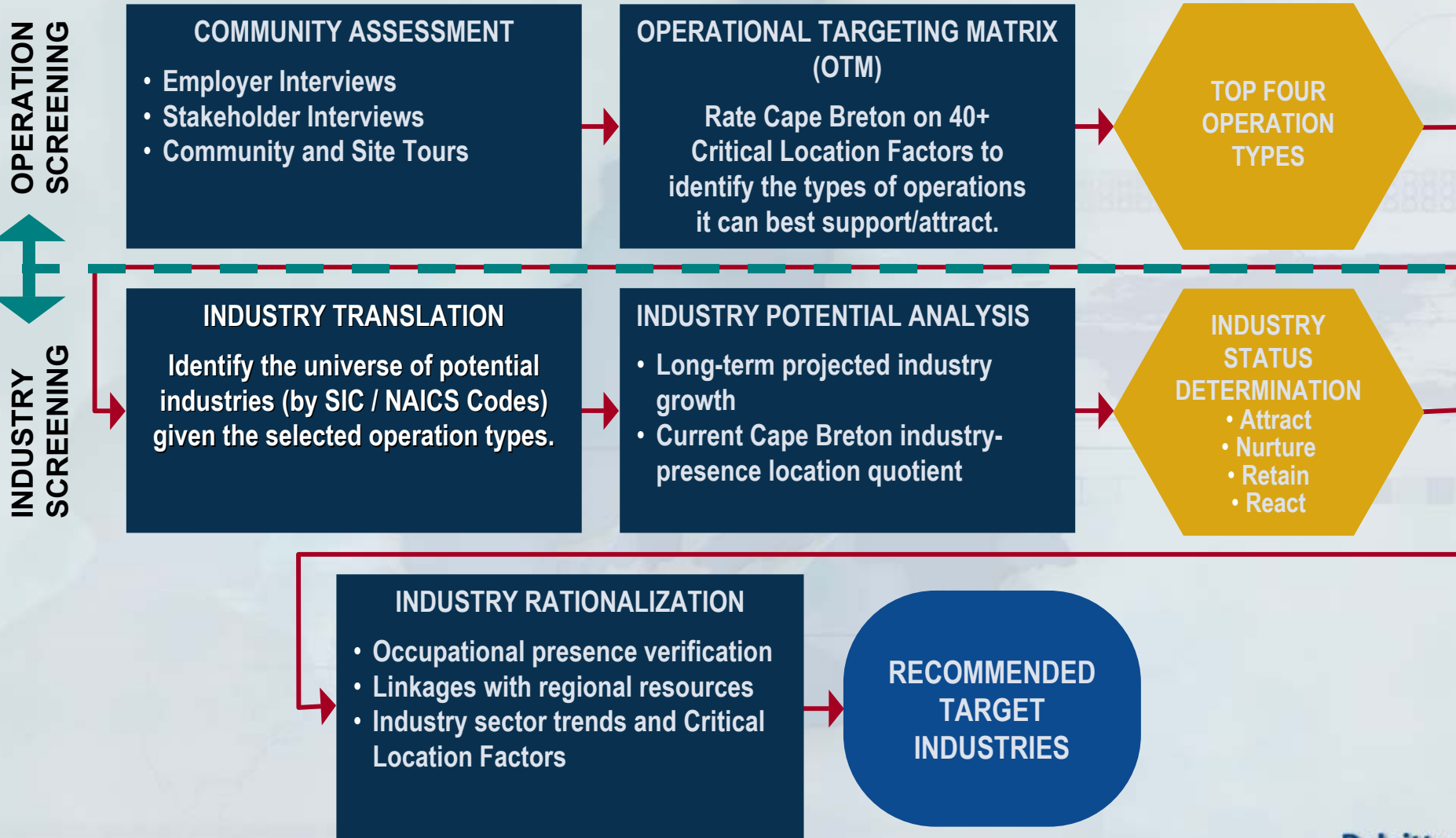
- ◆ As evidenced by our Community and OTM Assessments, we feel that customer-contact centers are an excellent fit with Cape Breton.
- ◆ However, based on the region's success in attracting call centers, and guidance from Cape Breton's economic development leadership, we did not explore the target industries associated with these facilities.
- ◆ Nevertheless, given Cape Breton's high-unemployment and overall location challenges, we recommend that business-attraction efforts continue to be directed toward companies and operations that will help Cape Breton's call-center industry 'evolve' into a more highly skilled and higher-paying industry.



Screening Potential Target Industries

Industry Targeting Process Overview

At this point in the process . . .



Translating Operations into Industries

- ◆ **Initially, 282 industries comprise the universe of potential targets.**
 - ❖ Technically speaking, an “Industry” is a SIC Code grouping created by the U.S. Bureau of Labor and Statistics.
 - ❖ Canada has a similar classification system; both Canadian and U.S. groupings were incorporated into our analyses.
 - ❖ The significance of these industries lies in the data available to monitor and predict industry trends.
- ◆ **The OTM effectively reduces the universe of potential industry targets by restricting our search to industries whose facilities likely include the four operation types.**
- ◆ **Of the 282 initial industry groups, over 50 were identified as potentially including one or more facilities of the four types from the OTM.**

Screening Industries Based on Their Employment Growth Potential

- ◆ **Typically, our first screen to identify compelling target industries involves categorizing them based on two metrics:**
 - ❖ Long-term projected growth as compared to national industrial averages; and,
 - ❖ The current level of industry presence based on employment, as compared to the national average for the industry.
- ◆ **This screen simultaneously gauges an industry's potential to generate new employment, and also serves as a barometer of the local area's ability to support the industry.**
 - ❖ High industry presence, as measured by employment, suggests the area has the skills, support services, suppliers, etc., required by the industry as well as other related industries.
- ◆ **Based on this Industry Potential screen, we segregate the universe of candidate industries into four categories that differ according to the marketing strategy that is appropriate for each.**

Industry Attractiveness Categories Based on Projected Growth and Local Presence

◆ ATTRACT: High Growth / Low Presence

- ❖ These industries present opportunities for new employment and investment from outside the region, but further analysis is needed to determine how well the area can attract/support them.

◆ NURTURE: High Growth / High Presence

- ❖ Because these higher-growth industries are already operating locally, opportunities for expansion as well as attraction may exist.

◆ RETAIN: Low Growth / High Presence

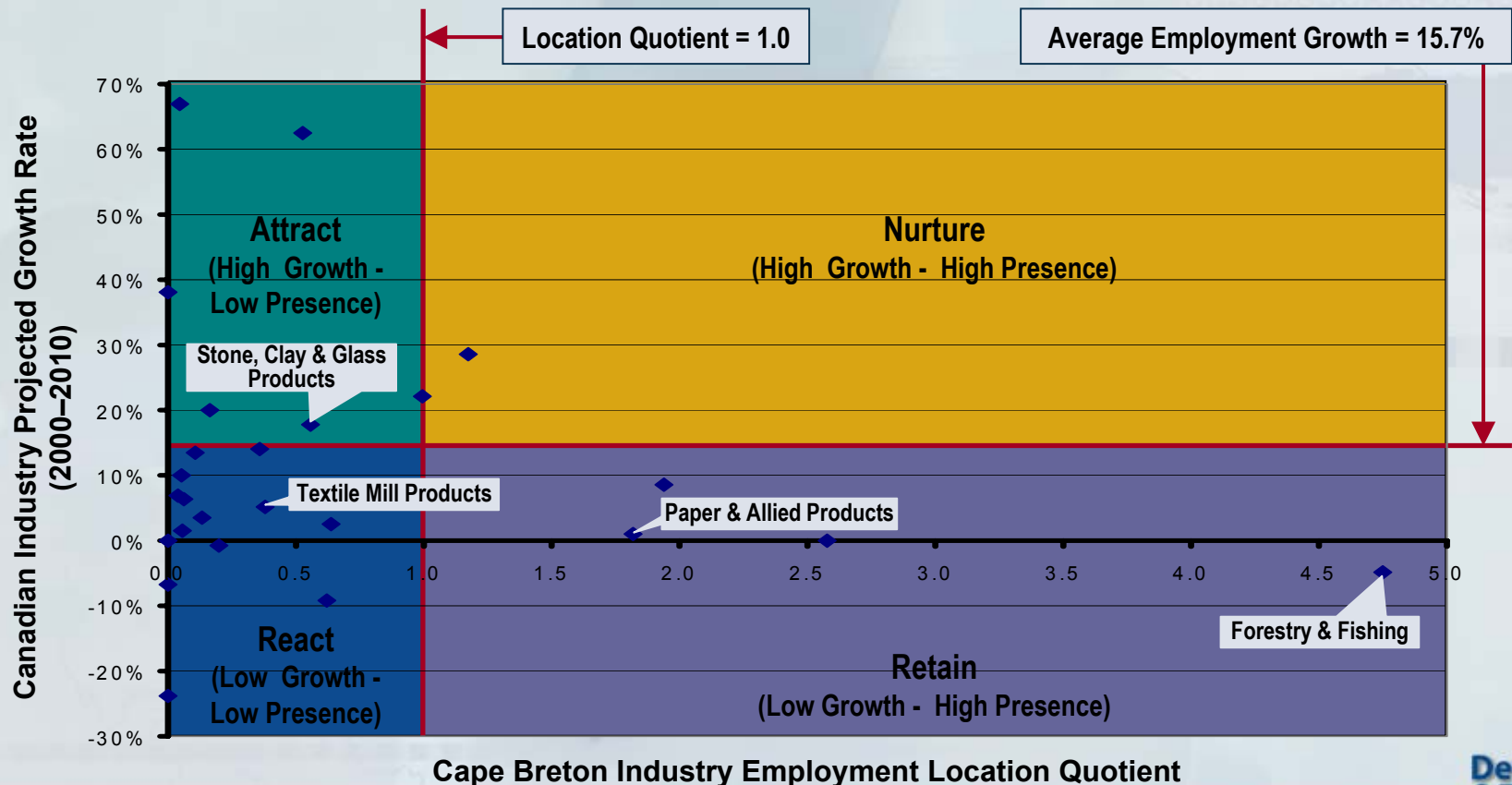
- ❖ This group of industries exhibits a relatively high local presence, however their reduced growth rates suggest their potential to generate new employment is less than the 'Nurture' industries.

◆ REACT: Low Growth / Low Presence

- ❖ Based on their low local presence, these lower-growth industries may not be compatible with the area.
- ❖ Their potential to generate meaningful employment may also be limited.
- ❖ A reactive marketing approach to these industries may be more appropriate as opposed to a proactive one.

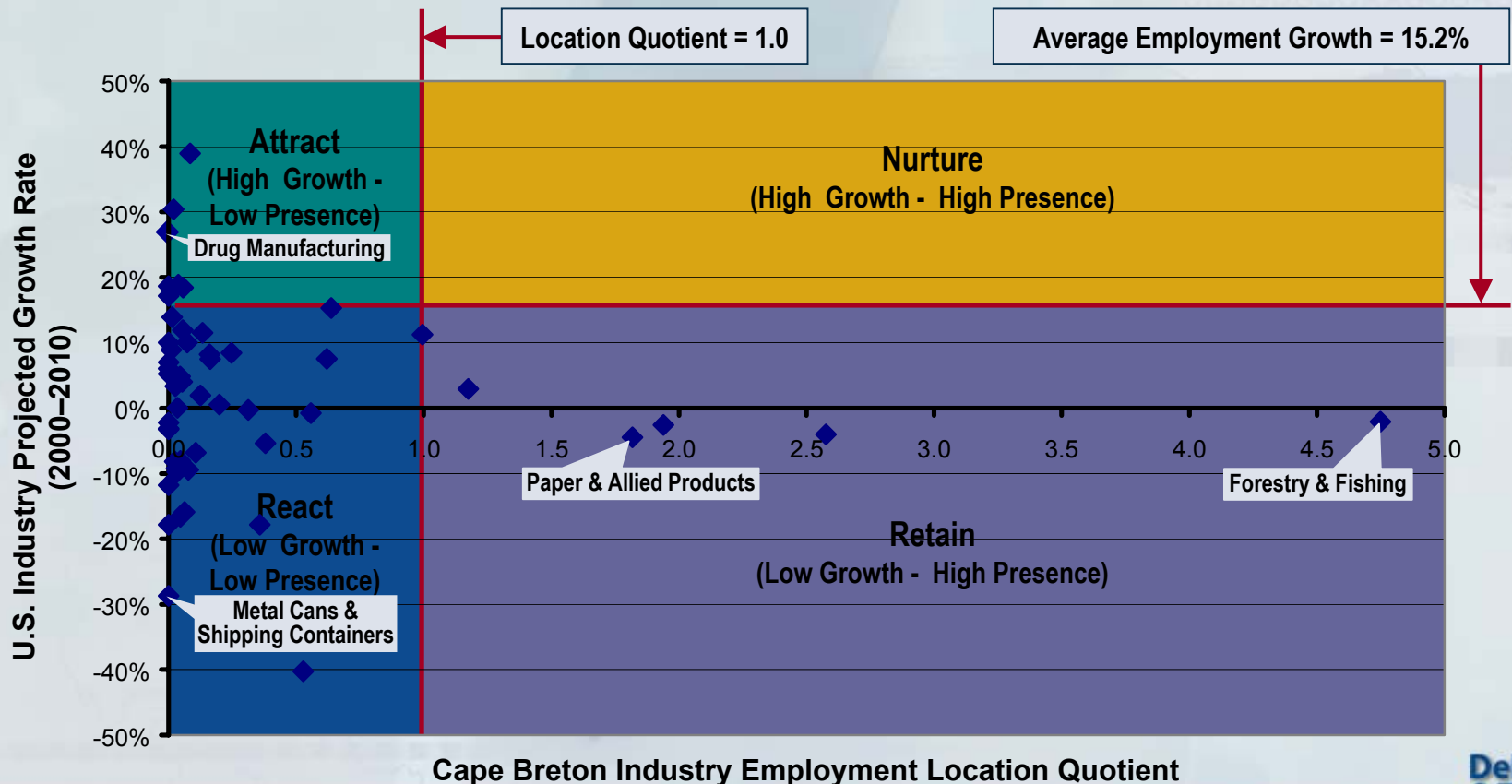
Industry Potential Screening – Projected Long-Term Canadian Growth

- ◆ Most of the candidate industries fall into the ‘React’ and ‘Attract’ categories. This indicates their lower levels of presence versus national averages.
- ◆ Several industries (‘Retain’ category) with above-average presence in Cape Breton exhibit below-average projected growth rates. Opportunities to support the continued success of these operations should perhaps be evaluated.



Industry Potential Screening – Projected Long-Term U.S. Growth

- ◆ Given the size and influence of the U.S. economy, a similar analysis was performed using the candidate industries' long-term projected growth in the U.S.
- ◆ The overall distribution of industries among the categories for the U.S. data is similar to that observed for the Canadian growth projections.



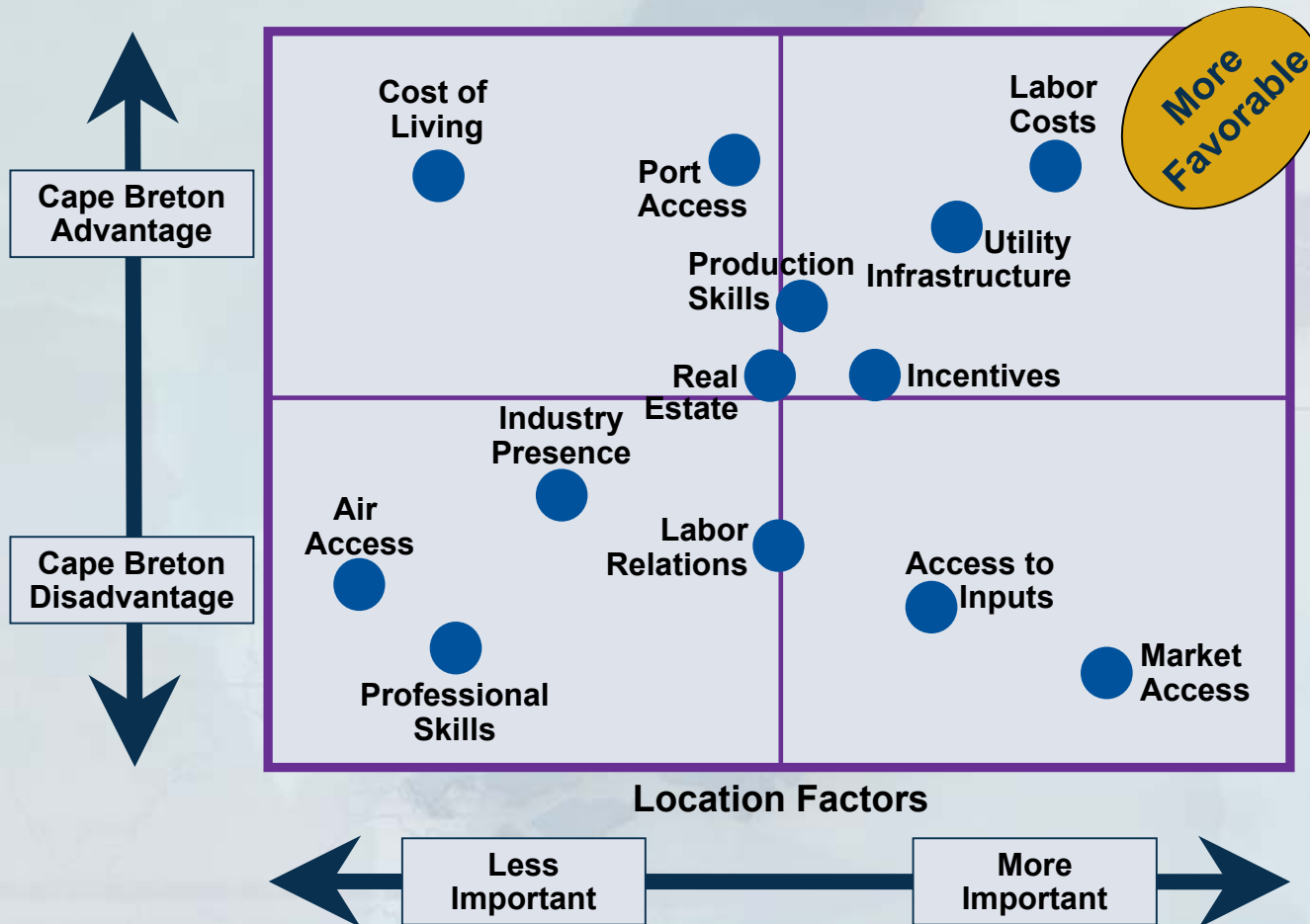
Results of the Industry Potential Screen

- ◆ **The Industry Potential Screen usually enables us to focus subsequent analyses on industries with above-average growth potential: the ‘Attract and ‘Nurture’ industries.**
 - ❖ The requirements of the ‘Attract’ industries are compared against the regional availability of transferable skill sets, support services, access to suppliers, etc.
 - ❖ The ‘Nurture’ industries are evaluated in terms of their potential for expansion in the area, possibly through vertical or horizontal integration.
- ◆ **In the case of this study, the screening results were used to prioritize the industries somewhat, but did not enable us to substantially narrow the universe of candidates.**
 - ❖ All but few a industries (e.g., those with strong negative growth) were retained for the subsequent analysis.
- ◆ **As a result, it was necessary to assess a wider range of candidate industries, and focus particularly on potential growth opportunities within sub-sectors of Cape Breton’s more established industries.**

Industry Rationalization Process

To identify three optimal industries, we compared the remaining industries' Critical Location Factors against Cape Breton's business-attraction strengths (both current and developable) in search of compelling gaps in industry fit.

Example rationalization for a representative manufacturing industry:



Model Industry Profile

To facilitate these comparisons, we developed a set of customized characteristics – a *model industry profile* – an industry should have to be optimally suited for Cape Breton.



Industry Research

- ◆ Throughout our process, we performed extensive economic research and industry analysis to:
 - ❖ Profile Cape Breton and Nova Scotia employment and occupation demographics;
 - ❖ Study industries and identify sub-market growth opportunities; and,
 - ❖ Assess prospective companies' performance, geographic distribution, and product lines.
- ◆ Sources we utilized include the following:

Cape Breton & Nova Scotia Research

- ◆ Atlantic Canada Opportunities Agency
- ◆ Cape Breton business directories
- ◆ Human Resources Development Canada
- ◆ Nova Scotia Business, Inc.
- ◆ Nova Scotia Statistical Review
- ◆ Previous development plans for Cape Breton

Industry Research

- ◆ Claritas data
- ◆ Deloitte & Touche industry reports
- ◆ Industry journals and publications
- ◆ Informetrica, Limited
- ◆ Manufacturing USA
- ◆ National Research Council of Canada
- ◆ Natural Resources Canada
- ◆ Statistics Canada
- ◆ Strategis Canada
- ◆ Trade magazines and associations
- ◆ U.S. Industry and Trade Outlook
- ◆ U.S. Bureau of Economic Analysis
- ◆ U.S. Bureau of Labor Statistics

Company Research

- ◆ Company websites
- ◆ Company financials and SEC filings
- ◆ Deloitte & Touche industry white papers
- ◆ Dow Jones
- ◆ Hoover's Business Information Authority
- ◆ Industry and trade association business directories
- ◆ OneSource

Industry Elimination – Some Examples

- ◆ Industries were eliminated from further consideration when compelling gaps were identified between their operating requirements and the *model industry profile* developed for Cape Breton.
- ◆ The basis for elimination varied by industry, and typically involved multiple incompatibilities. For example:
 - ❖ Reason for elimination: Size
 - ◆ **Leather Products** is a growing industry (in Canada only), but it lacks the size needed to generate meaningful new employment opportunities.
 - ◆ **Metal Services** is also projected to grow long-term, however the average size of these establishments is too small to merit proactive marketing.
 - ❖ Reason for elimination: Logistics Costs
 - ◆ **Food Processing, Printing and Publishing** and **Cutlery and Hand Tools** are judged incompatible with Cape Breton due to unfavorably high outbound freight costs to the North American market.
 - ❖ Reason for elimination: Labor costs and skills presence
 - ◆ Operations such as **Textile Mills** are migrating to less industrialized countries in search of minimal-cost labor.
 - ◆ **Aircraft and Missile Manufacturing** is an example of industries requiring specialized skills only available in very select geographies.

Our Recommended Industry Targets for Cape Breton

◆ Value-Added Wood Product Manufacturing

- ❖ Increasing demand for products in select portions of the industry
- ❖ Proximity to natural resources (hardwood and softwood)
- ❖ Available semi-skilled and transferable occupation skills
- ❖ Overall lower operating costs for European companies targeting the North American Market

◆ Marine Bioceuticals

- ❖ A new, high-growth industry
- ❖ Existing synergies with local companies
- ❖ Access to marine and aquaculture natural resource supplies
- ❖ Regional R&D and education centers to provide qualified labor

◆ Lower-Tech Pharmaceutical Production

- ❖ High growth industry that does not have sufficient manufacturing capacity and is continually driving down costs
- ❖ Lower operating costs compared to many European and North American locations
- ❖ Lower logistics unit costs per product
- ❖ Port access for inbound supplies

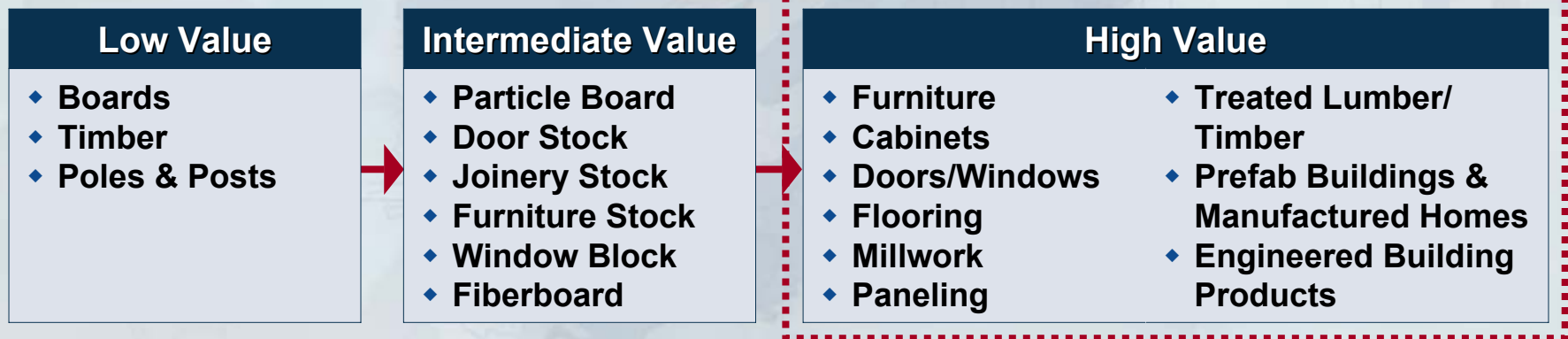


**Target Industry Profile:
Value-Added
Wood Product Manufacturing**

Industry Description and Trends

- ◆ **Value-added Wood Product Manufacturing is defined as the wood industry sub-sectors that involve a more advanced level of manufacturing and more intensive labor requirements.**
 - ❖ Furniture manufacturing, which includes all household, office, and institutional furniture, is one of the highest value-add sub-sectors within the wood industry.
 - ❖ Other high value-add wood manufacturing includes millwork (doors, windows, flooring) and engineered building products (trusses, pre-fab homes, etc.).
- ◆ **Most of the demand for these products are driven by the construction industry, which is forecasted to grow 11.2% in the U.S. and 22.1% in Canada from 2000 to 2010 (in employment).**

Value-Add Chain of the Wood Manufacturing Industry



Industry Description and Trends (continued)

- ◆ **Global furniture trade is heavily dependent on the US, as it has been the engine of trade activity for the past 10 years.**
 - ❖ American furniture consumption is on a long-term upward trend, and most of the growing demand has been-and still is- satisfied by imported furniture.
 - ❖ American furniture consumption increased 33.6% to US\$34 billion from 1996 to 2001, with approximately 1/3 of all furniture produced from abroad.
 - ❖ As U.S.home sales continue to increase, home-related investment is expected to increase, signifying promise for future investment in the furniture industry.

- ◆ **Canada is the 5th largest global producer of furniture, and the 2nd largest foreign supplier of furniture in the world. Canada is currently the largest exporter of furniture to the US.**

- ◆ **Other Canadian wood manufacturers have made successful inroads into the U.S.market.**

- ◆ **Cape Breton's best opportunities may be in the wood ready-to-assemble (RTA) furniture market. The RTA market is one of the fastest growing furniture market segments, and currently represents 13% of all European furniture production.**
 - ❖ Transportation costs for this market segment are much lower, as furniture are shipped in flat packs, possibly making outbound transportation less costly per pound than other furniture segments.
 - ❖ Large growth in the furniture demand has been in home office and juvenile furniture, a market segment where RTA has considerable presence.

Industry Fit with Cape Breton

Location Fit with Cape Breton

- ◆ Access to natural resources (wood) in Cape Breton and the region
- ◆ Access to port/barge for supplying raw materials as well as exporting finished goods
- ◆ Relevant skills presence (carpenters, cabinetmakers, machinists) in Cape Breton
- ◆ Existing furniture manufacturing firm in Nova Scotia (Shaw Wood – Ikea supplier), and other Maritime wood product manufacturing companies
- ◆ Furniture and woodworking technology program at Nova Scotia Community College
- ◆ Lower cost option for European and North American companies operating in higher cost locations

Critical Location Factors



Labor

Manufacturing Skills Availability	✓		
Transferable Occupational Skills	✓		
General Labor Availability	✓		
Labor Cost	✓		
Existing Industry/Company Base	✓		

Access

Access to Suppliers		✓	
Access to Natural Resources	✓		
Access to Market			✓
Highway Access		✓	
Port Access	✓		
Existing Industry/Company Base	✓		

Other

Utility Availability	✓		
Incentives		✓	
Real Estate Cost	✓		



Advantage



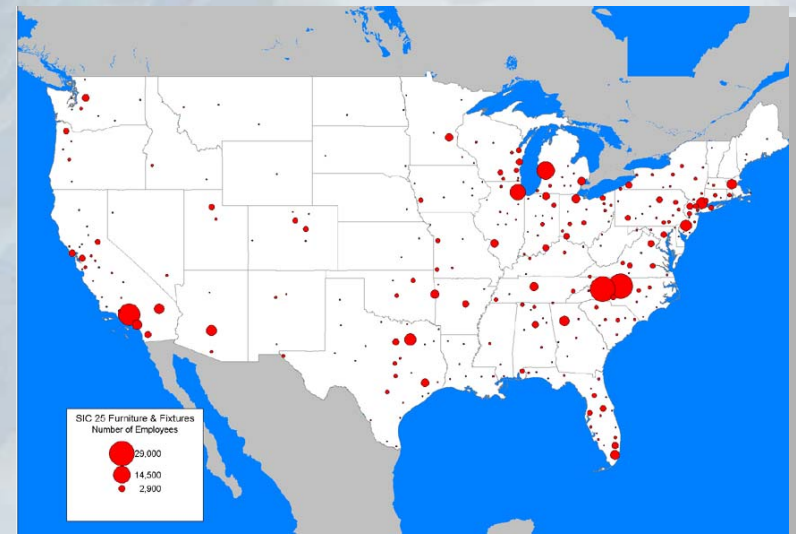
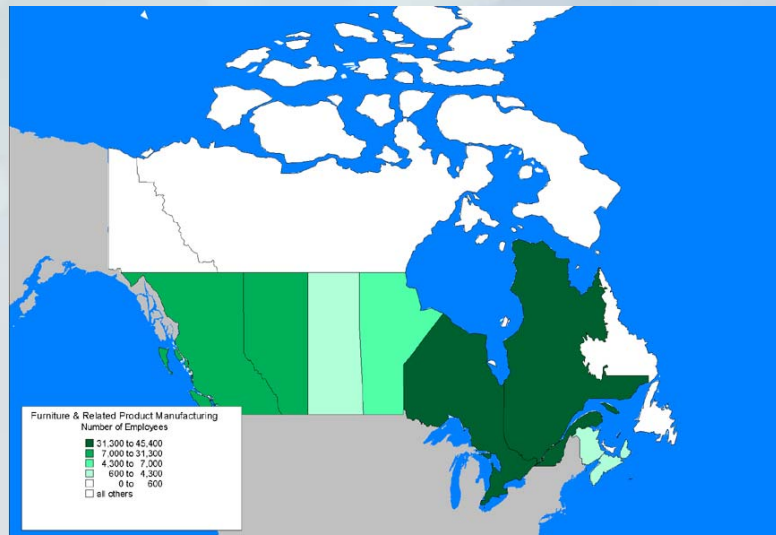
Neutral



Disadvantage

Sub-Sector Geographic Concentrations: Furniture Manufacturing

- ◆ The Canadian furniture industry is concentrated in Ontario and Quebec, with Ontario comprising 28%, and Quebec accounting for 24% of all employment.
- ◆ The U.S. furniture industry is concentrated in North Carolina, California, and Michigan. Italy, Germany and Scandinavia are the largest European producers of furniture.
- ◆ Emerging countries such as China, Mexico and Poland have been increasing furniture production. China has increased market share from 15% to 33% in the last 5 years.



Sub-Sector Metrics: Furniture Manufacturing

Inputs

Outputs

- Imports
- Sawmills
- Wholesale Trade
- Hardwood Dimension & Flooring Mills
- Veneer & Plywood
- Paint & Allied Products
- Particleboard
- Business Services
- Electric services
- Transportation & Warehousing
- Paperboard container & boxes

- Personal consumption expenditures
- Gross private fixed investment
- Exports

Major Occupations

- ◆ Assemblers and fabricators
- ◆ Upholsterers/sewing operators (upholstered only)
- ◆ Woodworking machine operators
- ◆ Cabinetmakers and bench carpenters
- ◆ Wood machinists

Key Companies

- ◆ Alno
- ◆ Bush Industries
- ◆ Furniture Brands International
- ◆ Hon Industries
- ◆ Ikea (+ Suppliers)
- ◆ O'Sullivan Industries
- ◆ Sauder Woodworking

Industry Metrics	Canada	US
Total Number of Establishments	1,750	13,240
Total Number of Employees	86,050	548,000
Employee % Growth (1990-1999)	21.4%	10.3%
Projected Employment Growth (2000-2010)	1.5%*	11.9%
Average Production Salary	CAN \$25,680	US \$24,800

Industry Metrics	Canada
Manufacturing Output/Revenue	CAN \$10.3 B
Wages as % of Total Manufacturing Costs	29%
Cost of Materials & Supplies as % of Total Manufacturing Costs	69%
Cost of Fuel/Electricity as % of Total Manufacturing Costs	2%

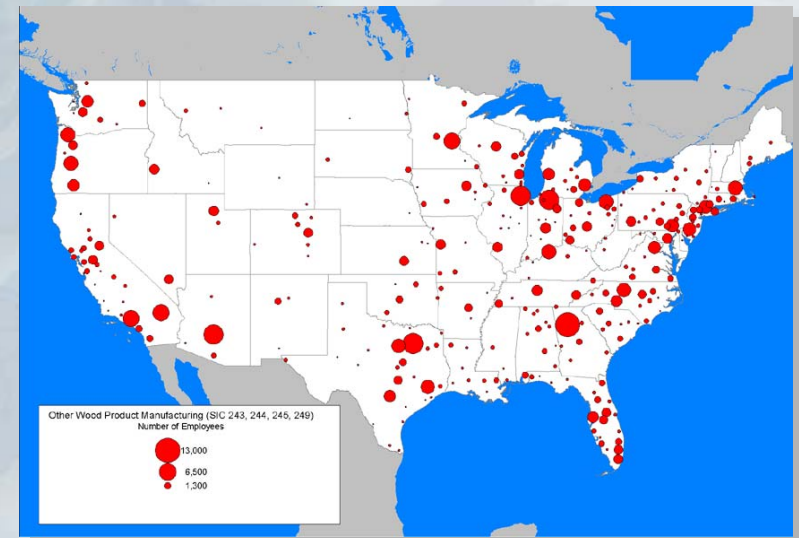
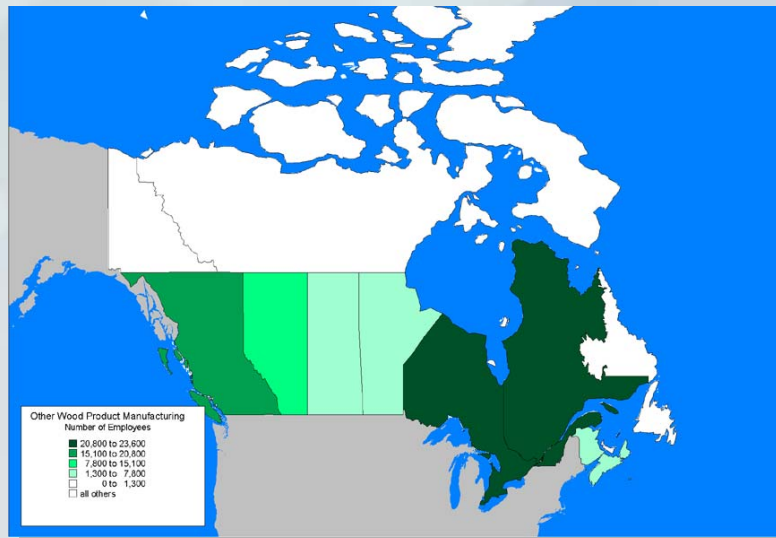
Canadian industry metrics are for the Furniture & Related Product Manufacturing industry in 1999 (NAICS 337).

US industry metrics are for the Furniture & Fixtures (SIC 25) industry for 2001. U.S. Employee % growth represents growth from 1990 to 2000.

* Canadian Projected Employment Growth for the Furniture Industry
Source: Informetrica, Ltd.

Sub-Sector Geographic Concentrations: Other Value-Add Wood Product Manufacturing

- ◆ In Canada, the Other Value-Added Wood Product Manufacturing industry is again concentrated in Ontario and Quebec.
- ◆ The U.S. Other Wood Product Manufacturing industry is more dispersed, with concentrations in Georgia, Texas, California and Oregon.



Sub-Sector Metrics: Other Value-Add Wood Manufacturing

Inputs

Outputs

- Sawmills & Planning Mills
- Wholesale Trade
- Reconstituted Wood Products
- Hardware, nec
- Veneer & Plywood
- Trucking
- Hardwood Dimension & Flooring
- Glass & Glass Products
- Paperboard Containers & Boxes

- Residential Structures
- Repair & Maintenance Construction
- Office Buildings
- New Construction
- Exports of Goods & Services

Major Occupations

- ♦ Assemblers and fabricators
- ♦ Cabinetmakers & bench carpenters
- ♦ Woodworking machine operators
- ♦ Cabinetmakers and bench carpenters
- ♦ Machine feeders
- ♦ Sawing machine operators
- ♦ Wood machinists

Key Companies

- ♦ Andersen Corporation
- ♦ Boise Cascade
- ♦ JELD-WEN
- ♦ Pella Windows
- ♦ Multiple other regional companies

Industry Metrics	Canada	US
Total Number of Establishments	1,500	22,120
Total Number of Employees	69,830	526,060
Employee % Growth (1990-1999)	43%	25.9%
Projected Employment Growth (2000-2010)	N/A	12.7%
Average Production Salary	CAN \$27,750	US \$25,270

Industry Metrics	Canada
Manufacturing Output/Revenue	CAN \$12.1 B
Wages as % of Total Manufacturing Costs	23%
Cost of Materials & Supplies as % of Total Manufacturing Costs	73%
Cost of Fuel/Electricity as % of Total Manufacturing Costs	4%

Canada industry metrics are for both Millwork (NAICS 3212) and Other Wood Products Manufacturing (NAICS 3219) sectors within the Wood Product Manufacturing (NAICS 321) industry for 1999.

US industry metrics are for the following industries: Millwork, Veneer, Plywood, and Structural Wood Members (SIC 243); Wood Containers (SIC 244); Wood Buildings and Mobile Homes (SIC 245); and Miscellaneous Wood Products (SIC 249). U.S. employee % growth statistics cover 1990 to 2000.



Target Industry Profile: Marine Biocentrals

Industry Description and Trends

- ◆ **Marine Bioceuticals is an innovative sector within Marine Biotechnology, and is defined as nutritional and pharmaceutical supplements and other biological substances derived from natural marine sources.**
 - ❖ Marine Bioceuticals is an immature and unconsolidated sector, with unlimited opportunities for potential products and future use.
 - ❖ Due to the nascent stage of the industry, potential exists for companies and geographic regions to establish themselves as strong market players (e.g. through patents, brand names, FDA approvals, geographical clusters.)
- ◆ **The Marine Biotechnology industry and its corresponding markets are growing at aggressive rates.**
 - ❖ The Marine Biotechnology sector is projected to grow 15-20% annually through 2005.
 - ❖ The natural personal care and foods market, a sector that includes marine bioceutical products, is valued at US\$3.8 billion in the U.S.alone and is growing 3 times faster than the overall health and beauty market.
- ◆ **The FDA has not granted approval for product labels to list the health benefits associated with marine products, although such health benefits are evident from research findings and are supported by various public groups.**
 - ❖ Potential exists for an increase in market growth if approval is granted.
- ◆ **Current challenges that the industry faces include changing regulations on extraction of marine resources in various areas, and natural fluctuations in resource availability, both of which create a non-static environment for the industry.**

Geographic Concentrations

- ◆ **Marine Bioceutical production appears to be heavily concentrated in Scandinavia (particularly Norway), Japan, Australia, and other coastal regions.**
- ◆ **Heavy consumption of Marine Bioceuticals is primarily in the Asian and European markets.**
- ◆ **The North American market is essentially untapped. Approximately 5.4% of North Americans consume fish oil nutritional products, which is one of the leading products within Marine Bioceuticals, compared to 65% consumption in Europe.**
 - ❖ However, the North America market is growing, with a 5.4% increase in 2001, compared to only 2.7% in 2000.

Industry Fit with Cape Breton

Location Fit with Cape Breton

- ◆ Access to marine and aquaculture resources as well as to the aquaculture feed market
- ◆ Access to port/barge for supplying additional marine and other raw materials as well as exporting finished goods
- ◆ Historical link to ocean-related businesses and relevant skills presence, as well as the need to seek ways of making higher-value-added marine products in order to increase local profit margins
- ◆ Existing innovative companies in related field in Nova Scotia (Ocean Nutrition, Acadian Seaplants) and potential for cluster-type synergies, both horizontally and vertically
- ◆ Regional R&D and educational centers that support further innovation in the industry and provide qualified workforce (particularly, Institute for Marine Biosciences)
- ◆ Lower labor cost option for European and North American companies operating in higher cost locations

Critical Location Factors



Labor

Critical Location Factors	Advantage	Neutral	Disadvantage
Labor			
Manufacturing Skill Base	✓		
Regional Technical Skill Base	✓		
Local Technical Skill Base			✓
General Labor Availability	✓		
Labor Cost	✓		
Existing Industry Presence	✓		
Access			
Access to Natural Resources	✓		
Access to Market			✓
Highway Access		✓	
Port Access	✓		
Other			
Utility Availability & Quality	✓		
Real Estate Cost	✓		
Quality of Life	✓		
Regional R&D/Education Presence	✓		
Local R&D/Education Presence			✓
Incentives		✓	



Access



Other



Advantage



Neutral



Disadvantage

Key Industry Companies

- ◆ Because Marine Bioceuticals is an immature and unconsolidated sector, it is represented by a diverse range of companies. The following groups appear to be most suited for consideration by Cape Breton:

Large pharmaceutical and chemical companies with strong presence in Marine Bioceuticals

- Roche
- Croda Chemicals
- BASF AG

Regional niche players to be nurtured/supported

- Ocean Nutrition
- Acadian Seaplants

Niche players, primarily in marine oil products, that have high-end mass pharmaceutical products

- Denofa (Norway)
- Pronova Biocare (Norway)

Emerging players making products from various marine resources, such as micro algae and seaweed

- Martek
- Cyanotech
- FMC Chemical
- Marine Nutraceutical Corporation



Lower-Tech Pharmaceutical Production

Industry Description and Trends

- ◆ **Lower-Tech Pharmaceutical Production is defined as the production of generic (non-patent), mass pharmaceuticals that require less sophisticated manufacturing processes and less urgency in market delivery.**
 - ❖ In many cases large pharmaceutical companies outsource such production to contract manufacturers in order to focus on their core business - drug development.
 - ❖ Such production includes “fill and finish” plants, where pre-mixed pharmaceutical substances are formed and packaged for market delivery.
 - ❖ Contract manufacturers of non-patented, bulk drug pharmaceuticals are driven by cost, and do not necessarily require to be in close proximity to their R&D facilities.
 - ❖ Major groups of participants that could be of interest to Cape Breton:
 - ◆ Large Canadian pharmaceutical companies
 - ◆ Contract pharmaceutical manufacturers with presence in Canada
 - ◆ Pharmaceutical multinational companies

Industry Description and Trends (continued)

- ◆ **Pharmaceuticals is an inelastic industry - consumption is not affected by economic downturns, and thus, is doing well in spite of the difficult market conditions.**
- ◆ **Global pharmaceutical sales:**
 - ❖ in 2001 – 12% annual growth, valued at US\$364 billion
 - ❖ in 2002 – 8.5% projected annual growth
- ◆ **Contract pharmaceutical manufacturing:**
 - ❖ Global capacity for drug pharmaceuticals is reportedly insufficient to meet future demand, which has resulted in high M&A activity in order to utilize capacity of others.

Industry Fit with Cape Breton

Location Fit with Cape Breton

- ♦ Strategic geographic location between the North American and the European markets
- ♦ Access to port/barge for water transportation of supplies and some finished goods
- ♦ Regional R&D and educational centers (particularly, Dalhousie University) providing necessary training and qualified workforce
- ♦ Lower labor cost option for European and North American companies operating in higher cost locations
- ♦ Potential to capitalize on some local marine resources that may be used in pharmaceutical production

Critical Location Factors



Labor

Manufacturing Skill Base	✓		
Regional Technical Skill Base	✓		
Local Technical Skill Base			✓
Labor Availability	✓		
Labor Cost	✓		
Existing Industry Presence			✓

Access

Access to Suppliers			✓
Access to Market			✓
Highway Access		✓	
Port Access	✓		
Regional Airport Access	✓		
Local Airport Access			✓

Other

Utility Availability & Quality	✓		
Real Estate Cost	✓		
Incentives		✓	



Advantage



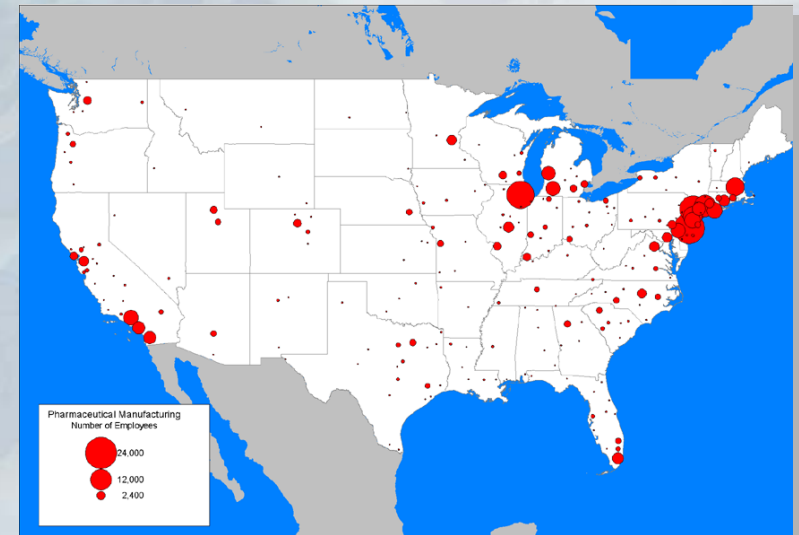
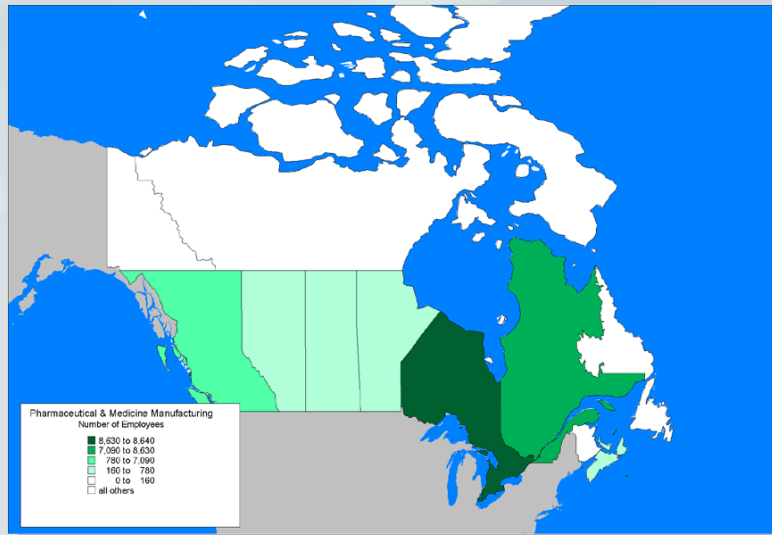
Neutral



Disadvantage

Geographical Concentrations

- ◆ Canada is a relatively small player in the pharmaceutical industries, with primary concentration in Ontario.
- ◆ The US, France, Switzerland, and Germany are the largest global players. In the U.S. the industry has clustered in the East Coast, California, and Illinois (Chicago).
- ◆ Puerto Rico, Ireland, and Singapore have emerged as global centers of drug manufacturing. All locations have significant tax incentives and lower labor costs, which have attracted pharmaceutical giants to build multiple facilities.



Industry Metrics

Inputs

Outputs

- Wholesale Trade
- Industrial inorganic and organic chemicals
- Miscellaneous plastics products, etc.
- Accounting & Bookkeeping
- Legal Services
- Paperboard container & boxes
- Advertising

- Personal consumption expenditures
- Drugs
- Exports of goods & services
- Government, hospitals and health programs

Major Occupations

- ♦ Packaging and filling machine operators
- ♦ Sales & related workers, nec
- ♦ Science technicians (smaller percentage required for lower-tech)
- ♦ Scientists
- ♦ Administration
- ♦ Chemists
- ♦ Blue collar worker supervisors

Key Types of Companies

- ♦ Large Canadian pharmaceutical companies (e.g., Apotex)
- ♦ Contract pharmaceutical manufacturers with presence in Canada
- ♦ Pharmaceutical multinationals

Industry Metrics	Canada	US
Total Number of Establishments	150	2,500
Total Number of Employees	22,300	270,300
Employee % Growth (1990-1999)	9.2%	32.9%
Projected Employment Growth (2000-2010)*	N/A	23.8%
Average Production Salary	CAN \$40,230	US \$41,600

Industry Metrics	Canada
Manufacturing Output/Revenue	CAN \$6.8 B
Wages as % of Total Manufacturing Costs	16%
Cost of Materials & Supplies as % of Total Manufacturing Costs	83%
Cost of Fuel Electricity as % of Total Manufacturing Costs	1%

Canada industry metrics are for Pharmaceuticals and Medicine Manufacturing industry (NAICS 3254) for 1999.

U.S. industry metrics are for the Drug industry (SIC 283) Industry for 2001. U.S. employment growth statistics cover 1990 to 2000.

* Canadian Projected Employment Growth Source: Informetrica, Ltd

Next Steps

Next Steps... Towards Attracting These Industries

- ◆ **Begin to address specific Cape Breton challenges**
- ◆ **Build consensus and alignment**
- ◆ **Detailed needs analysis**
 - ❖ What does Cape Breton need to do in order to close?
 - ❖ Real estate, training, incentives
- ◆ **Marketing and promotion**
 - ❖ Formulate a detailed 3 to 5 year marketing plan
 - ❖ Layout the means and methods
 - ❖ Assign roles and responsibilities