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TAKING STOCK AFTER THE FIRST YEAR:

PERFORMANCE EVALUATION OF THE GREATER EDMONTON COMPETITIVENESS STRATEGY

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Executive Summary

1) A majority of respondents felt the strategy had enhanced the success of their firm and spawned new business and entrepreneurial ideas.

2) The report lists 31 notable achievements from six Clusters and seven Flagships. Achievements ranged from creating a well-attended workshop to improving transportation infrastructure (for example, the 184th Street overpass project).

3) Survey results showed that, in general, the Cluster Strategies developed and empowered by the Greater Edmonton Competitiveness Strategy (GECS) have made good progress towards institutionalizing themselves. As clusters vary in size, stage of maturity and diversity, it should not be surprising that to date some are more organized and developed than others.

4) When considering Flagship initiatives, survey respondents reported a high degree of success. Some Flagships are beginning to have visibility and political muscle.

5) Survey results showed increased networking and communications across many sectors. The number of networking opportunities has also increased greatly. Similarly, cooperation by business leaders throughout the Greater Edmonton Region has increased.

6) The survey report summarizes the positive factors driving the Clusters, Flagships and Action Plans. The top factors energizing the process were: the commitment of participants; EDE's leadership; government and industry leadership; the focus on common needs, goals and visions; the participants' competitive drive and belief in the process.

7) Survey results also captured the "obstacles to success" of the GECS initiative. Some listed obstacles were: lack of human and financial resources from both the public sector and the private sector; too many Action Plans formulated; communications from Flagship Initiatives to Clusters not optimal; and a lack of leadership in some cases.

8) EDE leadership was praised.

Recommendation Highlights

Leadership. Greater Edmonton's key industry leaders, government officials and community champions need to become more involved in the GECS.

Resources. Continued efforts must be made to broaden industry and public sector representation from across the Greater Edmonton Region. In addition, adequate resources must be made available to engage a greater number of people in the process.

Focus. Clusters and Flagships need to constantly focus on tangible, realistic, 'bite-size' and achievable milestones within specific timelines. Taking incremental steps helps generate a sense of accomplishments that keeps participants active and helps ensure that the GECS thrives.

Communications. Even more intensive efforts at communicating GECS goals and sharing related information between the Clusters, Flagships and Greater Edmonton's general business community are required. Broader communications will help power the entire Strategy.

Performance Measures Clusters and flagships should begin to determine possible performance measures. GECS groups need to have the tools to critically gauge their achievements and progress.

Monitoring/Follow-up Assessments. In the absence of credible benchmarking methodologies, further monitoring of the GECS means developing subjective tools and standards. "Taking the pulse" by means of a formalized and comprehensive annual survey of participants is a good idea. Besides providing a snapshot of the GECS at work, regular surveying may help motivate and reinforce the commitment of participants.

Preamble

This report takes stock of the progress of the Greater Edmonton Competitiveness Strategy (GECS). Economic Development Edmonton (EDE) contracted the Western Centre for Economic Research (WCER) at the University of Alberta to:

- evaluate the GECS performance to date based on set-out objectives;
- evaluate the performance based on comparisons with other regions employing similar strategies;
- review the factors that may have influenced the implementation process;
- assess the GECS strategy to complement a recent KPMG study;
- formulate recommendations for action and follow-up assessments.

The ICF Consulting study, *Blueprint for a Next Generation Economy* (December 22, 2000) formulated the Greater Edmonton Competitiveness Strategy. The KPMG Consulting study, *Setting Measurable Performance Outcomes* (June 22, 2001), reviewed the cluster formation process, and the mobilization of cluster action plans and flagship initiatives. It also suggested targets to be achieved over a horizon of ten years and specified these in terms of incremental GDP, disposable personal income and employment, as well as the implied extra tax revenue.

These economic benefits will be realized in the long run. As explained below, no methodologies exist that would enable researchers to unambiguously separate the effects of the strategy from effects that would have occurred in its absence. Potential economic benefits as discussed in the KPMG study cannot be measured or even expected at this early date. The present implementation phase must be seen as a mobilization process, and it is most appropriate to take stock of the *perceptions* of participants of the process. Our findings and recommendations are therefore based on the *reactions* of GECS participants to their experience in clusters and flagship initiatives.

The report proceeds from providing essential contextual information about cluster strategies to identifying issues in the evaluation of cluster strategies, to the experiences and lessons learned elsewhere, and then turns to the survey of GECS participants and the findings from the survey. Finally, recommendations are offered.

Background

The theory and practice of economic development have received impulses from a variety of sources. Networks of firms characterized by inter-firm collaboration and supported by specialized services of government and/or trade associations have been shown to enable small firms to survive and prosper by means of scale economies, such as those arising from common training and joint marketing.

Agglomeration of firms in the same line of specialization is also known to create economies external to the firm. Examples are the development of specialized suppliers of parts and services, the improved availability of appropriate skills, lower transactions costs and the access to new ideas. Similarly, analysis of technology transfer and diffusion contributed the insight that knowledge spillovers are an important source of benefits from the clustering of firms, especially the intangible type of knowledge that is embedded in people's minds or organizational routines.

Finally, associative behavior has also been found to be an important factor in the process of economic development of regions. In this context, the role of chambers of commerce and other community-based (business) associations in facilitating information flows, learning and knowledge dissemination has been stressed by sociologists.

Thus, economists emphasizing the role of competition, and sociologists stressing the importance of cooperation ("social capital"), combine to suggest explicit cluster strategies for the development of regions. Since the early 1990s states, regions, provinces and metropolitan areas in North America have begun focusing their development strategies on selected industry clusters. The Greater Edmonton Competitiveness Strategy (GECS) is a case in point.

Cluster Identification And Policy

To move from the sociological and economic underpinnings to cluster strategy formulation requires two steps. Clusters have to be identified and appropriate (policy) levers have to be put in place to mobilize the collaborative activity within and among clusters. Clusters, consultants have developed a number of methodologies, which continue to evolve.

Some of the first states in the US to officially embrace a state-wide cluster strategy were Arizona and Oregon. In the former, a pyramid was identified which showed the major exporters at the top, their suppliers in the middle and all of them supported by the "economic foundations" of human resources, accessible technology, availability of capital, physical infrastructure, the quality of life in general, and the tax and regulatory environment in particular. In Oregon, a similar process was used and corporate leaders were invited by the Governor to take part in managing the overall strategy.

Typically a number of criteria drawn from public data are used to identify clusters:

- numbers of employers and establishments;
- location quotients that compare local concentrations of industry in a cluster to concentrations of the same group of sectors for the entire province/state or region;
- input-output tables estimating supply chain linkages; and
- estimated growth rates.

It would appear that clusters identified in this way vary in their degree of specialization, so that their boundaries tend to be somewhat "fuzzy". Depictions of identified clusters either map the geographic distribution of companies or show a flow diagram of the general direction of transactions among members, such as supply chains, services, resources, and support agencies/institutions. Large metro areas like Los Angeles may have as many as 20 identifiable clusters. Small regions may have only a few or even a single cluster, although the size of region does not necessarily determine the number of clusters.

As for organizational strategies to mobilize identified clusters, Arizona is said to have implemented cluster-specific governing bodies involving advisory groups,

foundation working groups and regional town hall meetings to involve the public.[1]

The delivery of services to the clusters can be accomplished either by one-stop shops of integrated services or by a set of intermediaries who are commonly located at the periphery and are charged with making services more accessible. These intermediaries would be experienced agents (stewards) who conveyed information and acted as brokers of networking activities.

In general, clusters are found to:

- attract needed specialized services to the region;
- have open membership;
- be based on social values that foster trust and encourage reciprocity;
- create demand for more firms with similar or related skills;
- engender cooperation as well as competition; and
- develop a shared collective vision.

In the case of the Greater Edmonton Competitiveness Strategy, a diagnostic assessment of nearly 260 pages was prepared by the ICF Economic Consulting Group of San Francisco, presented in September 2000, it served as the platform for launching the GECS.[2] Readers are also referred to EDE's web site: www.ede.org.

[1] Rosenfeld, Stuart A. (2001) "Backing into Clusters: Retrofitting Public Policies" (Harvard: Integration Pressures: Lessons from Around the World, John F. Kennedy School Symposium, March 29-30, 2001).
[2] ICF Economic Consulting Group, *The Greater Edmonton Competitiveness Strategy: Setting the Stage for Collaborative Action Phase II Diagnostic Assessment (San Francisco, September 2000).*

Lessons Learned Elsewhere

In this section we briefly summarize general observations that have been made about cluster strategies in the literature[3] and then turn to three specific cases in which telephone interviews provided additional insights. The findings will form the basis of our mandated comparison of the GECS with other regions employing similar strategies.

It is worth highlighting that clusters are not defined by political boundaries but by common economic interest. This means a smooth cooperation with firms and government units beyond the immediate political boundary is a prerequisite for success. Clusters must also be sufficiently large and diverse to generate the spillovers and collective efficiencies that are their objective. Conversations with consultants suggest that a cluster needs to be viewed as representative to become effective. In practice this translates into 35 to 65 members as a critical mass. The probability of action is said to be higher when a cluster is larger.

As for beneficial outcomes of clusters, there can be a number of specific results:

- new structures for associating;
- increased intensity of networking;
- enhanced entrepreneurial energy;
- added innovation and learning, a shared vision and leadership;
- improved workforce skills;
- development of human resources; and
- new foci for co-operation.

As can be appreciated from this list, it is not easy to ascertain the effects of a cluster strategy like the GECS from effects that would have occurred in its absence. This is a point to which we will return in the evaluation section below.

Cluster-based policy levers have normally been diverse. Some have been aimed at marketing a particular region, such as "made in Oregon"; others were oriented at attracting particular types of businesses, like the "micro-systems" focus in the US Southwest. Subject to funding availability, the state of North Carolina is looking to attract highly educated and skilled people. This state has also made investments of more than $100 million in research and development to achieve

[3] *Ibid.*

all of the above mentioned objectives for the biotech industry centered around three key universities.

Common to the observed strategies is a model of organizing the clusters. Typically, cluster-specific governing bodies (as deployed in the GECS) are used to build structure and identity. This structure is then used to determine common needs and action plans, building business and personal networks in the process. Stuart Rosenfeld, a leading US analyst of cluster strategies, points out that membership in such a council tends to lead to a "membership" mentality when in fact a cluster is a function of geography and relationships. [4]

Another increasingly popular model of clusters emphasizes learning and knowledge spillover at the expense of traded interdependencies. In his evaluation of four such clusters in the US Northwest, Rosenfeld[5] found that learning was ranked most highly among the reasons for association. A similar result was observed for Australia: firms joined networks for the managerial know-how they stood to gain.

Thus, clusters will differ in their organizational structure due to their inherent characteristic or "personality". Some will develop faster, some more slowly, some may lack critical mass, be poorly identified, or too "nascent". Herein lies a major reason for the difficulty of evaluating the "performance" of a cluster, especially in the early stages.

[4] *Ibid.*
[5] Rosenfeld, Stuart A. (1996) "Does cooperation enhance competitiveness? Assessing the impacts of inter-firm collaboration," *Research Policy* Volume 24.

Case Studies

Below we relate the experiences of three urban regions as gathered by means of telephone interviews with key staff involved in the initiatives.

Ottawa, Ontario

Ottawa began their cluster initiative with the help of ICF Consulting in September of 1999 and their blueprint was tabled in August of 2000. Seven clusters and ten flagships were identified for the region. Cluster groups and action teams have been formed and are currently working on various initiatives. Ottawa has been very pleased with the progress and continuing commitment that has been demonstrated by the various working groups within the initiative. The municipalities within the Ottawa area have also accepted and supported the approach.

To date there has been no attempt to measure the overall results of the program. However, Ottawa has set a goal of August 2002 for the release of an overall report card on the progress of the cluster initiative. This report card will outline the progress made toward each cluster goal and will profile actual outcomes of each cluster initiative. While there has been no formal report card issued to date, the city has identified and profiled individual success stories within various clusters. Ottawa is particularly interested in the number of projects started and the amount of city money leveraged through contributions from other levels of government and private organizations. For example, the brand Ottawa program is a $1 million advertising campaign that was started with $100,000 of city money. (As of early January 2002, indications are this campaign will not go forward due to a lack of consensus in the region.) A global learning centre, funded through private enterprise and other levels of government, was also created to increase awareness of the learning opportunities in the Ottawa area.

Contact: Michael Murr,
Manager, Business Facilitation
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San Antonio, Texas

Implementation of San Antonio's blueprint for the new economy began approximately one year ago with the completion of the City's Strategic Plan for Enhanced Economic Development. Four clusters: biotechnology, aviation, information technology and telecommunications, were identified as priority areas for the city. The City committed to providing $1.2 million over a three-year period for the development of San Antonio's Technology Accelerator Initiative (SATAI). SATAI is an independent body charged with the goal of developing the technology environment in San Antonio. SATAI works to link the assets that already exist within the San Antonio region and to create programs to fill the gaps within existing regional initiatives. SATAI also works to communicate and promote the region's strengths and accomplishments both locally and nationally. While SATAI works to create new programs, it prefers to pass them on to other groups who will ultimately own and operate them.

The SATAI initiative is currently in the start-up phase as they have only recently hired a new President and C.E.O. to run the operation. The four cluster communities have been formed and a 32-member board of directors is now in place. The cluster communities are in the start-up phase and implementation of the initiatives is scheduled for 2002. While no performance measures have been established at this time, SATAI is commencing a project to address this problem in 2002. SATAI hopes to develop some method of performance measurement by the end of 2002.

Contact: Manuel Longoria, Deputy Director Economic Development
City of San Antonio
Anne Van Horn, Director of Operations, SATAI Network

Central New Mexico

The Central New Mexico region created a new, non-profit organization to implement the ICF plan. Next Generation Economy (NextGen) works with existing regional development agencies to implement and manage the cluster initiative. NextGen is a joint effort of the public and private sectors, formed to help Central New Mexico aggressively establish its unique position in a changing global economy. Seven clusters were identified including: Aerospace and Electronic Systems, Biotechnology and Biomedical, Information Technology and Software, and Optics and Photonics. These clusters have been formed and the participants are currently working on implementation plans. NextGen views the cluster groups as different from local trade associations in that the clusters are primarily composed of chief executive officers and senior management from core companies within each cluster.

The macro-economic impact of a cluster initiative is very difficult to measure. This is especially true in the Central New Mexico region because NextGen works with existing regional economic development agencies. Therefore, it becomes extremely difficult to measure the macro-economic impact of the cluster initiatives separately from the work done by existing economic development agencies. Alternatively, NextGen has identified a list of core benefits that they see arising from the cluster initiative. Based on these perceived benefits, they have outlined specific measures that they will use in measuring the impact of the cluster initiative.

For example, NextGen has identified improved recruiting and staff development as a benefit to the cluster initiative. Measures to record the progress toward this goal include the number of vehicles (job fairs, web sites, etc.) developed and core company attendance at each event. Additional benefits identified by NextGen include the generation of new business opportunities through increased access to information about other companies, increased ability to identify and solve common problems, and increased access to business and technical information. These benefits will be measured through the number of hits on an interactive web portal, the purchase and use of a cluster directory, and the number of networking opportunities as illustrated through core company attendance at various seminars and workshops.

Contact: Mike Skaggs, President and C.E.O. Next Generation Economy

Evaluation Of Cluster Strategies: General Comments

To evaluate the performance of the GECS a frame of reference is required. The evaluation of the performance of a cluster strategy appears to be a new field. As Rosenfeld recently stated: "To the best of my knowledge, there have been few attempts to evaluate cluster initiatives, which is somewhat surprising given the attention to evaluating network programs."[6]

One possible reason for this lack of evaluative work lies in the fact that cluster strategies can be viewed as organizing vehicles rather than as discrete interventions. As well, clusters in action are both a "process", reflecting an organizing strategy, and an "outcome", namely a critical mass of firms and organizations that are characterized by interdependence.

It is possible, then, to distinguish two ways of evaluating performance. One is to appraise the *process*. Measured in this way, a cluster is ultimately deemed successful if it simply survives, better yet, thrives or even achieves global scale. Of necessity, the time lines for achieving this type of result are quite long and cluster-specific.

If instead an *outcome* is the focus of the evaluation, then some indicators can be selected for the medium and the longer run. For example, one could attempt to measure the extent to which networking has intensified. One could ask whether structures have been put into place that allow firms to associate with one another more than normal. One could attempt to gauge the increase in entrepreneurial energy, if any.[7] And one could focus on incremental innovation and learning. Similarly, one could try to determine whether and to what extent a shared vision and leadership have resulted. Perhaps most importantly for companies, one could ask if there has been improved access to the type of human resources that they need, especially the mid-level skills that tend to be of local origin. In the literature reviewed for this report, labor and access to specialized training associated with firms' needs consistently ranked very highly for location advantage.

[6] Rosenfeld, 2001, p.16.
[7] For example, one could systematically track attraction of businesses and exits of companies then relate these to possible causes and address them in the clusters in the context of retention strategies.

As can be seen from the above hoped for "outcomes" of cluster strategies, there is the problem of separating the effects of the strategy from the effects that would have occurred in its absence. Moreover, there will be the ebb and flow of the business cycle that will interfere with the mobilizing influence of any cluster strategy.

Given that the GECS has only been in effect for the better part of a year, an evaluation is a difficult undertaking but it is also true that early signals provide feedback that can lead to adjustments in the strategy or in the resources committed to it. There is certainly the need to account for public funds devoted to the effort. Against this background and with these constraints in mind, the following methodological approach was chosen to fulfill this project's mandate.

Taking Stock Of The GECS: The First Year

Given the absence of established performance criteria for cluster strategy implementation, a survey instrument was developed in conjunction with EDE-staff involved in the implementation of the GECS. This survey was kept short enough so as not to impose an onerous time commitment on the respondents. Its primary goal was to elicit the reactions of participants in cluster strategies and flagship initiatives to their work.

A copy of the survey instrument is appended. The survey's 12 questions (three of them two-part) were designed to gauge the perceptions of private and public sector agents regarding the progress of their initiatives. Six of the questions were scaled from "strong agreement" to "strong disagreement" with a statement, several questions required YES-NO answers. All questions invited comments and allowed for expansive answers.

The following are rough indications of the type of question in the survey:

- Are the groups meeting regularly? How often?
- Is the time commitment onerous?
- Have there been spin-off developments benefiting companies?
- Do private firms see sufficient benefits in the activities?
- Are the activities adequately resourced?
- Is the mobilization of the group proceeding apace?
- Are the goals of the groups well developed? Are they well communicated?
- How do participants rate the progress of their cluster or flagship?
- Have cooperative energies resulted from the work of the groups?
- What forces drive the action plans?
- How is the role of EDE in the process perceived?
- What advice do participants have from their experience in the GECS?

Three interviewers surveyed 32 individuals involved in the GECS during December 3rd to 19th, 2001. Of the interviewees 10 were EDE-representatives and 22 were from the private sector or public institutions. Two further conversations were held in January 2002 to garner further information about the Tourism Cluster and the Branding Flagship. The sample is by no means a representative sample in the statistical sense.

After agreeing on the questionnaire with EDE participants, the WCER staff telephoned EDE stewards and a sampling of participants from the private sector and public institutions. Time lines dictated this approach. Consequently, the findings below represent a snapshot of the GECS at the time the interviews took place. This observation is important to keep in mind when reading and interpreting the findings summarized below. For example, had we interviewed the members of the Skills Pipeline Flagship two weeks earlier, the evaluation would have been considerably less positive. This Flagship reoriented its activities very recently with strongly encouraging early results. Put simply, other groups may also make (or have made) progress after fitful starts, and the picture described below may become more positive yet.

The Survey

Respondents

A total of 45 surveys were completed as of December 13, 2001.

Respondents were asked to complete a survey for each cluster or flagship with which they were involved. This allowed us to draw comparisons between the flagship initiatives and the clusters themselves. One exception was for a participant who sat on many boards and flagships. When all interviews were completed, ten people from EDE were surveyed, accounting for 19 Cluster Strategies, Flagship Initiatives and Action Plan surveys. Another 23 people from other institutions and industry and involved with the GECS leadership and activities were surveyed, accounting for 26 surveys. Further comments from two people regarding the Tourism and Entertainment Cluster and the Branding Flagship are included in the "achievements" and "obstacles" sections.

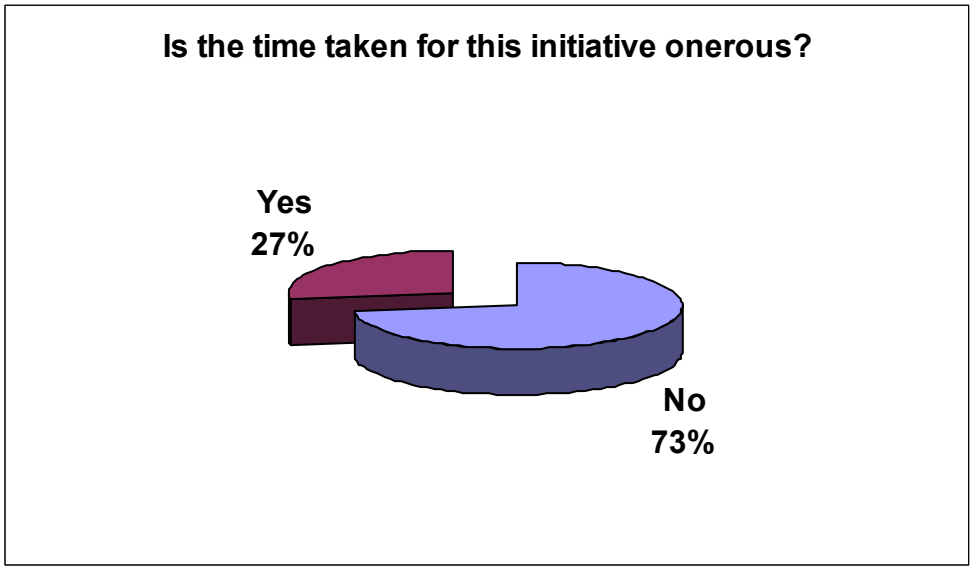
Question 1
How often have you met?

Thus far, there has been an average of eight meetings for each cluster, flagship or action group. The range in the number of meetings was, however, great.

- Fewest meetings were held for the Advanced Manufacturing Cluster, the Oil, Gas and Chemical Cluster, and the Agri-Food and Forestry Cluster.
- Between 10 and 15 meetings were held for the Transportation and Logistics Cluster and the Industrial Land Flagship.
- Between 15 and 20 meetings were held by the Skills Pipeline, Technology Park and the Regional Deal Generator Flagships.
- Over 20 meetings were held for the Biomedical and Biotechnology Cluster, and the Engineering and Technology Cluster.

Question 2
Is the time taken for this initiative onerous?

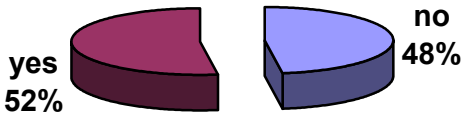
- 73% of those surveyed do not feel the time taken for the initiative is onerous, however, many of these people felt there was a "substantial" commitment of time.
- Of the other 27%, many reported that time taken was only onerous because they were so busy at their regular job.
- Both groups realised that a substantial commitment was essential for the success of the project. A typical comment was the amount of time and effort required for the strategy had been underestimated.



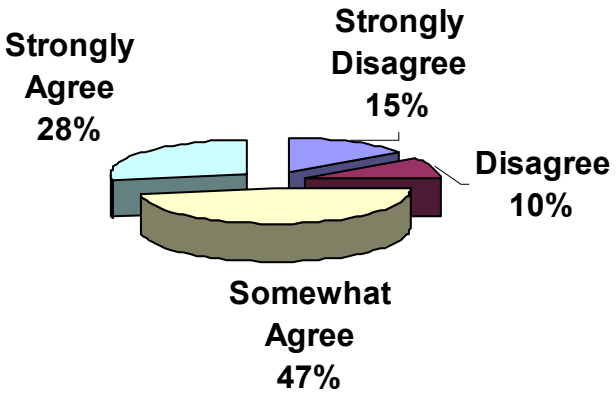
Questions 3 and 4
Has the GECS process encouraged the development of new business ideas within your company or spawned any entrepreneurial ideas?
Do you feel the GECS initiative has enhanced the success of the firm or agency you represent?

- 52% of respondents felt the GECS had encouraged the development of new business ideas or had spawned entrepreneurial ideas within their company or agency.
- 75% of the surveys indicated the GECS had enhanced the success of their firm or agency.
- Highlighted areas of success were better communication between groups and firms; bringing existing problems to the fore; new opportunities to bid on projects, and new synergies being created.
- A major coup was the placement of the National Institute of Nano Technology (NINT) in Edmonton. The National Institute of Nano Technology is seen as strengthening Edmonton and will be a critical part of the infrastructure of biomedicine, biotechnology, energy, and electronics in North America. It will help recruit and attract talent to Edmonton.
- Some respondents thought it was too early to judge if the initiative was enhancing the success of the firm or agency they represent.
- Of those that felt the GECS had not enhanced the success of their firm or agency, only one respondent (two surveys: Advanced Manufacturing and Skills Pipeline) was from private industry.
- While strongly agreeing that the strategy had enhanced the success of the respondent's association, the criticism was made that EDE had co-opted ongoing work of one association and, in so doing, had "reinvented the wheel".

The GECS process encouraged the development of new business ideas within your company or spawned new entrepreneurial ideas.

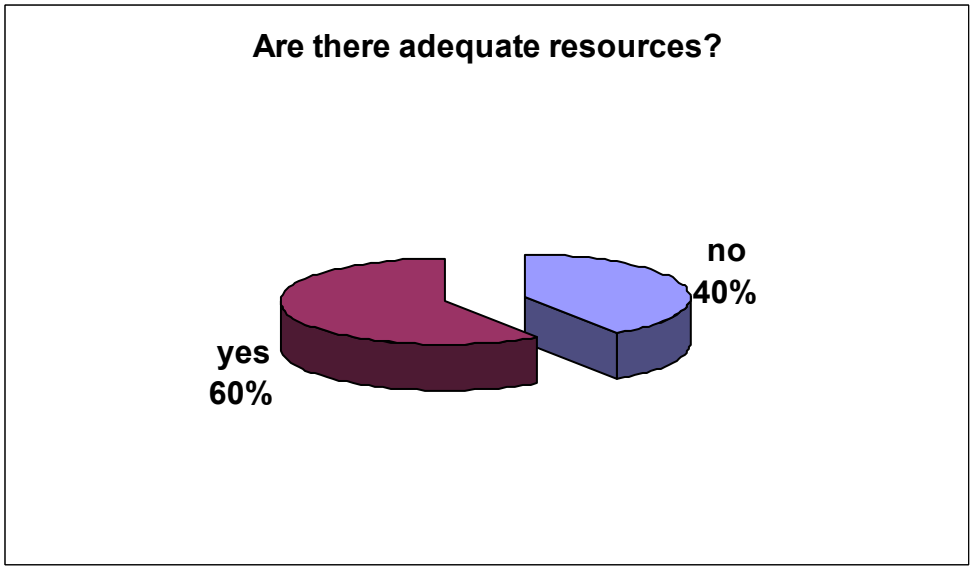


The GECS initiative has enhanced the success of the firm or agency you represent.



Question 5a
Does the initiative have adequate resources?

- Here it was emphasized that EDE was crucial in having provided resources.
- Both financial and human resources, in particular administrative assistance, were thought to be lacking by 40% of respondents.
- Some felt resources were adequate so far but more would be needed. One comment was also made that existing resources were not utilized to the fullest capacity.
- It was mentioned that industry funding was needed.
- A question of the source of funding arises: should financial and human resources be coming from industry or from governments and their agencies? Since the strategy was based on US models, there is a possibility that the American business culture is more apt to be comfortable investing in community economic development. Canadians are more likely to expect governments to fund such actions.



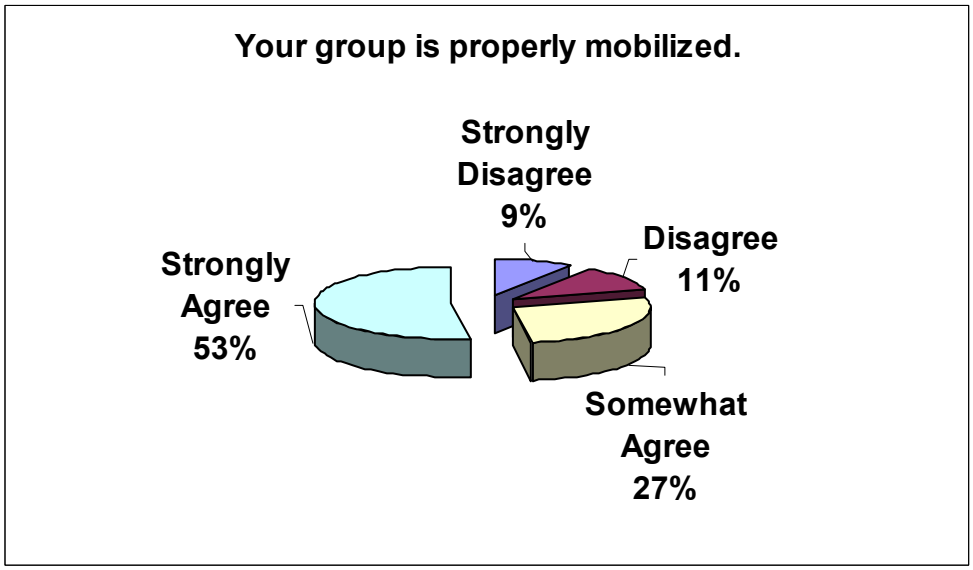
* EDE respondents were much more likely to feel resources were lacking.
- 65% of EDE respondents (11 of 17) felt that more resources were needed.
- Only 26% of non-EDE respondents (6 of 23) felt resources were lacking.

Question 5b

Do you feel that your group is properly mobilized?

(Answers were scaled where 1 was "Disagree" and 4 was "Strongly Agree".)

- 53% of those surveyed strongly agreed that their cluster, flagship or action group was properly mobilized, with another 27% feeling satisfied with the mobilization effort thus far. 20% of the surveys indicated that mobilization was lacking.
- Inconsistent attendance at meetings and a lack of focus were concerns here.
- Improper mobilization was cited in the case of the Advanced Manufacturing Cluster.
- General survey comments underlined the importance of having recognizable and achievable goals and a set time frame in order to keep a group interested and mobilized.

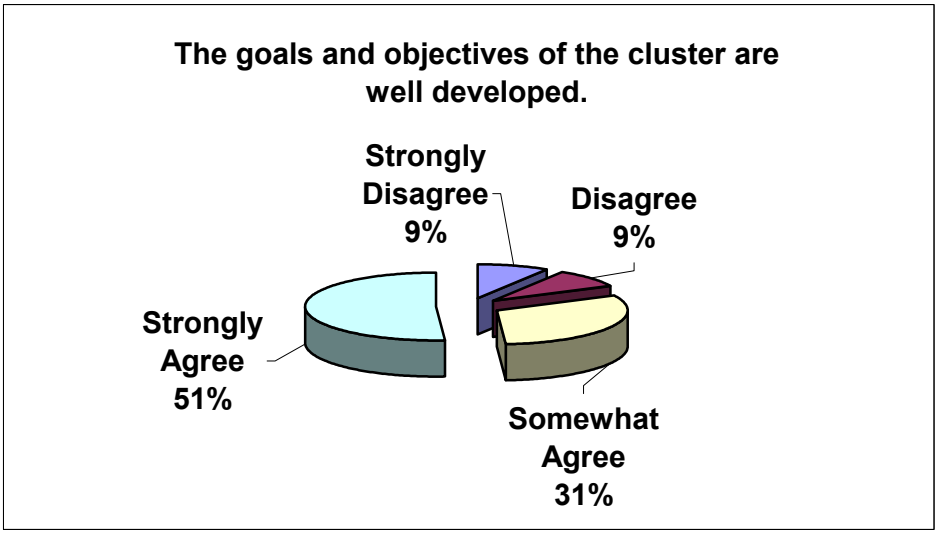


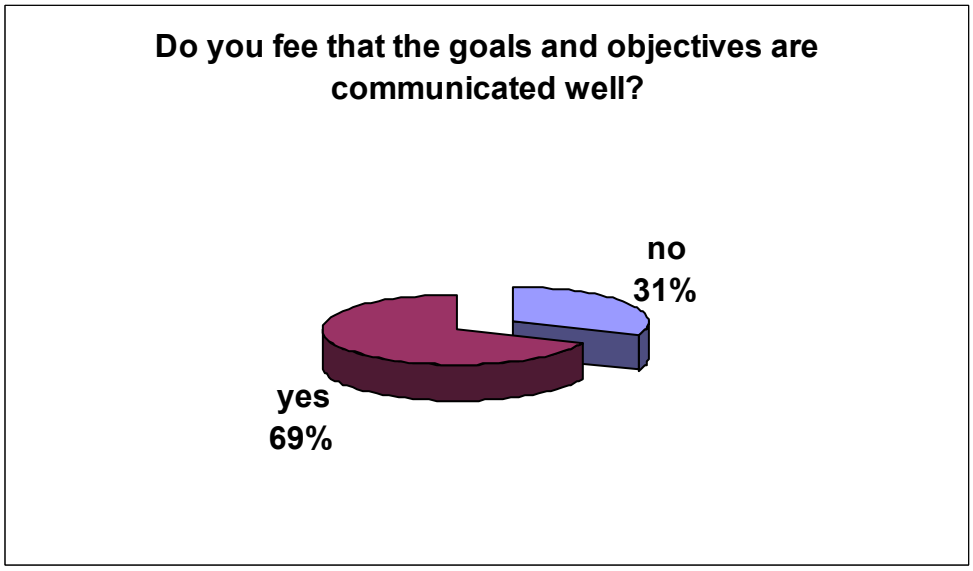
*Ratings were higher for EDE respondents than for non-EDE respondents.

- EDE respondents had an average of 3.4 out of 4.
- Non-EDE respondents had an average of 3.1 out of 4.

Question 6a and 6b
Do you feel that the goals and objectives of the cluster are well developed?
Are the goals and objectives successfully communicated?
(Answers were scaled where 1 was "Disagree" and 4 was "Strongly Agree".)

- 82% felt that that goals and objectives of the cluster/flagship were well developed.
- A slightly lower number (69%) felt that the goals and objectives were properly communicated to participants.
- 31% thought the goals were not communicated well. These groups included:
    - Advanced Manufacturing Cluster (4 responses), although one industry member thought the goals were well communicated.
    - Oil, Gas and Chemicals Cluster
    - Leveraging the Supernet Flagship
    - Information and Media Services Cluster
    - Skills Pipeline Flagship: Three respondents felt the goals were successfully communicated but one did not.
    - Responses were mixed for the Biomedicine and Biotechnology Cluster, the Transportation and Logistics Infrastructure Flagship, and the Microsystems Flagship.
- The *GECS Blueprint for a Next Generation Economy* was most often cited as being the source of communication.
- Goals were also stated to be fluid so that while long term plans could be well communicated, shorter term goals were not.


The goals and objectives of the cluster are well developed.
Strongly Disagree 9%
Disagree 9%
Strongly Agree 51%
Somewhat Agree 31%

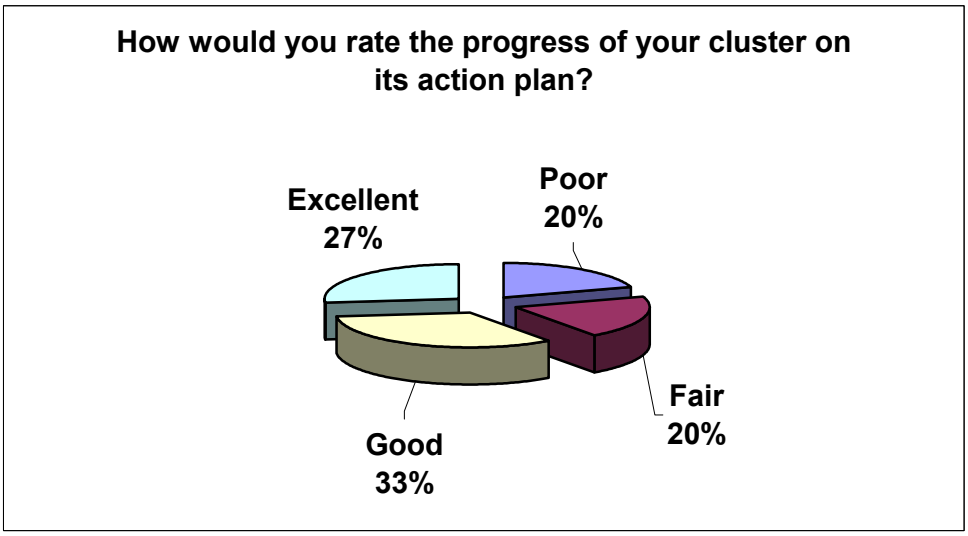

Do you fee that the goals and objectives are communicated well?
no 31%
yes 69%

Question 7
How would you rate the progress of your cluster on its action plan?
(Answers were scaled where 1 was "Disagree" and 4 was "Strongly Agree".)

- 80% of the surveys felt that their cluster's progress had been fair or better.
- 20% of the surveys described progress as 'poor'.
- Average ratings for both EDE and non-EDE respondents were 2.7

Ratings

Cluster	Advanced Manufacturing	Poor (4)
Cluster	Agri-Food and Forest Products	Poor (1)
Cluster	Biomedicine and Biotechnology	Good (1)
Cluster	Information and Media Services	Poor (1), Good (2)
Cluster	Oil, Gas and Chemicals	Fair (1), Excellent (2)
Cluster	Tourism and Entertainment	Good (1)
Cluster	Engineering and Technical Services	Fair (1), Good (2), Excellent (1)
Flagship	Transportation and Logistics Infrastructure (evolved from the Transportation and Logistics Cluster)	Good (2), Excellent (2)
Flagship	Regional Deal Generators	Poor (1), Fair (1), Excellent (1)
Flagship	Skills Pipeline Partnership	Fair (1), Good (2), Excellent (2)
Flagship	World Life Sciences Centre Initiative	Fair (1)
Flagship	Greater Edmonton Brand Initiative	Fair (1), Good (1)
Flagship	Leverage Investment in the Supernet	Poor (2)
Flagship	Enterprise Attraction	No ratings
Flagship	Microsystems Development and Commercialization	Excellent (2)
Flagship	Industrial Land	Good (1)
Flagship	Creating a Digital Cluster Network Project NEXUS	Excellent (1)
Action	Venture Capital Biomedicine and Biotechnology	Good (1), Excellent (1)
Action	Management Action Biomedicine and Biotechnology	Fair (1)
Action	Techno Park	Fair (1), Good (1)
Action	Human Resources/Skills Engineering and Technical Services	Fair (1)


How would you rate the progress of your cluster on its action plan?
Excellent 27%
Poor 20%
Fair 20%
Good 33%

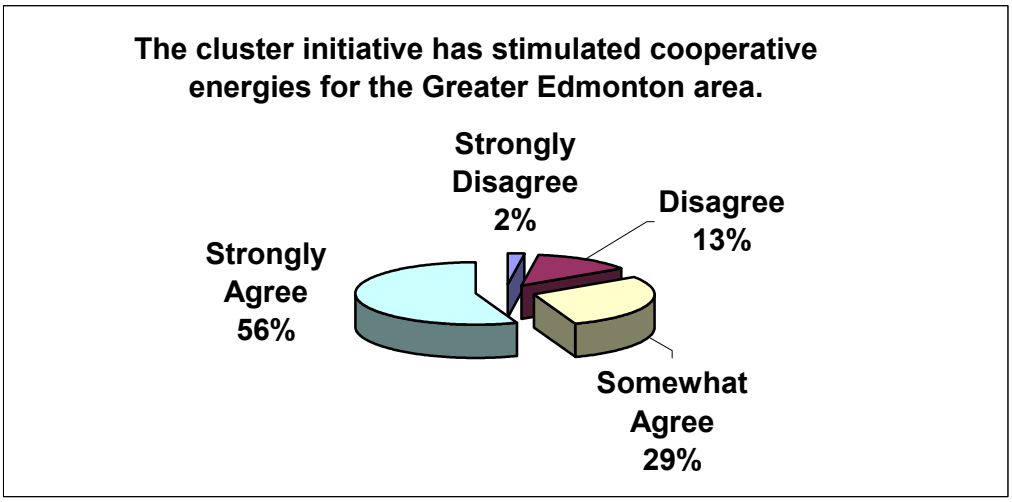
Question 8
What are the top achievements to date?

Advanced Manufacturing Plastics	• NAIT is making changes to their plastics program to better fit industry needs • Buyer/supplier workshop (230 participants)
Engineering and Technical Services	• Planning for International Winter Construction Symposium & Expo, November 2002 • 2 studies on licensing completed—US certification research • US licensing exams may be written here in 2002 • Raising profile during certain periods
Industrial Land	• Integrating stake holders in the region into a flagship
Oil, Gas and Chemicals	• First of any cluster to hold a forum • Electricity deregulation forum held in late 2000 • The Alberta HUB is being recognized in plans made by Arctic gas owners
Tourism and Entertainment	• Improved signage to downtown • Inclusion of human skills position on council
Biomedicine and Biotechnology Venture Capital	• Planning and execution of Greater Edmonton Biomedicine, Biotechnology and E Health Investor Forum, October 4 and 5, 2000
Branding	• Bringing group together • Getting funding for Phase 1 • Contract let for research into branding initiatives in other regions and business and public perceptions of the Edmonton region

Microsystems Development and Commercialization	• Establishment of the National Institute of Nano Technology in Edmonton • Increased Canadian awareness of Edmonton as micro technology centre
NEXUS	• Request for Proposal • Process consultative workshops
Regional Deal Generator	• Investor Forum • Boot Camp at U of A • Angel/Investor Data Base
Skills Pipeline	• Identifying particular skill shortages • Flagship breakfast November 30, 2001 attended by 175 people • Report to the community • Action plan formulated with 4 main directions and 4 committees struck
Techno Park	• Agreement signed between EDE, U of A, Alberta Research Council and City of Edmonton
Transportation and Logistics Infrastructure	• 184 street overpass project • Innovative Funding Package which included tax levy through a Business Revitalization Zone • Supporting Anthony Henday Extension • Initiating a $784,000 commodity flow survey

Question 9
Do you feel the cluster initiative has stimulated cooperative energies for the Greater Edmonton area?
(Answers were scaled where 1 was "Disagree" and 4 was "Strongly Agree".)

- 85% of the surveys indicated that this initiative had stimulated cooperative energies for the greater Edmonton area.
- Respondents commented that the opportunities were there for stakeholders to increase cooperation.
- One respondent felt that only "lip service" was paid to areas outside of Edmonton proper.



*Ratings were higher for EDE respondents than for non-EDE respondents.

- EDE respondents had an average of 3.8 out of 4.
- Non-EDE respondents had an average of 3.1 out of 4.

Question 10a
What is driving your plan?

Cluster	Advanced Manufacturing	• Need for skilled labour • Education component • Increase market share • Develop collaborative group to exchange ideas • Improve Manufacturing in Edmonton Area
Cluster	Agri-Food and Forest Products	• Be more competitive
Cluster	Biomedicine and Biotechnology	• Need to address critical challenges
Cluster	Information and Media Services	• Chairman • EDE leadership
Cluster	Oil, Gas and Chemicals	• Information dissemination • Working together—competing yet collaborating on human resources • Branding and infrastructure
Cluster	Tourism and Entertainment	• Tourism partnership
Cluster	Engineering and Technical Services	• People believe in action plan • Promote Edmonton cold weather construction • EDE • Very involved participants who support & maintain momentum
Flagship	Transportation and Logistics Flagship	• Need for good infrastructure • Key individuals taking initiative
Flagship	Regional Deal Generators	• EDE's vision and commitment
Flagship	Skills Pipeline Partnership	• Need for skilled labour • Key objective of competitiveness strategy • Private sector has taken initiative • Educational sector has adapted to needs
Flagship	World Life Sciences Centre Initiative	• Commitment of leader

Flagship	Greater Edmonton Brand Initiative	• GECS Blue Print
Flagship	Leverage Investment in the Supernet	• The Greater Edmonton Competitiveness Strategy
Flagship	Microsystems Development and Commercialization	• Objective of the National Institute Of Nano Technology • EDE's vision and commitment • Partnership with NRC and U. of A.
Flagship	Industrial Land	• Common Interest
Flagship	Creating a Digital Cluster Network Project NEXUS	• Steering Committee Leadership • Internalization of the Strategy by the Clusters
Action	Venture Capital Biomedicine and Biotechnology	• Need for Venture Capital
Action	Management Action Biomedicine and Biotechnology	• Need for highly qualified technical/business management in Edmonton area
Action	Techno Park	• Need for quality industrial land for R&D facilities • Evidence such parks work elsewhere

Summary of Forces Driving Plans

- Key leaders
- Committed participants
- EDE commitment
- Common needs, goals and visions
- Belief in competitiveness strategy
- Desire to be more competitive

Question 10b
Obstacles

Cluster	Advanced Manufacturing	• Lack of leadership • Apathy and inertia • Lack of resources • Entire cluster too large and diverse, solved by splitting into interest areas • Time • Lack of understanding of benefits of strategy
Cluster	Biomedicine and Biotechnology	• Financial resources
Cluster	Information and Media Services	• Time—hard to get key people together • Resources • Moving from event driven to project driven work
Cluster	Oil, Gas and Chemicals	• Time • Sense that this mature group of companies do not feel need to participate
Cluster	Tourism and Entertainment	• Funding
Cluster	Engineering and Technical Services	• Funding • Time—need volunteers • Motivation • Too many action plans
Flagship	Transportation and Logistics Infrastructure	• Funding • Cost of infrastructure
Flagship	Regional Deal Generators	• Funding • Executive sponsorship
Flagship	Greater Edmonton Brand Initiative	• Funding • Consensus among participants

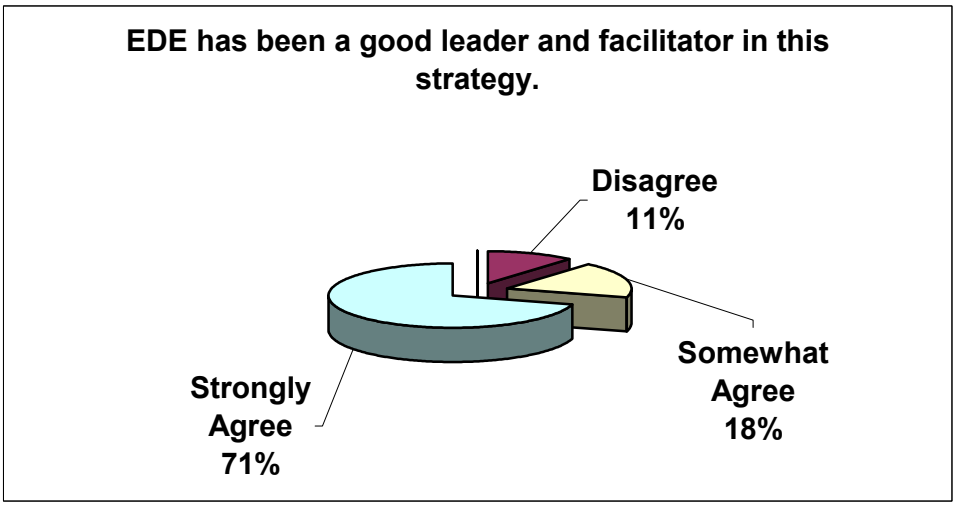
Flagship	Skills Pipeline Partnership	• Funding • Mostly educational institutions who participated • Hard to pin down existing shortages • Sharing of information back to clusters
Flagship	World Life Sciences Centre Initiative	• Need volunteers
Flagship	Leverage Investment in the Supernet	• Data sharing of stakeholders • Staff resources
Flagship	Microsystems Development and Commercialization	• None
Flagship	Industrial Land	• Fragmented political structure
Flagship	Creating a Digital Cluster Network Project NEXUS	• Ownership • Scheduling meetings with all clusters • Executive sponsorship
Action	Venture Capital Biomedicine and Biotechnology	• Very few venture capitalists in Alberta • Deciding who should participate
Action	Management Action Biomedicine and Biotechnology	• Hard to keep momentum
Action	Techno Park	• Provincial government approval
Action	Human Resources/Skills Engineering and Technical Services	• Need volunteers

Summary of Obstacles

- Time
- Resources both financial and human
- Apathy, inertia
- Lack of leadership in some cases
- Sharing of information back to clusters
- Too many action plans

Question 11a
EDE has been a good leader/facilitator in this strategy.
(Answers were scaled where 1 was "Disagree" and 4 was "Strongly Agree".)

- 89% of respondents rated EDE as an excellent (30) or good (17) facilitator or leader for the Greater Edmonton Competitiveness Strategy
- No one rated the leadership of EDE as poor.

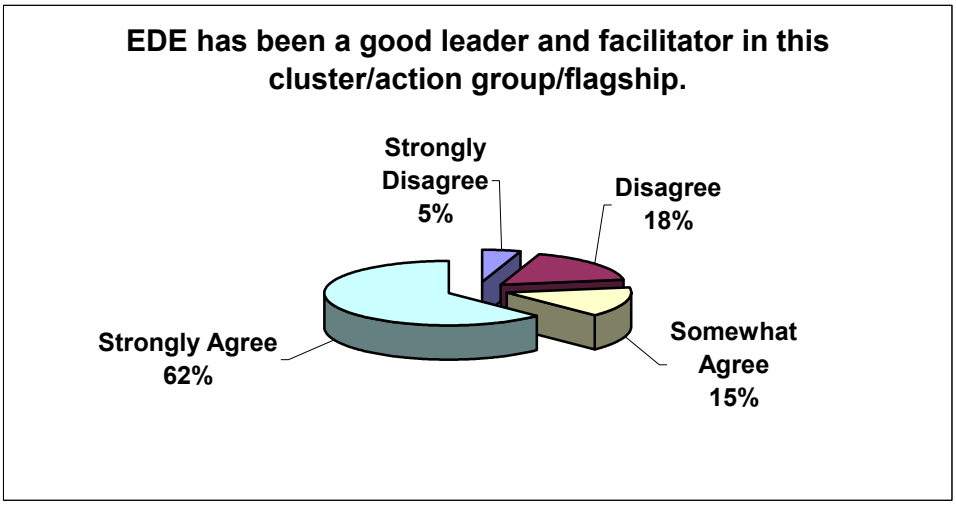


*Ratings were higher for EDE respondents than for non-EDE respondents.

- EDE respondents had an average of 3.9 out of 4.
- Non-EDE respondents had an average of 3.4 out of 4.

Question 11b
EDE has been a good leader/facilitator in this cluster, flagship or action plan.
(Answers were scaled where 1 was "Disagree" and 4 was "Strongly Agree".)

- Ranking of EDE as leader and facilitator of a particular cluster, flagship or action group is a little lower. 77% of respondents gave EDE a ranking of 3 or higher on the 4 point scale.
- Two respondents (5%) ranked EDE poorly. Two of the nine respondents who disagreed or strongly disagreed that EDE was a good leader were from EDE.



*Ratings were higher for EDE respondents than for non-EDE respondents.

- EDE respondents had an average of 3.4 out of 4
- Non-EDE respondents had an average of 2.9 out of 4

Question 12
Advice for other regions planning similar strategies:

- Keep it simple. Edmonton has too many objectives in each cluster. Keep focused. More goals and actions can be added if necessary later.
- Realistic goals and objectives.
- Industry must be involved and committed. Industry representation must be maintained. The strategy must be driven by business.
- Have finances lined up in advance.
- Leaders must be good facilitators, not event organizers.
- Need strong leaders.
- Need high profile champions for strategy.
- All components of community must be involved
- Formalize and institutionalize the strategy.
- Goals must be clear and achievable in a year. Good to have quantifiable goals, i.e. number of new jobs or new enterprises.
- Make sure of commitment.
- Must have patient and pragmatic approach.
- Rewards are worth the involvement.
- Develop roles and responsibilities of chairs and council members.
- Don't reinvent the wheel. See what already exists in the community and build on it.
- Constantly work to maintain regional focus.
- Strategy must be based on reality.
- Marketing and communication strategy in place in advance.

Criticism of the Strategy

The main criticism of the strategy was that it is an American strategy placed in a Canadian context. In the US, businesses play a greater role in economic development planning for a region. As a consequence, industry is more willing to come forward with the necessary financial funding and human resources. In Canada, government leadership and financing is often expected. This may provide some rationale for the common response that greater industry involvement and commitment is needed.

The criticism was made that the strategy was not the most effective way to encourage economic growth and that it was expensive. Comparisons of costs and effectiveness of alternative strategies, however, are beyond the scope of this review.

Finally the criticism was made that EDE did not carefully see what existed before the strategy was implemented. Existing networks may have been exploited more fully.

The Findings

Evaluation Of The Status And Progress Of Cluster Strategies, Flagship Initiatives and Action Plans

The GECS has made very good progress in a short time period. Success to date (December, 2001) is reflected in the agreement by 85% of those surveyed that the strategy has stimulated cooperative energies among participants. Moreover, survey respondents discovered new opportunities to increase cooperation as a direct result of their involvement in the strategy.

The cluster achievements the survey respondents found particularly noteworthy were:

Cluster	**Achievement**
Advanced Manufacturing	• Changes to NAIT program better meet industry needs
Biomedicine and Biotechnology	• Biotech/Health Investor Forum
Engineering and Technical Services	• International Winter Construction Symposium and Expo (2002) • US licensing exam to be made available in Edmonton in 2002
Oil, Gas and Chemicals	• Forum held on Electricity Deregulation • Alberta Hub recognition in plans of Arctic gas owners

This list may actually be too short because of time constraints and the limited sample size. Certainly, little mention of the Tourism and Entertainment Cluster has been made. Indications are that the entities involved with Tourism and Entertainment worked well as a cluster prior to the GECS.

Noteworthy flagship achievements:

Flagship	**Achievement**
NEXUS	• Request for proposals has gone out • Consultative workshops to engage and check for buy-in by cluster members
Branding	• Bringing the group together, arranging funding • Request for proposals for research has gone out
Industrial Land	• Integrating stakeholders into flagship
Microsystems Development and Commercialization	• Establishment of National Institute of Nano Technology in Edmonton
Regional Deal Generator	• Investor Forum, Boot Camp at U. of A. • Angel/Investor Data Base
Skills Pipeline	• Breakfast Meeting with 175 attendants • Formulation of four directions for action • Report to community
Techno Park	• Techno Park agreement
Transportation and Logistics Infrastructure	• Overpass on 184 Street • Innovative Funding Package for overpass • Extension of Anthony Henday • Initiation of commodity flow survey

There are too many action plans and too few interviewees in our sample to deliver a valid evaluation of each action plan. Our interviews suggest that action plans are evolving, at various speeds and with varying levels of commitment. Moreover, action plans are continually changing. This is in keeping with the cluster strategy concept. Mobilizing cooperative energies will lead to institutionalized networks with joint problem identification and consequent action that are continually adapting to the conditions evolving in the environment of the clusters.

Our considered assessment is that the clusters have made good progress toward institutionalizing themselves, although there are differences in the degree to which they have done that. The evidence for their progress can be found in the large number of cluster meetings convened. While the number of cluster meetings in and of itself is not necessarily indicative of good performance, it is, at this early stage, suggestive of steps that extend to assuming responsibility and initiating actions which result in a changed and more collaborative regional mindset. This "outcome" is intangible but has the potential of becoming self-reinforcing. In our view, it is appropriate for the clusters to begin reflecting on their work and to determine possible performance measures that could be used by a longer run data trading system.

As clusters vary in size, stage of maturity and diversity, it should not be surprising that to date some are more organized and developed (e.g. Engineering and Technical Services, Tourism and Entertainment) than others (e.g. Advanced Manufacturing). As time goes by some clusters will become self-sustaining.

Arguably it would be a definition of a successful cluster strategy if more than half of the clusters initially identified meet and participants actively pursue goals five years later. This is a lofty expectation. Keep in mind that the political dimension of clustering has possibly led to the identification of a larger rather than a smaller number of clusters. In any case, a marginal cluster might simply be maintained in the hopes that it will develop and flourish.

As for the comparative performance of the GECS to date, it would appear from our literature search, interviews with officials in other regions and discussions with James Gollub—ICF's leader and the author of the GECS blueprint—that it is too early for such comparisons. In Arizona it took ten years to have the clusters evolve into a state-wide network. In S.E. Los Angeles it took five years for the cluster groups to gather enough support for their action plans. The GECS, at this stage, certainly compares favourably

with these initiatives. As for aiming high, one can point to Connecticut where the clusters, after just a couple of years and with strong leadership by the Governor, started to create their own projects, such as training programs and joint marketing.

A higher degree of success for the flagship initiatives than for clusters can be expected as time passes. Flagships represent the sum of the shared problems of clusters, hence have higher visibility and political muscle. More support and resources accrue to them as a consequence. We note that the recent surge of organized energy in the Skills Pipeline Flagship, the evolution and achievements of the Transportation and Logistics Infrastructure Flagship, and the accomplishment of integrating the stakeholders of the region into the Industrial Land Flagship as early indications of genuine success.

Factors Influencing The Implementation Of The Greater Edmonton Competitiveness Strategy

From our interviews a number of key factors emerged as drivers of action plans and their implementation. Clearly, commitment of the participants was crucial. A number of private sector participants referred to EDE's commitment as a key success factor, and in their observation, implementation moved faster when there were strong leaders pushing the clusters. As mentioned above and frequently in the literature, the commitment and leadership of key government officials, like the Governors in the cases of Connecticut and Oregon, plays a critical role in overcoming regional jealousies.

Common needs, goals and visions facilitate the implementation of the strategy. To some extent these are easier to establish when the clusters are well chosen and sufficiently representative.

Other key factors mentioned by our respondents were competitive drive and a real belief in the strategy. The latter factor is to some extent dependent on successful communication and articulation of the strategy, the availability of resources, and, again, its leadership.

Recommendations For Action And Follow-Up Assessments

We approached this component of the mandate by asking participants in the process what advice they would give other cities considering a similar strategy. By using an indirect approach, respondents were able to step back from immediate issues to reflect on the substance of their experiences. A number of constructive suggestions were received, and these may help point out weaknesses of the current strategy. As cluster strategies are living, and hopefully self-sustaining organisms, it may be useful to communicate such observations widely.

Number of Clusters

The most popular advice given was that the initiatives should be "focused", "lean and mean", "kept simple", and "should not try to do too much". This advice appears to reflect a shared feeling that Edmonton has taken on too many clusters and flagships. Similarly, much of the feedback seems to suggest that clusters and flagships need "tangible", "realistic", "bite-size", and "achievable" milestones with firm time lines to generate a sense of accomplishment. Such measures will help sustain the GECS initiative.

Leadership

Another commonly expressed theme was that Edmonton's key industry leaders and community champions need to be more involved in the GECS. This goes back to the role of leadership as a key success factor. Many respondents stressed the need to have the 'right' people, the 'movers and shakers' involved and 'fully invested' in the process. It was implied that such leadership helps overcome regional/peripheral distrust where it exists.

Resources

Other popular pieces of advice from respondents revolved around the theme of organizational structure and required resources. There is evidence of a sense that industry players or the business community at large could play an even greater role in the process. As expected, the issue of 'resources', or the lack thereof, was a common thread in many of the responses.

Involvement

Continued efforts must be made to ensure broader industry involvement. Success of the strategy depends on industry as well as institutions believing in the process and committing themselves to the process. The time and effort will be well rewarded.

Communication and Information Strategy

More intensive efforts at communicating the goals and sharing information to the business community and between clusters and flagships are required. Broader communications will help power the mobilization of energies. It is essential that participants embrace the competitiveness strategy and believe that it is a viable path towards economic success.

Region Involvement

Care should be taken to fully integrate the regions outside the City of Edmonton into the GECS.

Performance Measures

Clusters and flagships should begin to determine possible performance measures. GECS groups need to have the tools to critically gauge their achievements and progress.

Follow-up Assessment

In the absence of credible benchmark methodologies, and in view of the early stage of the GECS evaluation, attempts will of necessity be subjective. However, "taking the pulse" by means of a formalized comprehensive annual survey of participants should be considered. Such a survey would provide a snapshot of the strategy and would also serve to motivate and reinforce the commitment of the participants. Over time, periodic surveying would help build a comprehensive data base and history of achievements.

APPENDIX A
EXAMPLES OF STATE AND LOCAL CLUSTER ANALYSES[8]

1. South Carolina Department of Commerce, (Approaching 2000: An Economic Development Vision for South Carolina, 1995)

Existing clusters: Textiles/apparel; forest products; tourism; poultry.
Potential clusters: automotive, plastics.

- Targets recruitment by clusters, provides cluster-specific business assistance, resource development, and manufacturing extension programs.
- Aligns technical colleges to clusters.
- No analysis included

2. Massachusetts Office of Economic Affairs, Governor, University, (Choosing to Compete, 1993)

Names clusters, which include most of state's population, and then describes strengths and potential by region.

- Includes virtually all industries and looks for relative concentrations within state.
- A means to target services, not a cluster analysis *per se.*

3. Rhode Island Economic Policy Council, (Meeting the Challenge of the New Economy, 1997)

Clusters: jewelry; precision metalworking; marine; seafood products; electronics and instruments; financial service; software; biomedical; travel and tourism.

- Report recommends networking, learning alliances targeted technology services.

4. Empire State Development, (New York State Industry Cluster Profiles, 1999)

Clusters: Biomedical/Biotech; business services; communications and media services; distribution; fashion, apparel, and textiles; financial services; food processing; industrial machinery and systems; information hardware and software; materials processing; optics and imaging; transportation equipment; travel and tourism.

- Analyzed by regions using DRI power index, input-output, location quotients, etc.
- Actions focus on targeted recruitment, workforce training, and exports.

[8] Rosenfeld, 2001.

5. California Trade and Commerce Agency, (Collaborating to Compete in the New Economy, 1996)

Clusters analyzed by geographic region:

Bay area: Multimedia; environmental technologies

Sacramento Valley: Diversified manufacturing

San Diego area: telecommunications; health care technologies

Southern California region: entertainment; apparel and fashion; information technologies

Northern California: wood products

- Applies SRI Pyramid approach to strengthen foundation factors.

6. Florida Chamber of Commerce, (Cornerstone and Cornerstone Revisted, 1992, 1994)

Clusters: information technologies, biomedical and health services; space and defense; business services; tourism and entertainment; agriculture and food processing.

- Applies SRI Pyramid approach to strengthen foundation factors.

7. Southeast Minnesota Industrial Cluster Study, Initiative Fund, 1995

Clusters: composites; printing publishing and software; industrial machinery and computer manufacturing; and food processing.

- Uses Porter's diamond analysis.

8. Northern Illinois Corridor Council. (An Economic Baseline Study for the Northwest Eight Counties of Illinois, 1994)

Clusters: manufactured inputs; transportation equipment; agriculture and food processing; health and biomedical; export services; electrical equipment; and business and personal, travel and tourism.

- Quantitative analysis, to identify clusters.
- No actions recommended.

9. Northeast Ohio Clusters Project (Cluster Briefing Papers, 1998)

Clusters: insurance, motor vehicles, instruments and controls, chemicals, biomedical, and metalworking.

- Conducted by Urban Center at Cleveland State University and Collaborative Economics.
- Each cluster study describes the scale and evolution, maps cluster, and lists external and internal factors and opportunities for collaborative action.

10. Louisiana Department of Commerce (A New Strategy for Economic Development, 2000)

Clusters divided between 'traditional' and 'seed'.
Traditional Clusters: shipbuilding, oil and gas, petrochemicals, transportation, agriculture and food products, wood lumber and paper, health care, tourism, and entertainment.
Seed clusters: medical and biomedical, micromanufacturing, information technologies, food technologies, advanced materials.

- Uses bubble charts and maps of infrastructures.

11. Charlotte Chamber (Advantage Carolina: Capitalizing in Charlotte's Momentum Together, 1999)

Clusters divides between existing and 'clusters in-the-making'.
Existing clusters: financial services; transportation and distribution; and high-growth manufacturing;
Clusters in-the-making: information-related services; software; and travel and entertainment services. The information-related cluster includes, for example, research and testing, advertising, and accounting.

- Uses maps that show lead firms, key suppliers, and key infrastructure providers; bubble charts describe strength of cluster component sectors.

12. Business Development Board of Palm Beach County, Inc. (Cooperating to Compete in the 21st Century: An Industry Cluster Development Strategy for Palm Beach County, Florida, 1998)

Clusters: medical/pharmaceutical, communication/information technology, business services/financial services, aerospace/engineering, agribusiness, tourism/recreation/entertainment, education, transportation and distribution.

- Uses bubble charts to depict strength.
- Pyramid three-tier maps of export-based companies, suppliers, and foundation.
- Created councils and appointed chairs for each plus foundation councils.

13. Connecticut Governor's Council on Economic Competitiveness and Technology (Gaining a Competitive Advantage: An update, 2000)

Clusters: bio-sciences, aerospace components Software/IT, metals manufacturing, maritime.

- Strong promotion and recruitment effort, in part by improving regulatory environment.
- International recruitment
- Promotes training networks for clusters.

14. San Diego Association of Governments (Industrial Clusters in the San Diego Region, 2000)

Clusters: The analysis of this urban area produced 17 clusters, ranging from Biomedical products to fruits and vegetables organized according to three categories: emerging (young, fast growing), stabilizer (adding diversity to region), and mature declining or low employment growth).

APPENDIX B

Greater Edmonton Competitiveness Survey

Cluster Group:

Cluster Action Team

Flagship

Name of Person Interviewed **Phone number**

Business

1. How often has your cluster group/cluster action team/flagship initiative met?

2. Is the time taken for this initiative onerous? (yes/no, brief comment)

Yes No

3. Has the GECS process encouraged the development of new business ideas within your company or spawned any entrepreneurial ideas? (comment)

4. Do you feel that the GECS initiative has enhanced the success of the firm or agency you represent?

Strongly Disagree Disagree Somewhat Agree Strongly Agree

5a. Does the cluster group/cluster action team/flagship initiative have adequate resources?

Yes No

5b. Do you feel that your group is properly mobilized?

Strongly Disagree Disagree Somewhat Agree Strongly Agree

6a. Do you feel that the goals and objectives of the cluster are well developed?

Strongly Disagree Disagree Somewhat Agree Strongly Agree

6b. Are the goals and objectives successfully communicated?

Yes No

7. How would you rate the progress of your cluster on its action plan?

Excellent Good Fair Poor

8. What are the top achievements of your cluster/ action initiatives/flagship to date? (list three)

9. Do you feel that the cluster initiative has stimulated cooperative energies for the Greater Edmonton area?

Strongly Disagree Disagree Somewhat Agree Strongly Agree

10. What is driving your action plan and what obstacles are you encountering? (comment)

11a. EDE has been a good leader/facilitator in this strategy?

Strongly Disagree Disagree Somewhat Agree Strongly Agree

11b. EDE has been a good leader/facilitator in this cluster?

Strongly Disagree Disagree Somewhat Agree Strongly Agree

12. San Antonio and cities and regions elsewhere are initiating similar strategies. Given your experience with the GECS thus far, what advice would you offer them?