

Benchmarking of North American Strategies in Cluster Development

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Scope of the Mandate

- Present North American trends in cluster policies
- Analyse specifically five (5) regions, based on a detailed analysis framework
- Identify emerging pilot projects between North America and Europe



Focus

Our study focuses on policies directly made to pursue cluster development and activation, whether at a state, province, or metropolitan level.

Cluster policies are pursued by public actors for the purpose of increasing socio-economic benefits through the creation or the further development of clusters.

(Source: The Cluster Policies Whitebook, 2004)





Overview of North American Trends in Cluster Strategies



New Trends in Economic Development

- The number of US states and Canadian regions applying a cluster strategy to economic development grows every year.
- Cluster-based economic development is not restricted to a single geography. Not only states but also large regions such as government councils and even metropolitan areas have drafted cluster strategies.
- Often, a cluster-based strategy focuses on a few industries in the regional economy, and high-tech sectors are privileged.
- Sometimes the regional strategy implementation is the result of a strong industry mobilization (bottom-up) while it can be a governmental initiative (top-down), or a mix of both.



Clusters: a New Way of Thinking

According to Michael E. Porter, a nation's ability to produce high-value products and services that support high-wage jobs depends on the creation and the strengthening of numerous **regional hubs of competitiveness and innovation** (clusters).

Clusters of Innovation Initiative (2001) by Michael E. Porter, presents a new way of thinking about economic development across U.S. regions. The main objectives of this work was to :

- Understand the composition of regional economies
- Understand how clusters develop
- Develop lessons from regional case studies for key stakeholders
- Develop a methodology, process, and data infrastructure to be utilized widely across America
- Present five specific regions in detail

What are the main challenges now?

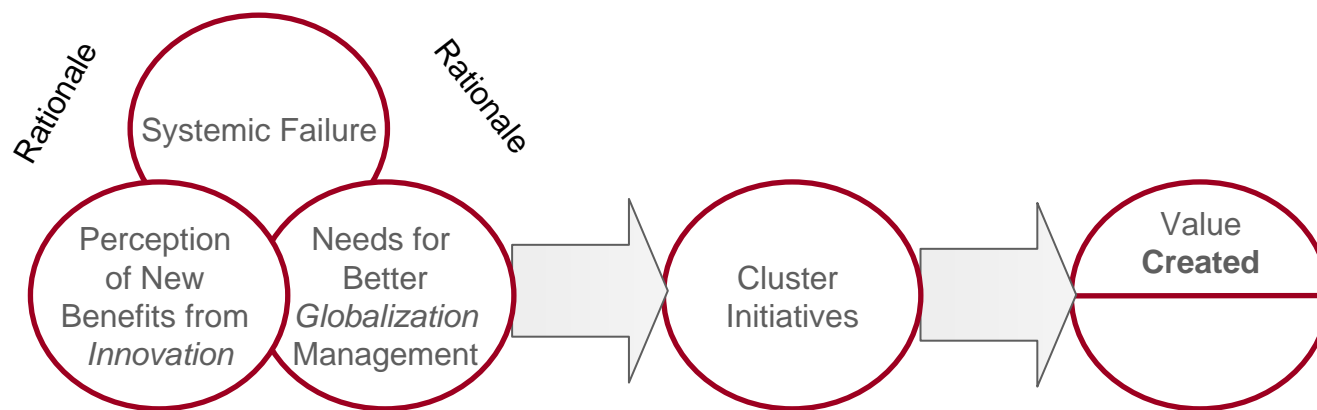
- Hard to proceed to the last phase: cluster mapping / strategy definition / **cluster activation**
- Factors of success : mobilization, leadership, adapted governance, private sector involvement, strategic mission and realistic focus, identification of industry challenges and levers, internationalization, etc.

Once the cluster mapping phase is done, a small proportion of regions proceed to a precise and detailed cluster strategy



Privileged Approach in North America

Most of the time, in North American regions, the framework for cluster activation is missing. It is more action-driven than policy-oriented.





Selection of Regions



Proposed Selection Criteria

Core Criteria

1. Have an explicit cluster-oriented economic development policy.
2. Have a defined specific cluster activation strategy, following an initial cluster mapping phase.
3. Have an established institutional leadership on clusters' implementation.
4. Have publicized relevant information on the regions' strategy.
5. Have a detailed strategic plan and/or action plan for the cluster(s).
6. Have implemented, at least, one cluster.

Optional Criteria

1. Have specific tools to support "*clusterpreneurs*".
2. Have a specific follow-up process for clusters implementation.
3. Have emerging or potential collaborations with European regions/clusters/cities.



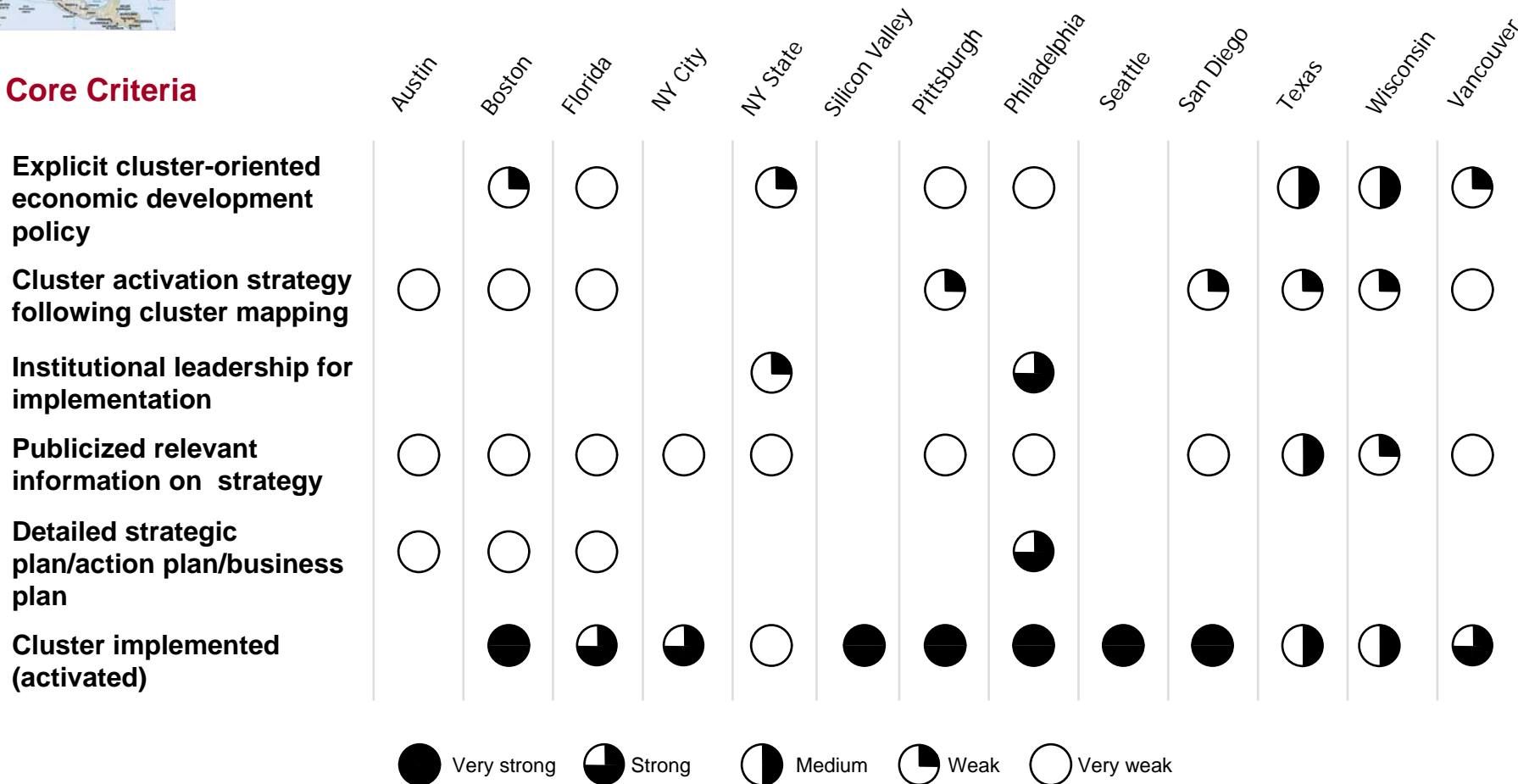
Explored Regions

•Austin	•Oregon	•Silicon Valley
•Boston	•Pittsburgh	•Texas
•Florida	•Philadelphia	•Western Greater Toronto Area
•Montreal	•Research Triangle	•Vancouver
•New York City	•Seattle	•Wichita
•New York State	•San Diego	•Wisconsin



Rejected Regions

Core Criteria



In North America, only a few regions have made explicit and formal strategies/policies for a cluster-oriented economic development.



Two Eloquent Examples

Silicon Valley and San Diego are largely cited as models of clusters at a global scale, but in the present context, these regions will not be kept as relevant models for clusters strategies/policies.

Silicon Valley:

- A mix of circumstances (opportunities) and good initiatives, a good momentum and a relevant innovating environment are the premises for the establishment of Silicon Valley.
- Silicon Valley has not emerged from a structured policy oriented upon economic development.

San Diego:

- The region was among the ***Clusters of Innovation Initiative*** of Michael E. Porter, presenting strengths, opportunities and challenges for the region.
- Afterwards, an inner mapping effort was driven by the region under the initiative of the Workforce partnership. The emphasis of cluster implementation is only focused on skills employment and is not directly linked to cluster policy.
- San Diego is a referral region for its strong scientific base and action-oriented cluster initiatives (institutions like CONNECT, Global CONNECT, BIOCOM).
- But there is no policy framework base.



Selected Regions

Core Criteria

Research
Triangle

Oregon

Wichita

Western
GTA

Montreal

Explicit cluster-oriented economic development policy



Cluster activation strategy after cluster mapping



Institutional leadership for implementation



Publicized relevant information on strategy



Detailed strategic plan/action plan/business plan



Cluster implemented (activated)



Very strong



Strong



Medium



Weak



Very weak



Selected Regions

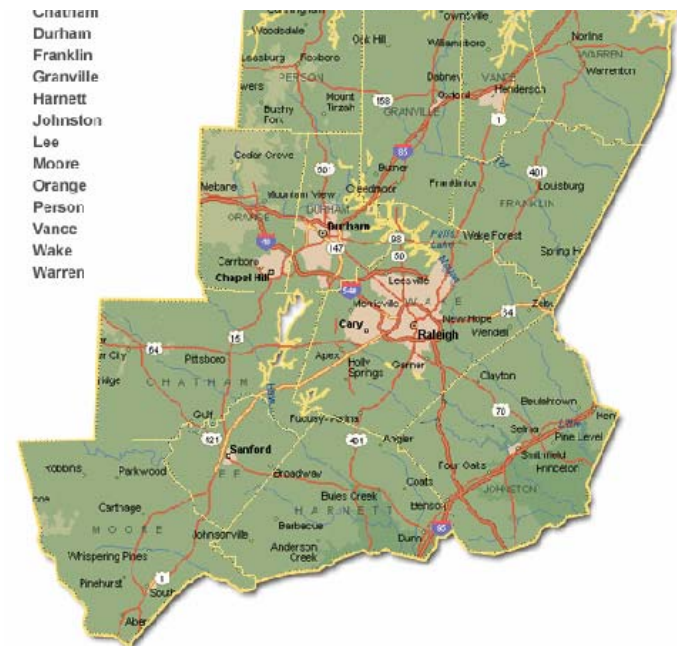
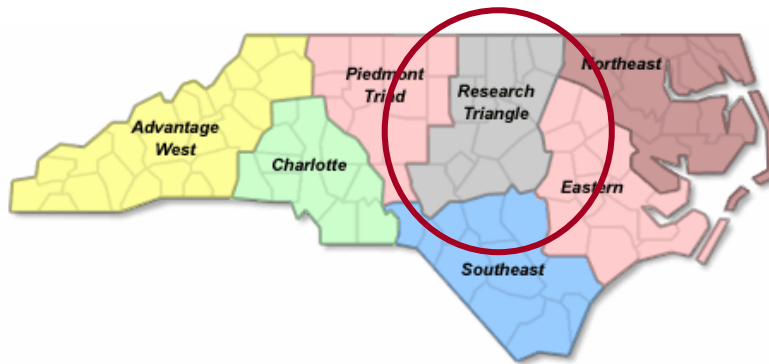
Optional Criteria	Research Triangle	Oregon	Wichita	Western GTA	Montreal
Specific tools for <i>"clusterpreneurs"</i>					
Follow up process					
Collaboration with Europe					

Very strong
 Strong
 Medium
 Weak
 Very weak

N.B. : Even if the geographical scope of analyzed regions is different, this does not alter our study.



Research Triangle Region North Carolina





Leading Strategic Organisation

Research Triangle Regional Partnership

- **Positioning:** This public-private partnership of economic development agencies which acts as a cluster management group works with the NC Department of Commerce and a wide range of partners to market the 13-county Research Triangle Region of North Carolina.
- **Mission:** To promote economic growth and competitiveness for the Research Triangle Region.
- **Vision:** To preserve the long-term competitiveness of the region.
- **Strategy's budget:** Staying on Top is a \$5 million 5 year strategy that is funded at numerous levels. In 2004, the RTRP planned to raise \$2.25 million from Institutional partners, \$1.25 million from private fundraising, \$750,000 from grants from national and regional foundations and the balance from sponsorships and income generation.
- **Governance:**
 - Board of Directors: 56 members representing the 13 counties
 - Executive Committee : 24 representing the 13 counties (most are members of the Board)
 - Permanent staff :7 permanent employees
 - A Regional Advisory Committee of economic developers from each county meets monthly to plan and implement strategic marketing efforts.



RTRP's Main Partners

More than 86 partner organizations across the 13 counties:

- **Institutional Partners** (NC Dept. of Commerce, economic development agencies, tourism offices, airports, community colleges, universities and business support organizations) : Implement the competitiveness plan through collaborations with a variety of committees/working groups and through supports given to initiatives.
- **Private Investors** (businesses) : Support financially economic development activities.
- **North Carolina State University** : Now facilitates the Cluster Networks and is in charge of operating its technical agenda (technical expertise, speakers, conferences, etc.), through its Industrial Extension Service Management (IES) which aims at helping businesses to become more productive and profitable.
- **RTRP Partners** : An independent organization composed of businesses that examine issues of economic competitiveness and help RTRP implementing domestic and global marketing strategy.
- **World Trade Center of North Carolina** is a program of the Research Triangle Regional Partnership, that coordinates the region's global strategy.



Cluster Policy Rationale

Why a Cluster Strategy?

- Market Failure: recession, unemployment in traditional industries and stalled rural economies.
- Aggressive competition nationwide and worldwide (lots of new strong players in the markets, like China and India).

Why implementing Clusters?

- Dr Michael Porter, *Clusters of Innovation* (2001): region needs a new economic vision to remain competitive.
- An RTRP initiative called the Future Clusters Competitiveness Task Force has conducted many studies to analyze industry data to identify existing and emerging clusters in the region.

What are the Policy Objectives?

- Strengthen the region's existing clusters by improving collaboration among companies and organizations.
- Diversify the economy by recruiting a wider array of clusters and focusing on opportunities at the intersection of the strongest clusters.
- Spark creation of more homegrown businesses.
- Identify regional investments needed for competitive advantage.
- Invigorate the economy across a broader geographic area.
- Develop the region's capacity to meet its goals.

What are the expected Results?

- Generate 100,000 new jobs over 5 years in the 13 counties.



Characteristics of Policy

Level of Policy

- Policies established by regional initiatives: RTRP, Cluster Network, etc.

Policy Approach

- Since the RTRP is mainly composed of a collective group of academic and economic development leaders and not of state government members, the policy approach is **bottom-up**. Each cluster committees meet regularly and exchange on what can be done (initiatives/policies/strategies) to foster their development.

Main Focus

- Global branding and marketing campaign for the 13-county region.



Cluster Expansion

- **Drafted** by the Future Clusters Competitiveness Task Force (business and high education leaders) and finalised by the RTRP, *Staying on Top* (2004) has a high credibility because it pursues Porter's Clusters of Innovation Initiative recommendations. Tending to be a broad strategy, RTRP is now narrowing strategies for more targeted clusters like life science (2006), and aspects of its development like internationalization (2006).
- **The main points** of the strategy are to grow industry clusters, to create and retain businesses, to align academic programs to markets' needs, to foster rural prosperity and to improve the clusters' network.
- The RTRP (regional) provided the funding, staffing, the strategic direction, wrote the final plan and is responsible for implementing the strategy and policies.
- The **strategy is communicated** through important public relation initiatives. Ex : logos, website, brochures, radio show, monthly e-newsletters, regular press articles.
- Collective 5 years Marketing Plan in which all 13 counties participated : *Triangulating Success* (2004) raises the theme : *Best for Business*; *Best place to live*; *Top Region for Inward Investment*.
- A media strategy targeting local, regional and national outlets that promote the region's entrepreneurial and creative-class climate
- **10 targeted industry clusters**: Pharmaceutical, Biological Agents/Infectious Diseases, Agricultural Biotechnology, Pervasive Computing, Advanced Medical Care, Analytical Instrumentation, Nanoscale Technologies, Informatics, Vehicle Parts Manufacturing, Logistics and Distribution.
- Implementation of the strategy, *Staying on Top*, began in 2004.



Policy Action & Partnership

Policy Action

- RTRP launched and led an initiative to bring together the RT community called the Future Clusters Competitiveness Task Force. This 37 members board has been mandated to plan the region's clusters development strategy.
- Self-governing clusters with structural support provided by the RTRP and the NC State. For that matter, each cluster network will have both a steering committee and a "quasi-leader" (experienced and successful manager from the industry who will act as a mentor for the committee).

Partnership

Networking

- **CLUSTER NETWORK** : a networking tool for cluster companies and support organizations
 - *All Cluster Meetings* (every two months): first part dedicated to networking and second part to a "board-type" meeting to discuss issues and opportunities (ex: funding).
 - *Industry Cluster Meeting*: discussions on challenges and business opportunities specific to each industry cluster. These do not have a management mandate. The plan is to have one network for each cluster, and the 3 following clusters already have one : Advanced Medical Care, Biological Agents & Infectious Diseases and Informatics.
- Web platform on which clusters' members can promote their work and exchange ideas.

Internationalization

- The RTRP used to have networking initiatives to promote the region.
- Global strategy is now led by the World Trade Center N.C. to support organizations involved in internationalisation and to attract knowledge workers (three-year, \$2,25 M strategy).



Industrial Performances/ Innovation & Technology/ Skills & Training

Innovation and technology

- Incubator Services: The Council for Entrepreneurial Development (CED) expanded its services to support the region's entrepreneurs. Also, it has a program to match business community with academic and inventors, researchers and innovators to help university and other technology commercialization efforts to market faster and easier.
- Physical Incubator : The Research Triangle Park, owned by the Research Triangle Foundation is home of three incubators. One of them is the First Flight Venture Center (FFVC) which was given the 2006 "Best Science Based Incubator" Award by an international jury.

Skills and Training

- Connect industry leaders with the higher education community to develop strategies for maintaining the region's national leadership in industry training and support.
- Expand the Small Business & Technology Development Center's Management Education Services to targeted high-growth cluster companies.
- Portals and single points of contact for each institution of higher education.
- Develop higher education rapid-response teams for each targeted cluster.
- Develop demand-driven specialized cluster programs for community colleges.
- Training program in economic development field to provide continuing education on New Economy developments.



International Collaboration

Existing Collaboration with Europe

Initial collaborations with European partners, but lack of time and funding at the time to implement collaborations:

- *Alsace Development International*, (France), *Karlsruhe Technology Region*, (Germany), to collaborate on a range of marketing initiatives to attract corporate investment. (2003)
- RTRP is a member of the *Danish-American Business Forum*, (Denmark), which is membership-based and focuses on business opportunities between Denmark and the US.

Potential Partners

- Initial contacts with Ireland (University of Ireland and enterprises).
- Interest in collaborating with regions from North East England, Alsace (France).



Oregon





Leading Strategic Organisation

OREGON BUSINESS PLAN STEERING COMMITTEE

- **Positioning:** Launched in 2002, Oregon Business Plan (OBP) is a statewide initiative of Oregon's business community jointly led by its Steering Committee which wrote the strategy and its Leadership Committee which hosts the *Annual Leadership Summit*.
- **Mission:** To shape a long-term vision and strategy for creating more quality jobs in the state, by promoting the development of clusters of competitive traded sector or export industries.
- **Vision:** To position Oregon in fact and reputation as a state unique in its passion and ability to nurture clusters of innovative industries.
- **Strategy's Budget:**
 - Although all of the funding is not directly attributed to clusters' development, here are their most relevant strategies/initiatives:
 - In 2005, The Oregon Business Plan : strategy to increase the competitiveness of Oregon's targeted clusters (\$19 M / 1 year)
 - In 2007, the Oregon Innovation Council (Oregon Inc.) : innovation strategy (\$38 M / 1 year)
- **Governance:**
 - OBP Steering Committee: 17 leaders from industry and one representative of the Oregon Economic & Community Development Department (OECDD).
 - OBP Leadership Committee: 6 leaders from government including 2 U.S. Senators, State Governor and State Senate President.



OBP's Main Partners

- **Business leader organizations, non-profit organizations** (business associations), **government agencies**: Promote policies that improve Oregon life.
- **Oregon's U.S. Senators** organize the Annual Leadership Summit through the OBP Leadership committee .
- **Governor** and **legislative leaders** among city and county governments: Make policies and diffuse an economic development vision based on clusters.
- **College and University**: Active members of the Cluster Network (in governance) and work with different groups to improve research and education related programs.
- **Oregon Cluster Network** is an initiative funded by OBP, connecting industry leaders with university researchers, schools, media, venture capital, and other support organizations, helping cluster facilitators (BDO) across the state, and sharing best practices.
- **Oregon InC**: its mission is to identify Oregon's top innovation-driven growth opportunities, maximize the state's competitive advantages and establish Oregon's niche in the global economy. Also, Oregon InC's first charge is to develop and track the state's Innovation Plan.
- **Economic development agencies** in counties and **Business Development officers** (BDO): recruit firms (state-wide) to participate to the Cluster Network and are responsible for its organization



Cluster Policy Rationale

Why a Cluster Strategy?

- **Systemic Failure:**
 - To revitalize the public finance system thus protect the education systems.
 - Regulatory framework limits benefits that the region could gain from natural resources.
 - Losing of traditional cost advantages in energy supply.
 - Lack of land dedicated to industrial development.

Why implementing Clusters?

- Inspired by Dr. Porter's cluster theory, business leaders recommended that state, regional and local economic development efforts and plans embrace the cluster's approach.
- Market study: *Developing the Architecture of Clusters*, OBP (2003).
- Targeted trade-sectors industries because they bring new income that will be reinvested in Oregon's economy.



Cluster Policy Rationale

What are the Policy Objectives?

- To improve the understanding of the way businesses should compete in the global market
- To develop more effective means of understanding their (businesses) challenges and supporting their success.
- To improve support to the Oregon economy via the support of traded-clusters to spur on Innovation.

What are the Policy Challenges?

- To clarify the IP ownership for projects led by multiple universities
- To minimize the region's weaknesses, particularly in public finance and resources management.
- To connect education and training with workforce needs.
- To increase participation and stability in the workforce.

What are the expected Results?

- Strengthened competitive position facing the intense global competition.
- Growing and keeping quality jobs and improve the competitive ranking Vs. other U.S. states.
- To anchor the premier nanotechnology incubator in North America. (ONAMI)



Characteristics of Policy

Level of Policy

- Annually, the OBP Steering Committee is selecting industry clusters' stakeholders demands and presenting those which fit the initial strategy to the state's legislator and governor. **(State level)**

Regulatory Framework and Level

- Using inputs from the OBP committees and the Oregon Inc, Oregon's **state government** is responsible for the establishment of the Regulatory framework.

Policy Approach

- The policy approach is **bottom-up**. The Oregon Cluster Network provides to clusters' stakeholders a platform to suggest adjustment to creation of policies to the OBP Steering Committee. **(Industry level)**.

Main Focus

- Policies focus on traded-sector industry clusters. Oregon's economy mainly relies on them.



Cluster Expansion

- **Drafted by the** Oregon Business Plan Steering Committee, *Stepping Up* (2003) is the blueprint of the cluster-based strategy. In addition, they annually publish updates for the year to come objectives' and strategy's adjustment. They recently published the *Policy Playbook* (2007) which the OBP defines as its *broad strategy and specific initiatives for 2007*.
- OBP's strategy integrates industry sectors into the region's economic development as industry clusters. It is also to provide an healthy public finance system for the region to invest into innovation, education and entrepreneurs. Key words: life quality; future, innovation, productivity, knowledge-based, traded-sector.
- While there is a long-term strategy, cluster's programs and policies (and funding) are subject to change annually.
- Distinct website for each initiative of OBC, and Oregon Clusters website (www.oregonclusters.org) a virtual focal point, a central resource for cluster information & communication.
- Branding and communication tools: brochure, documents, different logos, campaign to publicize industry clusters initiative: *Oregon is a great state in which to relocate and do business*.
- Promotion made by BDOs to recruit participants state-wide.
- 40 active cluster development efforts were identified around the state but priority oriented toward 11 traded-industry clusters.
- The strategy has been planned and the OBP is **midway to implementation**. The OBP community is waiting for the legislators to confirm the funding. Only by then they should know which part of the strategy will be funded and at which level. They are still doing initiatives based on their strategy.



Policy Action & Partnership

Policy Action

- The Oregon Business Plan Steering Committee is responsible for the planning. New objectives and initiatives are presented annually.
- General lobbying efforts by OBP Steering Committee. Oregon Inc. works to influence legislature regarding innovation regulatory framework.
- *The Annual Leadership Summit* is the key policy forum bringing together business, elected and community leaders.
- Guidelines for stakeholders to submit initiatives/policy proposals to the OBP Steering Committee.

Partnership

Networking

- Regular meetings for networking and communication between groups involved in clusters development.
- Oregon Cluster Network is an initiative funded by OBP, connecting industry leaders with university researchers, schools, media, venture capital, and other support organizations, helping cluster facilitators (BDO) across the state, and sharing best practices.

Internationalization

- Study Oregon program that operates as a consortium made up of various universities and colleges whose goal is to support recruiting foreign student to Oregon.
- The international efforts focus on High-Tech, Software, Secondary Wood Products, Apparel/Sportswear, Energy, Environmental and Sustainability.



Industrial Performances/ Innovation & Technology/ Skills & Training

Industrial performances

- Develop a competitiveness assessment for each cluster (SWOT) and recommendation for the success.
- Develop techniques to measure cluster health and performance over time.
- Assist cluster working groups to access needed expertise or resources.
- Annual progress report (Competitive index).

Innovation and technology

- From the \$38 million innovation strategy of Oregon Inc., \$20M has been dedicated to extend funding to three major research centers, to offer a nanotechnology world-class incubator (*ONAMI*), a privately funded drug development accelerator and a collaborative research project with the private sector on bio-economy and sustainable energy.
- Oregon Inc. will assist the Oregon University System (OUS) and the Oregon Department of Justice to clarify and improve statewide technology transfer.
- Establishment of a Research Council to capitalize on research excellence in Universities, by Academic Excellence/Economic Development (AEED).

Skills and training

- Education and workforce systems must be overhauled to be able to increase the level and quality of education attainment.
- Clusters practitioners training to equip BDOs in clusterization.



International Collaboration

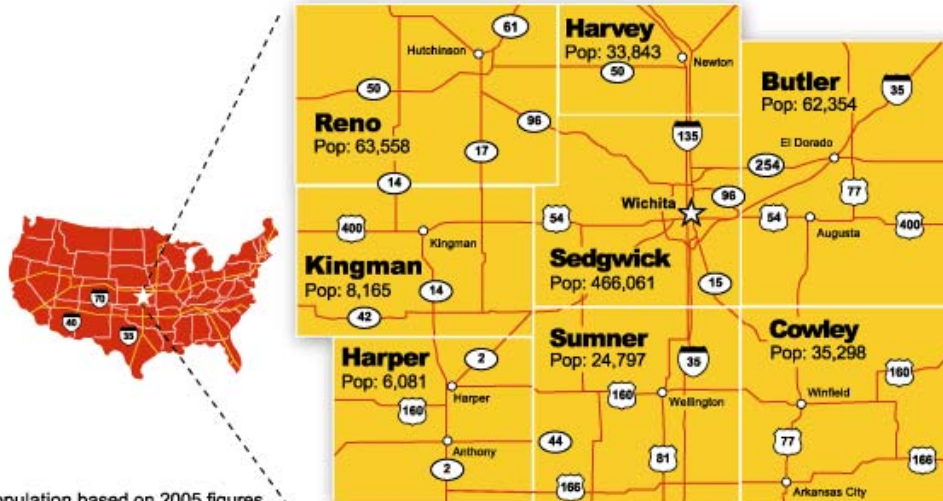
The OCEDD is presently developing its international strategy.

International Events

- In October 2007, Portland will host the Competitiveness Institute, a global organization of cluster experts and practitioners. The theme of the five-day event will be “Collaboration, Innovation, and Sustainability.”



Wichita



KANSAS COMPOSITES & ADVANCED MATERIALS PARK



Leading Strategic Organisation

Greater Wichita Economic Development Coalition (GWEDC)

- **Positioning** : GWEDC is a bold regional public/private partnership charged with executing South Central Kansas's economic development marketing and outreach strategies to expand the regional commercial and industrial base.
- **Mission** : To retain and expand the Aerospace Cluster in the greater area and to attract high-wage jobs in order to diversify the local economy.
- **Vision** : To provide South Kansas with a variety of related industry clusters.
- **Funding** : 3 year cluster-based strategy cumulating nearly \$90M in addition of the building of educational facilities (\$78M). GWEDC leverages funds from regional, state or federal programs and from cluster's stakeholders:
 - Federal Fund, Workforce Innovation in Regional Economic Development (WIRED) provides \$1M for the first year and \$2M for the next two years. (lever from stakeholders and others is \$17/\$1)
 - Lever includes \$44M from various cities and counties and \$7M from the state of Kansas
- **Governance** :
 - 8 directors representing the 4 permanent members representing :
 - The City of Wichita, Kansas (city), Sedgwick County, Kansas (County) – at least 1 elected official each
 - The Regional Economic Area Partnership (REAP) and the Wichita Chamber of Commerce (Chamber) – each shall assign at least its president or its chairperson.
 - 4 additional directors shall be elected by a plurality of the votes of the "paying" members.



GWEDC's Main Partners

More than 40 Partner Organizations in 10 Counties

Kansas Department of Commerce is the WIRED grant recipient and fiscal agent.

Workforce Alliance works with local employers to provide training grant assistance to support re-skilling of incumbent workers and new hires in core competencies needed by new industry growth sectors.

Visioneering Wichita uses citizen input to develop regional long-term strategic planning. Visioneering also works to maintain communications between the business community and educational/training institutions to encourage relevant technological training.

Wichita State University provides space and administrative support to the NIAR. In addition to these, many regional initiatives benefit of cash and in-kind funding to support research, innovation and small business creation.

National Institute for Aviation Research (NIAR) has for mission to support Advanced Materials & Composites research and training (\$4.5-5M annually over 3 years). This supports staff, space, equipment and also includes contracted work.

Wichita Area Technical College (KATC) is a member of the Kansas Institute for Technical Excellence (KITE) which is consortium of regional colleges committed to the development of Centers of Excellence for technical training programs. The KATC overseas technical training needs and leads development of new technical training facility (Jabara Campus Project) and curriculum in support of Aerospace and Advanced Materials & Composites clusters. A \$78 million initiative.



Cluster Policy Rationale

Why a Cluster Strategy?

- **Benefits of Innovation:** Wichita already has the industrial “critical mass” in Advanced Materials & Composites manufacturing to drive development of the emerging cluster.
- **Opportunity vs. threat:** shift in technology (predicted sudden growth of Advanced Materials & Composites market: 14% a year for the next 20 years) represents both opportunities and threats to Wichita.

Why implementing Clusters?

- Multiple reports identified the Advanced Materials & Composites as a key industry to develop in Wichita. Although this cluster is apart from the Aerospace cluster, it naturally collaborates and acts as a support to it.

What are the Policy Objectives?

- To support companies experiencing employment and training needs.
- To have entrepreneurs with strong ability make critical decisions so they can connect research with improved performance in their business.
- To provide government officials and general public with a better understanding of the emerging cluster.
- To improve relationships with other R&D centers (local & international).

What are the Policy Challenges?

- Potential danger to outsource the engineering and production to new emerging clusters, both nationally and globally.
- Importance to understand the role of a qualified and experienced workforce locally.



Cluster Policy Rationale

Results expected from policies:

Qualitative

- Successful launch of new products and services in the emerging cluster through successful technology transfer and wider market application of Advanced Materials & Composites within both new and existing businesses.
- Effective and rapid incorporation of new technologies into the aerospace fleet.
- More effective cooperation and cluster facilitation among relevant private and public entities.
- Better informed and more effective decision-making regarding regional cluster external marketing strategies and internal stakeholder communication.

Quantitative

- Generate 8,000 new jobs over 5 years in the Wichita county.
- Training delivery of approximately 587 M.Sc. or Advanced Materials & Composites students over the three-year WIRED period (in advanced manufacturing careers, including Advanced Materials & Composites)
- The Jabara Campus Project will serve 1,500 day and evening students at maximum capacity:
 - 25 programs have been targeted for the start-up phase of the Project related to Manufacturing, Aerospace and Career Development and Assessment.



Characteristics of Policy

Level of Policy

- Policies defined by regional organizations such as GWEDC, using inputs from its partners (Workforce Alliance, private sector and institutional actors such as universities and colleges).

Regulatory Framework and Level

- GWEDC working closely with the State of Kansas to develop economic development incentives and a favourable climate to technology transfer.

Policy Approach

- The global policy approach is bottom-up. Regional stakeholders define policies, but most of the funding is provided by the federal and state's authorities.
- Big focus on Training. Multiple programs put in place to assure that population receives training and learning skills oriented towards its clusters' needs (Aerospace cluster and Advanced Materials & Composites cluster).

Main Focus

- Positioning Wichita as a global Center of Excellence in Advanced Materials and Composites



Cluster Expansion

- There are **no clear strategy-related documents** yet. However, guidelines for the emerging cluster strategy are seen in most of the initiatives documents, feasibility studies, and in grant applications.
- **Strategy shows** a clear will to support the emerging Advanced Materials & Composites industry, to maintain South Central Kansas competitive advantage, to develop Advanced Materials & Composites expertise and doing so, to diversify its regional economy.
- **Keywords:** Educational and workforce development; Catalyze innovation and entrepreneurial talent through R&D; Center of Excellence, emerging clusters to support existing ones.
- **Promotion tools:** targeted direct mail, print advertising, trade shows and seminars, with a primary focus on international. Internal and external marketing led by the GWEDC.
- GWEDC's Website provides information regarding the competitive advantage of the region.
- **Targeted sectors:** Aerospace, Advanced or “engineered” materials (composites, etc.) and polymers (advanced plastics, elastomers, etc), Healthcare and Bio-Composite industry.
- The planning of the Advanced Materials & Composites cluster is now completed. Awaiting the funding confirmations, the stakeholders have taken proactive steps to implement the cluster.



Policy Action

Policy Action

- GWEDC is responsible for the **planning** and elaboration of the cluster development strategy. For that matter, it has created a Composites Advisory Board: stakeholders responsible for giving their input on the strategy, and more specifically on new programs focusing on industry's needs. This Board is administered by a Composite Coordinator, who oversees market development, market research and stakeholders communication.
- Wichita Metro Chambers of Commerce has a well-established staff oriented towards governmental relations (business tax, regulatory climate, etc.).



Partnership

Networking

- The cluster development benefits from Visioneering Wichita as a strong regional network to unite citizens, public and private entities. It offers to them the opportunity to share their input through thematic meetings.
- Regional Economic Area Partnership (REAP) is a vital leadership network which consists of a council of local governments to coordinate state and national actions and to adopt ones that enhance the regional economy (weekly meetings).

Internationalization

- Mainly in United Kingdom and France. Existing research partnership, but also negotiations for mutual export/import opportunities.
- Discussions with Nagoya (Japan) to establish a trade-recycling partnership.
- Targeted sectors: Aviation sector (suppliers), Advanced materials & composites expertise in Thermoset composites. Emerging supply chain in carbon fiber production, manufacturing, fabrication and design.



Industrial Performances/ Innovation & Technology/ Skills & Training

Industrial Performances

- Dedicated industrial park for Advanced Materials & Composites-related companies (preferably co-located with the innovation center), part of the KCAMP.

Innovation and Technology

- **Incubation Services:** Advanced Materials & Composites Cluster Specialist for Entrepreneurs: consultation and training to high-potential firms / provide individual “mentoring” to entrepreneurs.
- **Technology Transfer:**
 - Creation of a dedicated innovation center to spur research and development that can be spun off into viable commercial processes (part of the KCAMP).
 - Expansion of the Kansas Entrepreneurial Initiative (KEI) program which provides feedback of the potential viability of technology transfer to the concept’s originators.
- **Collaborative Projects:** Providing a forum to present new business ideas to local business community leaders.

Skills and Training

- **Jabara Campus Project:** Development of world-class facilities for Aerospace Technology (including Advanced Materials and Composites technologies), Advanced Manufacturing and Career Development/Assessment. Includes new facilities and new programs. (Construction Early 2008, classes starting Fall 2009) – \$40 million.
- **Workforce Solutions WIRED Grant Consultant:** works with local employers to identify incumbent worker training opportunities and develop customized training programs.



International Collaboration

Existing Collaboration with Europe

United Kingdom

- **Composite Mission:** “Our goal with the U.K. mission was to do everything we could to help support our local composites expertise, building on what we already have, while also positioning Wichita as a center of excellence in composites engineering and manufacturing,” French* said. “In addition, the excellent dialogue and interchange with other international experts can help form collaborations, bring more work to Wichita and hopefully improve processes through best practices.”

France

- **Lightning Strikes Research:** Collaboration with The French Aerospace Lab, *Onera*
- **Mutual export/import and Foreign Direct Investment (FDI) opportunities:** Collaboration with the French Aerospace Industries Association (*GIFAS*)

France & UK

- Joint Project in trading Material Composite with the Department of Trade and Industry (DTI) of UK and the *GIFAS*

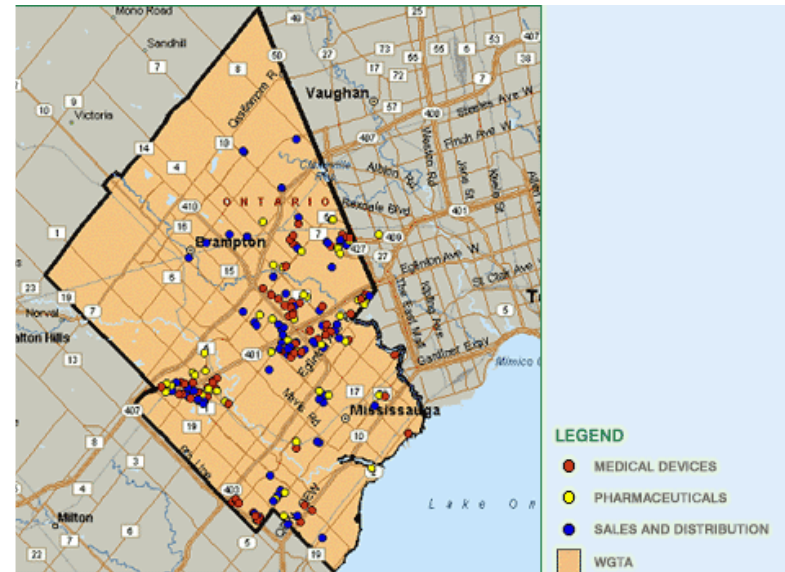
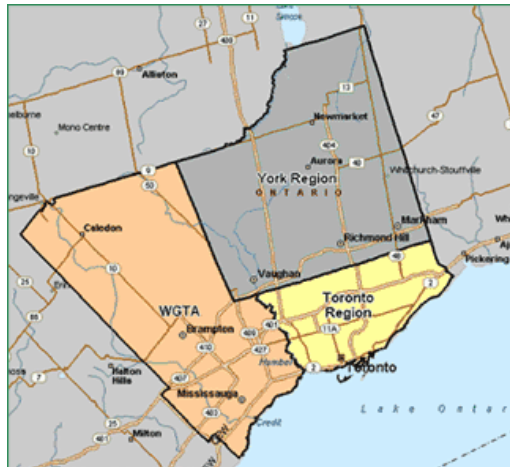
Potential Partners

France, Germany, United Kingdom, Spain

* Patrick French, President of the GWEDC



Western Greater Toronto Area





Leading Strategic Organisation

Western Greater Toronto Area Convergence Center Advisory Board:

- **Positioning:** The Western Greater Toronto Area (WGTA) is one of the 11 regions in Ontario known as Regional Innovation Networks (RINs). The WGTA Convergence Center is an initiative of the University of Toronto at Mississauga (UTM) to act as an umbrella organization for the Biomedical cluster of this RIN*. Its advisory board works in consultation with stakeholders across region to elaborate strategy, policies and to implement initiatives.
- **Mission:** To network and enhance infrastructure, education, and research, thereby supporting commercial, institutional and societal interest in the life science.
- **Vision:** To accelerate WGTA's growth as an internationally significant Biomedical cluster and as an integral part of the biotechnology strengths of the surrounding region.
- **Budget:**
 - Planning of the strategy was funded in cash at state level through minister's cluster development program (\$150K for creation of a business plan for the cluster fully matched by private partners).
 - When the plan got approved, program's extension provided the WGTACC with \$1 million on four years in cash to implement the strategy. (fully matched by private partners).
- **Governance:** This partnership, which is led by the UTM, has 22 members representing industry, academia and government leaders.

*Results of a program formerly called: Biotechnology Cluster Initiative Program (BCIP)



WGTACC's Main Partners

22 Key Partners & Stakeholders to implement the Strategy

Ontario Ministry of Economic Development and Trade (MEDT) is responsible for the Biotechnology Innovation Cluster Program (BCIP). The MEDT fostered regional initiatives to create clusters.

Minister of Research and Innovation (MRI) funds half of the operations budget of the WGTACC which is about \$500,000 per year. WGTACC has to provide the MRI with an Annual Performance Measures Report

City of Brampton and Mississauga: The City of Mississauga has been responsible for the mapping of the Biomedical cluster and chairs on numbers of initiatives boards. Each city provides the WGTACC with between \$50K and \$100K in cash annually.

University of Toronto at Mississauga: Major partner in most of cluster initiatives. Provides the WGTACC with hundreds of thousands in cash annually.

MaRS (Toronto): Physical incubator for the WGTA, partner in major events and in the marketing efforts.

Private partners: Most of them are pharmaceuticals which provide a minimum of \$50K to \$100K in cash. Others like accountants companies and law firms provide them with free professional services.



Cluster Policy Rationale

Why a Cluster Strategy?

- **Market Failure:**
 - The need for a collective vision.
 - The will to expand networking with other regions.
 - The necessity of a better access to capital.
 - The rareness of senior executives and failure to retain high quality labour.
- **Aggressive Competition:**
 - To prevent successful firms from being taken over by foreign interest.
- **Government Objectives:**
 - Make Ontario one of the most competitive jurisdictions in North America in biotechnology.

Why implementing Clusters?

- City of Mississauga, Economic Development Office, Mississauga: A Leading Canadian Bio Cluster, (2003) – Promotion tool.



Cluster Policy Rationale

What are the Policy Objectives?

- Promote the Western GTA Biomedical Cluster.
- Facilitate communications within the Western GTA Biomedical cluster and with stakeholders outside of cluster.
- Assess the performance and needs of the Western GTA Biomedical Cluster.
- Facilitate the provision of the infrastructure, human resources, and business environment required by Western GTA Biomedical Cluster organizations.
- Work with the local community to improve the social, natural, human and health of the region.

What are the Policy Challenges?

- Competition between local RINs and municipalities and the lack of connectivity with the trade associations would not be conducive to Ontario Network.
- Loss of opportunity due to constrained budget and lack of attraction of venture capital.
- Lack of alignment of programs among institutions would weaken IP capacity and educational network.
- Lack of effectiveness of Advisory Board would limit alignment of the 3 trusts of the WGTACC.

What are the expected Results?

- New educational programs.
- Technical and business services targeting start-ups and SMEs providing access to University infrastructure and faculty members.
- Impact of the Healthy City Stewardship Centre, and its international recognition.



Characteristics of Policy

Level of Policy

- Policies drafted at regional level: WGTACC Advisory Board partners with local key actors to design strategies and to mobilize cluster's stakeholders.

Regulatory Framework and Level

- Municipal governments foster business development through tax rates lower than other Ontario cities.
- Gap between the actual federal framework and industry needs (ex: lack in patent protection and longer cycle for grants for pharmaceutical and vaccine approvals).

Policy Approach

- The global policy approach is **Top-down**, as state governments do foster the development of cluster policies
- Convergence Center, aiming at establishing a one-stop resource for the cluster community as a broker policy approach. It fosters the input of the cluster community for the creation of policies.
- Training: Development of new programs in universities.

Main Focus

- To improve the cluster's international position.



Cluster Expansion

- **The Cluster Strategy** was drafted by the WGTACC Advisory Board, the strategy is published in a document called *Western GTA Biotechnology Cluster Strategy* (2004), www.wgtacc.com.
- Strategy focuses on four points: Coordination and promotion, development of the Business environment, Human resource environment and the Community Environment.
- **Strategy is communicated** through the WGTACC's Website. Web-Visibility exchange with partners for cluster's initiatives.
- Quarterly "BioBeat" newsletter, to promote cluster's events, sectors trends and SME's profile.
- Brochures promoting the WGTA biomedical cluster's advantages.
- **Strategy focuses** on biomedical sectors, but ITC is another strong cluster in WGTA (not-activated)
- Targeted sectors: Drug Discovery, Innovation Management and Policy, Ecosystem Transport and Remediation, Sustainable Environment, Clean Energy.
- WGTA is part of a larger regional biomedical cluster that includes the Toronto region and the York Region.
- After two years of implementation, surveys and studies have led to adjustments in the initiatives.



Policy Action & Partnership

Policy Action

- 2001: State governments funded regions to develop a regional Biotechnology Cluster Innovation Plan to a maximum of \$200K. The WGTACC advisory board has done the planning.

Governance:

- Eligible applicant to the BCIP must be a regionally based consortia mix of an exhaustive list of stakeholders and form a legal entity.
- Specific RIN Governance detailed in the WGTACC Operating Plan (2007).
- “*Code of Conduct and Conflict of Interest Guidelines*” is a document presenting the governance rules applicable to board administrators, which all have to sign and respect them.

Partnership

Networking

- Virtual Network: database (UTM) in which life science and technology community can build relationships (collaboration/partnership opportunities & hiring platform), housed on the WGTACC Website. Partners Website present cluster’s activities (1% of the strategy’s budget).
- Seminars, networking events and breakfast event series organized with partners (35% of the strategy’s budget).

Internationalization

- Existing relationships with Germany. Initiated relationships with France and Italy, as well as with China and India.
- International efforts are mainly conducted in the following sectors: Medical & Assistive Technologies and Pharmaceuticals Products.



Industrial Performances/ Innovation & Technology/ Skills & Training

Industrial Performances

- Program to create an Imaging facility. “This technology is now a focal point at various institution...” WGTACC (30% of the overall strategy’s budget).

Innovation and Technology

- Mississauga Technology Business Accelerator (MTBA): Virtual Incubator focusing on helping start-ups with leasing of space within Mississauga and to provide technical and business services in partnership with the UTM (coaching and mentoring). (30% of the overall strategy’s budget).
- Incubation: As a physical incubator, MaRS Discovery District in the Toronto region is now home for most of the companies that were housed in the initial MTBA physical Accelerator.
- Technology transfer – *The Smart Growth – Research and People* : Program to be developed by the WGTA CC to foster partnering and alignment for scientific research by academic institutions and community hospitals.

Skills and Training

- *The Smart Growth – Research and People* : Another goal of this program is to align the academic programming by academic institutions and community hospitals with more investments in University/College programs – Pharmaceutical/Biotechnology, research/manufacturing.
- Industry-driven training company based at the MTBA.



International Collaboration

The Cluster strategy has now been implemented for two years. Although international collaborations are part of the strategy, the WGTACC focuses now on the implementation process locally and will then work on the international aspect of the strategy.

Existing Collaboration with Europe

- Discussions initiated with these countries : France, Italy and Germany



Montreal

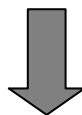




Leading Strategic Organisation

The Montreal Metropolitan Community:

- **Positioning:** The Montreal Metropolitan Community is a planning, coordinating and funding body serving 82 municipalities. It has jurisdiction in the following fields: Land Planning, Economic Development, Arts and Culture Promotion, Social Housing, Facilities, Infrastructure, Services and Activities of metropolitan importance, Public Transit and the Metropolitan Road Network, Waste Management Planning, Air Quality and Water Quality
- **Vision:** Montreal must become one of the most competitive metropolitan areas in North America
- **Governance:** The MMC is administered by a 28-member Council. An Executive Committee of 8 members is the operational arm of this Council.



Through its Economic Development Plan adopted in 2005, the MMC put in place a competitiveness strategy centred on 15 dynamic and innovative business clusters. Total investment of **\$1.5 million annually over 3 years** to support the creation of clusters initiatives and value-added projects (equal funding by federal and provincial governments, the MMC and the private sector)



MMC's Partners

Federal (Canada Economic Development):

- The Economic Development Agency of Canada for the Regions of Quebec is responsible for promoting the long-term economic development of the regions of Quebec
- It provides 25 % of the operations annual funding for the activated clusters (\$200K)

Provincial (Ministry of Economic Development, Innovation & Exportation / Ministry of Municipal Affaires & Regions):

- Part of MAMR mission is to advise government on how to foster Montreal's progress and visibility. The MDEIE has for mission to support economic development, innovation and exportation, and research
- Together, they provide 25 % of the operations annual funding for the activated clusters (\$200K)

Private sector:

- It provides 25% of the operations annual funding for the activated clusters (\$200K). The private funding for Aero Montreal (Aerospace) comes from different types of memberships (stakeholders: \$100K / year; integrators, manufacturers & MRO: \$80K / year; sub-contractors: \$20K / year). For other clusters (Techno Montreal, InVivo and Cinema), funding comes directly through contributions

Table Métropolitaine de Montréal (TMM):

- Joint planning organization operating under a mandate from Emploi-Québec, which is responsible for determining labour policies in the metropolitan area.
- TMM is the MMC partner for ensuring that the supply of skilled labour meets the demand. The table define strategies and propose actions to meet labour market needs.



Cluster Policy Rationale

Why a Cluster Strategy?

- OECD Territorial Reviews, Montreal: “The principal challenge is to develop a clear and coherent strategy with an associated institutional framework that ensures co-ordination among the key actors and a clear implementation mechanism (...) the point of departure for Montreal is that the strategy should take a metropolitan-region perspective”

Why implementing Clusters?

- Mapping phase that led to the identification of 15 industrial clusters (partnership with the MAMR)

What are the Policy Objectives

- Innovation, productivity, competitiveness and prosperity

What are the Policy Challenges?

- “Existing” metropolitan clusters unable to take advantage of the business synergy among the various players in the productive cluster system
- MMC’s role is not to create new clusters, but to find clusters that are already active in the metropolitan area and activate them by supplying appropriate tools and meeting opportunities

What are the expected Results?

- Create a ripple effect on the Montreal metropolitan area’s economic and social vitality
- Provide the 82 municipalities in the MMC’s five administrative regions with a concerted, integrated approach for strengthening their competitive advantages



Characteristics of Policy

Level of policy

- Metropolitan

Regulatory Framework and Level

- The Montreal Metropolitan Community Act
- Vision: *Charting our international future: Building a competitive, attractive, interdependent and responsible community*
- Economic Development Plan

Policy Approach

- Bottom-up Strategy: the initiative must come from the firms involved and their institutional partners in development. Economic leaders have a crucial role to play

Main Focus

- Increasing business productivity and regional competitiveness
- Visibility; manpower; sub-contracting; productivity; innovation

TYPE OF CLUSTER	DESCRIPTION	INDUSTRIAL CLUSTER	CLUSTER CRITERIA	CMM'S ROLE
1. Competitive clusters	Competing clusters that bring together internationally competitive segments.	01) Aerospace 02) Life sciences 03) IT 04) Textiles and clothing	<ul style="list-style-type: none"> • World leader • Role as economic engine • National importance • Strong externalities 	Planning and goal definition. Co-ordination and monitoring.
2. Visibility clusters	Strategic sectors for a city region's socio-economic development and branding.	05) Culture 06) Tourism 07) Services	<ul style="list-style-type: none"> • Obvious presence • Multiple activities • Importance for innovation 	Support for the production of the region's social and creative capital (branding).
3. Emerging technology clusters	Cross-sectorial technologies with high, long-term growth potential.	08) Nanotechnologies 09) Advanced materials 10) Environmental technologies	<ul style="list-style-type: none"> • Sustained, multifaceted R&D • Importance for future development 	Support for technological and sector-based innovation.
4. Manufacturing clusters	Clusters with growth potential that are based on the use of natural resources.	11) Energy 12) Bio-food 13) Petrochemicals and plastics 14) Metallurgy 15) Paper and wood products	<ul style="list-style-type: none"> • Diversified segments, geographically dispersed businesses, major industries 	Support for local, regional and sectoral planning.



Cluster Expansion

The *Terms of reference for implementing cluster initiatives* provides a framework and admission criteria for obtaining financial assistance and coaching from MMC and its partners in setting up and operating metropolitan cluster initiatives. To qualify for funding, a cluster must present the following:

- Candidates must form a legal and independent entity (an NPO) and determine a location for dialogue and business activities
 - The managers named by the representatives of the cluster are in charge of this legal entity
 - A clearly articulated vision that is shared by its members
 - Growth goals
 - A 3-year development strategy (action plan, added-value projects)
 - 10-year prospects
 - Financial needs
 - Performance criteria
 - Proof of a strong consensus
 - The involvement of a champion and all key players from the sector
- Cluster initiatives are responsible for co-ordinating the firms and organizations associated with the cluster and the initiatives developed following the mapping exercises. The initiative puts in place a Board of directors, an Executive Committee and a manager's office and support staff.
- Each initiative chooses its own branding (ex: Montreal InVivo) and its promotion serves as a collective marketing tool
- Global objective: *"Montreal must become a learning region, competitive and prosperous, attractive and world-class"*



Policy Action & Partnership

Policy Action

- Planning has been realized by the MMC, supported by a Provisional Committee and external resources when required (feasibility studies, business plan and implementation plan)
- Provisional Committee played the role of animator and promoter of the cluster, with the final objective to mobilize the sector's players; specific "workshops" have been put in place, with a focus on each major identified challenges

Partnership

- Networking
 - To stimulate innovation within its borders, the MMC and its partners suggested to give a non-profit organization (NPO) the mandate to coordinate all the players involved in creating and supporting the metropolitan innovation dynamic. It will act as a mechanism to integrate all clusters, and will provide all the firms and organizations taking part in the metropolitan innovation dynamic with a forum for consultation and action (Economic Development Plan)
- Internationalization
 - A specific Promotion Plan for the metropolitan region is presently under elaboration by the MMC



Industrial Performances/ Innovation & Technology/ Skills & Training

Industrial performances

- Through its business plan, each cluster initiative defines its specific business strategy and implements specific workshops

Innovation and technology

- To encourage and support the development of an innovation dynamic within the metropolitan area to strengthen collaborative efforts among various players and foster innovation within the region's firms and organizations. This is part of a global vision that aims to stimulate the metropolitan innovation system using the cluster strategy, which encourages many players to exchange ideas and network among themselves

Skills and training

- The MMC must extend its role as a catalyst to the field of professional development and technical training activities. It must work closely with the people involved to create a better-trained workforce and optimize the use of current tool. It will work with the Table métropolitaine of Montreal which has the responsibility for determining labour policies. The Table has already developed industry information sheets for several metropolitan clusters



International Collaboration

International Strategy

- The Act respecting the MMC stipulates that the MMC *“has exclusive jurisdiction to promote its territory internationally so as to stimulate and attract economic growth and diversification”*
- The MMC International Strategy: presently under elaboration (strategic plan, distinctive brand, optimal framework for management, promotion and financing)
- The MMC has given Montréal International the mandate to promote the metropolitan area on international markets and attract new foreign direct investment

Alliances

- OECD Nutek: *Regional Strategy Study* being undertaken by OECD in co-operation with the Swedish Agency for Economic and Regional Growth – Nutek. The study will look at approximately 12 regions in both OECD countries and non-OECD countries. Proposed regions for the three sectors are the following:
 - Automotive - Gothenburg/Vastra Gotaland, Turin, Detroit and Shanghai
 - Biotechnology - Stockholm/Sodermanland, Northern Switzerland, Montreal and Shanghai
 - Information and communications technology - Stockholm/Kista, Noord-Brabant/Eindhoven, Ottawa and Recife
- CLUNET project: European clusters network dedicated to lead thinking among 16 innovating regions about cluster dynamics, and share best practices specifically based on internationalization and incubation topics. The MMC has been selected as non-European member of the consortium
- Member of the IEDC International Committee: mandate to propose new initiatives to the Board, to create and maintain a virtual network of exchange between the international members of IEDC

Potential Partners

- MMC is qualifying potential international partners for its competitive clusters.

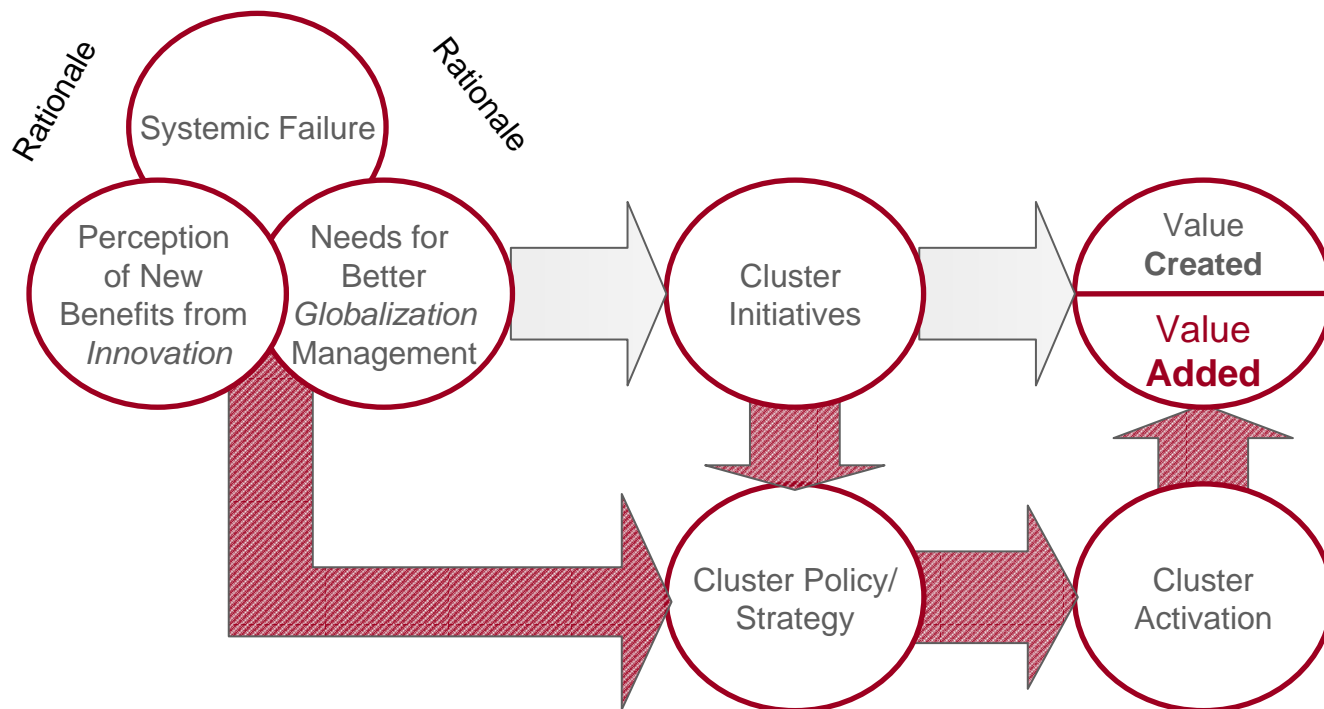


Conclusion
Best Practices
Suggestions



Conclusion

Strategies & Policies Add Value





Best Practices

1. **Draft and publicize:** importance for the Leading Strategic Organization to publicize officially the cluster-based strategy once it is drafted.
2. **Encourage a bottom-up approach, key for success:** mobilization has to come from the community that identifies development needs and industry challenges, and then come the governmental stakeholders with a regulatory and funding framework.
3. **Engage all levels of stakeholders:** strategy might be drafted at metropolitan or provincial levels, but defining a cluster-specific legislative agenda with high levels of governments remains crucial (federal grants, tax credits, etc.)
4. **Build on what's existing:** foster cluster development through optimization and mobilization of existing initiatives and/or facilities. Do not reinvent the wheel.
5. **Involve the Business and Education communities in the planning process:** this early involvement in the process seems to have created a natural cohesion in the community and have kept its members mobilized.



Best Practices

6. **Get support from hands-on partners:** delegate specific aspects of the cluster development to dedicated groups/councils/committees (ex: internationalization, innovation, marketing & branding, etc.).
7. **Encourage networking and exchange:** implement networking tools to get the mobilization going, through platforms for companies, universities and the whole community to meet, exchange best practices, pursue mobilization, accelerate promotion of the cluster and foster economic growth for companies (ex: Cluster Networks). Monthly meetings, newsletters, Web portals.
8. **Measure performance:** on a regular basis, strategy and/or clusters' performances need to be evaluated (ex: Montreal, where clusters are evaluated annually on their ability to reach their business plan's objectives).
9. **Update strategy and make it evolve:** organize an annual event to keep everyone up-to-date on the cluster's priorities and to give a regular opportunity for every actor, from business leaders to federal officials, to get together and discuss initiatives and policy changes (ex: Annual Leadership Summit).



Suggestions

- As a final step to the CLUNET consortium, realize a “Cluster Policy Whitebook” aimed at providing the participating regions with the best practices regarding strategies and specific tools for cluster activation.



APPENDICES

- Types of Cluster Policy/Strategy
- Analysis Framework
- References
- List of Contacts



Types of Cluster Policy/Strategy

- **Broker Policies:** Concern dialogue and collaboration between firms, as well as between firms and relevant public sector actors (particularly at local and regional levels) and/or non-governmental organisations. The realisation of the implied policy objective does not necessarily require a public policy. In some clusters, private actors indeed undertake these roles spontaneously.
- **Demand Side Policies:** Concern public contribution to make data and information on markets available. Public procurement is a public policy demand-side instrument. It is regulated by international trade agreements, national and supra-national laws.
- **Training:** Concern efforts to strengthen incentives to upgrade competencies for SME and workers.
- **Promotion of International Linkages:** Concern an extension of instruments traditionally applied in industrial policy (intellectual property rights, skills, technologies and knowledge transfer, promotion to attract foreign direct investment, support to SME to penetrate wider markets).
- **Broader Framework Conditions:** Concern infrastructure and institutional conditions that are fundamental to the functioning of clusters, for the purpose of influencing cluster processes (support for cluster platforms or animators).
- **Bottom-Up Strategy:** Concern a strategy launched by the industry and actors directly engaged in the cluster.
- **Top-Bottom Strategy:** Concern a strategy launched by authorities.
- **Mix of Bottom-Up and Top-Bottom Strategy:** Concern initiatives driven in parallel by both industry and government.



Analysis Framework

Inspired by the Cluster Policies Whitebook and based on the CLUNET cluster policy fast sheet:

A. Cluster Policy / Program

A1 Cluster Policy Rationale

A2 Characteristics of Policies

A3 Cluster Policy Data

B. International Cooperation (Europe and Others)



A1 - Cluster Policy Rationale

- What is the rationale behind the implementation of such a cluster-oriented strategy?
 - Market failure
 - Government/policy failure
 - Systemic failure
 - Government objectives
- What is the rationale behind the implementation of such cluster?
 - Industry reports? Market analysis?
 - Industry mobilization/lobby?
- What are the policy objectives and the identified challenges?
- What results are expected from the policy?
 - Qualitative
 - Quantitative



A2 - Characteristics of Policies

- At what governmental level does the policy has been defined? (state, regional, national, municipal)
- Is there a regulatory framework supporting the cluster policy/program? (national or regional law, or other)
- Qualify the type of policy approach:
 - Is it a broker policy?
 - Is it a demand side policy?
 - Is it a training policy?
 - Is it a policy promoting international linkages?
 - Is it a broader framework policies?
 - Is it a top-down, mixed or bottom-up policy?
- What is its main focus?



A3 - Cluster Policy Data

- **Cluster Expansion:**

- Is there a clear position for the cluster strategy? How is it drafted?
- What are the main points of the strategy? (short description, keywords)
- Level, origin, type of funding and duration of the cluster program-policy
- How the cluster initiative is communicated (frequency, promotion tools for the strategy and the leading organisation)?
- Number of sectors targeted and list of the regions' clusters identified
- At what stage in the clustering process is the region? (identification of the opportunities (analysis), planning (strategic plan), implementation)

- **Policy Action:**

- Who is or who has been responsible for the planning? (analytical work, actors involved)
- Who is or who has been responsible for the lobbying and creating dialogue within the community? How?
- What are the policies supporting the governance of the cluster?



A3 - Cluster Policy Data

- **Partnership:**

- Networking:

- What are the policies and/or initiatives enabling interactions within the cluster? (among companies (SMEs and anchors), scientific community, government).
- Description and qualification of the efforts (funding).

- Internationalization:

- Is there any networking initiative promoting or enabling links outside the cluster? Which are they? (origin, type and level of funding)
- How does the cluster strategy support the global companies or companies wanting to export?
- Where are mainly conducted your international efforts? In which sector? Description of partnership



A3 - Cluster Policy Data

- **Industrial Performances:**
 - What are the programs to support development of supply-chain, production process and cooperation with SMEs and large companies?
- **Innovation and Technology:**
 - What are the incubating initiatives? (description of activities, services, funding)
 - What mechanism of technology transfer do you use?
 - What are the policies supporting technology transfer? (funding)
 - What are the collaborating projects linking industry and research exploitation? (listing and qualification)
- **Skills and Training:**
 - What is your strategy to support workforce skills development? (programs and funding)



B – International Cooperation

- Does your region/cluster/city has emerging or existing cooperation with European region/cluster/city?
- If no, which region/cluster/city would you consider as potential partner?



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