



Northern Ontario Mining Supply and Services Study
Final Report - EXECUTIVE SUMMARY



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Executive Summary: Northern Ontario Mining Supply and Services Study

Introduction and Methodology for the Analysis

This document summarizes the results of a strategic analysis of Northern Ontario’s Mining Supply and Services Sector. The overall objective was to assess growth opportunities, and outline a plan to realize them through concerted stakeholder action, both public and private.

The primary base of information for this analysis was developed by Doyletech Corporation through interviews with 150 companies. These interviews were guided by a formal interview guide, and respondents were encouraged to add further details if they wished. As well, an in-depth literature review was also conducted, including web searches and Internet inquiries, and the information from these sources was analyzed using the Doyletech “Industrial Systems” methodology. This methodology differentiates three broad groupings or “blocks” in any given system (such as Northern Ontario mining supply and services), and further distinguishes several levels within each “block”. Finally, three regional focus groups were held, to discuss the results of the interviews and the preliminary hypotheses and conclusions.

The Size and Scale of the Sector

Based on the interviews, existing information about the sector, and the literature review (including web searches), the sector includes about 500 separate firms and organizations. All of these derive more than 50% of their revenues from mining supply and services.

The total value of the output of the Northern Ontario Mining Supply and Services Sector is projected as being \$5.6 billion, and the sector employs about 23,000 people. The approximate breakdown of sales and employment by the region’s four principal centres is as follows:

- Sudbury \$3.94 billion and employs 13,800
- North Bay \$0.77 billion and employs 2,990
- Timmins \$0.59 billion and employs 4,600
- Thunder Bay \$0.35 billion and employs 1,610

This adds to the grand total of \$5.6 billion and employing 23,000. This is a very large industrial sector. In turn this suggests that the sector has been a very successful one in order to achieve this scale of operations.

The Capabilities of the Sector

Based on the interviews, the evident success of the sector can be related to five main capabilities and numerous secondary ones:

- Mining Engineering and Mine Management;
- Mining Equipment Manufacturing;
- Customization of wheeled, tracked and flanged vehicles;



- Equipment Repair and Rebuild; and
- Support: Consulting, Research, Training, and Financing.

As well, there are numerous additional specialized products and services. In sum, the sector has a very wide range of capabilities. However, there seem to be a few gaps: these include a lack of an overall supply chain management capability, and sometimes innovation has come from overseas firms (e.g. wireless underground communications and waste pile stabilization). Nevertheless on balance this is a very capable sector at doing its job.

Productivity and Employment

Projecting from the interviewed sample, the sector's calculated net output of approximately \$124,000 value of sales per employee is high - almost 1.4 times the equivalent Canadian overall average of \$89,000. This is a very promising finding. However, like other sectors, this high productivity comes disproportionately from larger firms:

- Taking the sales value per employee of small firms (firms having up to \$5 million annual sales) as the reference benchmark, then the lower-mid range of firms (those with sales of \$6 to \$25 million), have sales per employee 1.84 times greater;
- Upper-mid range firms (those with annual sales between \$26 and \$100 million) have 2.63 times the annual sales value per employee; and
- Large firms (those with sales over \$100 million annually) have 5.15 times the sales value per employee.

The survey indicated that the sector was hit by the 2008-2009 recession and other down-side risks, such as strikes. In 2008-2009, almost half of all the firms lost jobs; only 10% gained, while the balance remained constant. However, from the survey, the sector is a good deal more optimistic about the future: 83% believe it will have significant revenue increases over the next 3 years; only 1%, a decline. Employment forecasts are similarly optimistic. The sector sees the 2008-09 downturn as a temporary, cyclical, phenomenon.

Current Market and Client Focus

From the survey, the sector's market is overwhelmingly domestic at present, Canada accounting for 81% of sales:

- 62% to Northern Ontario;
- 7% elsewhere in Ontario;
- 12% elsewhere in Canada.

In contrast, exports are much less - 19% of sales:

- 8% outside of North America;
- 6% unspecified;
- 5% United States.



In sum, the sector is dependent on the domestic market. Even more significantly, the sector does not have a diversified client base: firms of all sizes are heavily dependent on just a few clients:

- 48% depend on one customer for almost 30% of sales;
- 51% rely on two customers for at least 50% of sales; and,
- Overwhelmingly, the sector sells directly to miners: 63% describing their “best customer” as a miner, and 53% describing their “second-best” customer as a miner; there is very little intra-sector trade.

In contrast, about 16% of “best customers” are manufacturers of complete mining equipment systems and some 6% of “best customers” are manufacturers of parts and components for such systems. This is significant in that it appears to represent intra-sectoral trade: for manufactured components and fabricated materials respectively, having these two groups of “best customers” is logical. All the same, most of the sector’s firms sell directly to miners.

Paths to Growth

The sector definitely sees paths for growth. These fall into roughly two main categories:

- Diversifying markets; and
- Adding greater value internally to the sector through diversified products.

The survey asked respondents to rank the single highest priority for a growth strategy. Significantly, while mining has traditionally been a commodity business where cost rules, no less than 82% of the interviewed respondents seek market and product diversification combined as the single top priority for action (because of rounding totals do not add to 100):

- New Markets was the top priority choice of 53%;
 - 30% elsewhere in Canada
 - 23% exports
- New Products was the top priority choice of 29%;
 - 16% through R&D
 - 13% by technology acquisition
- Cost Reduction was the top priority of only 13%;
 - 7% by capital investment
 - 6% through skills investment
- A minority of 6% were not able to state a priority strategy.

This is one of the most important findings of the research. The sector cannot continue as it has. It has to diversify.

The sector is well aware of new markets potential. From the survey, Canadian and Northern Ontario markets will still be important, but the most important potential export market is South America. This is a very different picture from the current market profile of the sector:

- 1st: Elsewhere in Canada 63%;



- 2nd: Northern Ontario 53%;
- 3rd: Chile 43%;
- 4th: USA 42%;
- 5th: China 27%;
- 6th: Peru 25%;
- 7th: Brazil 23%;
- 8th: Central America/Caribbean 20%.

However, the sector is also well aware of barriers to exporting. Intelligence gathering and marketing are serious barriers and insufficient scale is a fundamental problem, impeding the formation of links for value-added “systems solutions”:

- 39% cited lack of market Intelligence (1st);
- 38% lacked linkages to complementary firms (2nd).

Cost is also a constraining factor:

- 24% felt their pricing was non-competitive (3rd);
- 18% saw exports requiring unaffordable capital investment (in 5th place – in 4th place was lack of promotion of the Northern Ontario sector, at 20%).

But perhaps most importantly, only 4% felt they were not competitive on quality, and only 8% felt that their products or services did not lend themselves to exporting. Accordingly, the sector has plenty of export potential.

Another path to growth emphasized in the survey responses was the prospect of adding value internally to the sector’s overall products. The interviewees were asked to identify from a given list which categories of firms stood the best chances of growth in the medium term. The answers were revealing. For growth prospects, respondents indicated that, globally, buyers were seeking “solutions”: complete mining solutions or mining systems sales are outpacing the growth of the mining companies they serve - reflected in industry’s selection of the most promising categories:

- 1st: Mining Engineering, Complete Solutions - 21%;
- 2nd: Mining Equipment Manufacturing, Complete Systems -13%;
- 3rd: Mining Direct Services - 9% (which could include mining engineering for solutions);
- 4th: Miners themselves - 9%.

In short, the sector is indicating: global growth will go to those organizations and globally competitive sectors that can offer complete packages of integrated mining solutions, rather than merely parts and equipment. This is another very significant finding from the research.

Moreover, in support of this increasing emphasis on mining solutions, the sector would like to do more R&D. Almost 90% of respondents believe that a strong R&D effort, equal to 5% of sales, could increase revenues significantly, even over what they were expecting anyway in a rebound from the 2008-09 downturn:



- 19% believed it could raise revenues over 5 years by over 50 percent;
- 26% believed it could raise revenues over 5 years by up to 50 percent;
- 43% believe it could raise revenues over 5 years by up to 25 percent.

While this level of increased R&D would represent a major initiative, taking into account that Canadian R&D including public spending is just 1.8% of GDP (which is low by OECD standards), nevertheless, it seems clear that the sector sees that adding value to its offerings, particularly in the direction of being able to provide complete solutions and complete systems rather than providing parts and components, is the emerging competitive benchmark of capability.

Public Sector Support and Collective Action

From the survey, government is seen as part of the solution:

- 64% had used or could benefit from federal programs such as Scientific Research and Experimental Development (SR&ED) tax credits, NRC-Industrial Research Assistance Program (IRAP) and (formerly) HRSDC temporary employment support;
- 53% cited provincial programs such as the Northern Ontario Heritage Fund;
- 48% referenced municipal programs; and
- 48% cited educational institutions (beyond solely employing graduates).

Similarly, collective action through a pan-Northern-Ontario industry association could help, *if it had the resources* to deliver key results:

- 53% agreed that it could materially help by acting as a “Marketing platform to help sales and exports”;
- 42% agreed that it could “Provide market intelligence”;
- 38% concurred that it could “Help in finding technology and marketing partners”;
- 38% agreed that it could “Provide a voice for industry to governments”;
- 38% said yes that it could usefully support “Networking for coordination and expansion”;
- 20% agreed that it could usefully do “Special projects, such as technology roadmaps”.

The survey showed that current associations are valued: companies pay on average \$4,750 annually on all memberships. Out of these memberships, there was the Chamber of Commerce at 63%, followed by CIMM (49%), SAMSSA (42%), CAMESE (20%), OMA (17%), and CMA (13%).

In short, the sector believes that both public sector support and collective action through industry association are part of the growth solution for the sector.

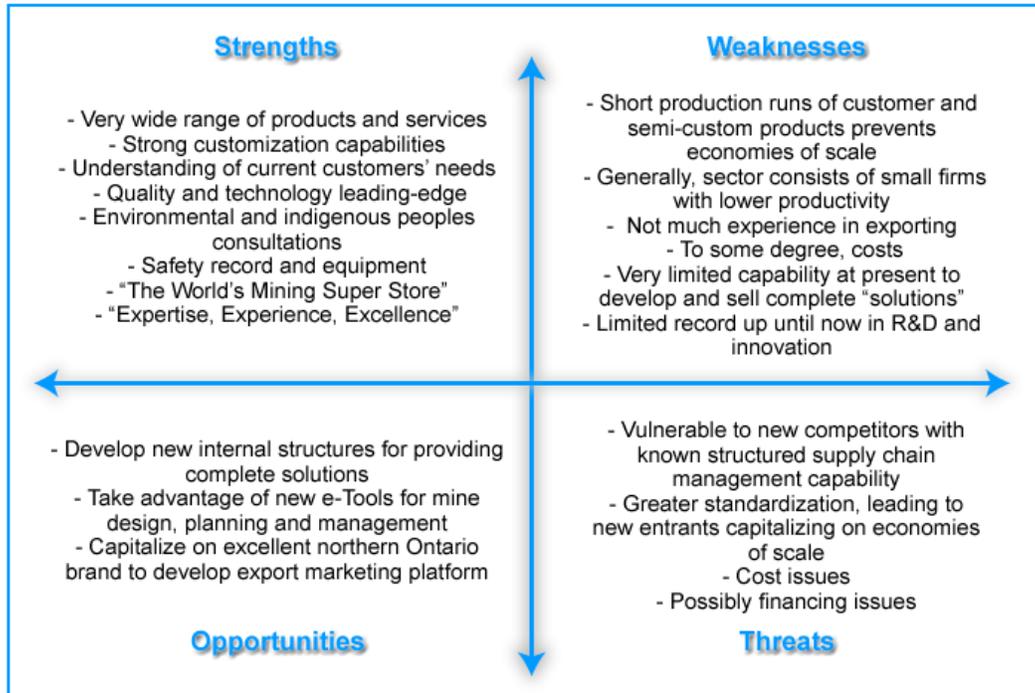
Strengths, Weaknesses, Opportunities, Threats

The project team developed a comparative capabilities analysis between the Northern Ontario sector and three competitive rivals. The three alternate sectors were Colorado (Denver) in the western USA; New South Wales (Sydney area) in Australia; and Gauteng State (Johannesburg) in South Africa. Coming out of this comparison, and following the survey and literature review research, the project

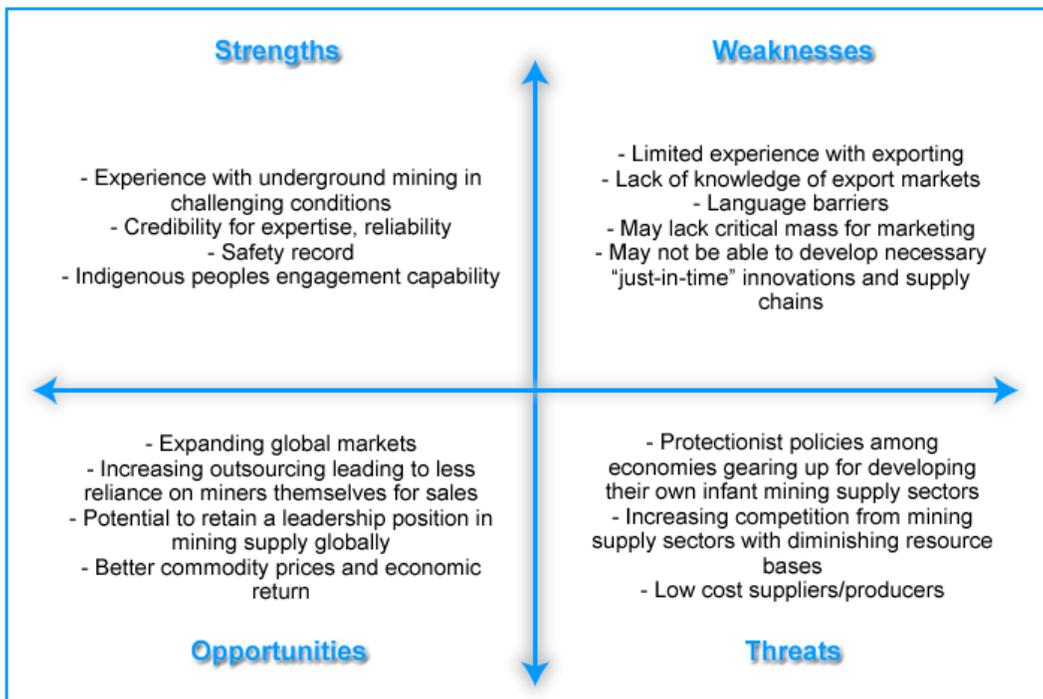


team developed Strengths, Weaknesses, Opportunities, Threats (SWOT) analyses, for both the sector’s supply side and the sector’s demand side. These are shown below.

ES-1: SWOT Analysis, Supply Side Summary



ES-2: SWOT Analysis, Demand Side Summary

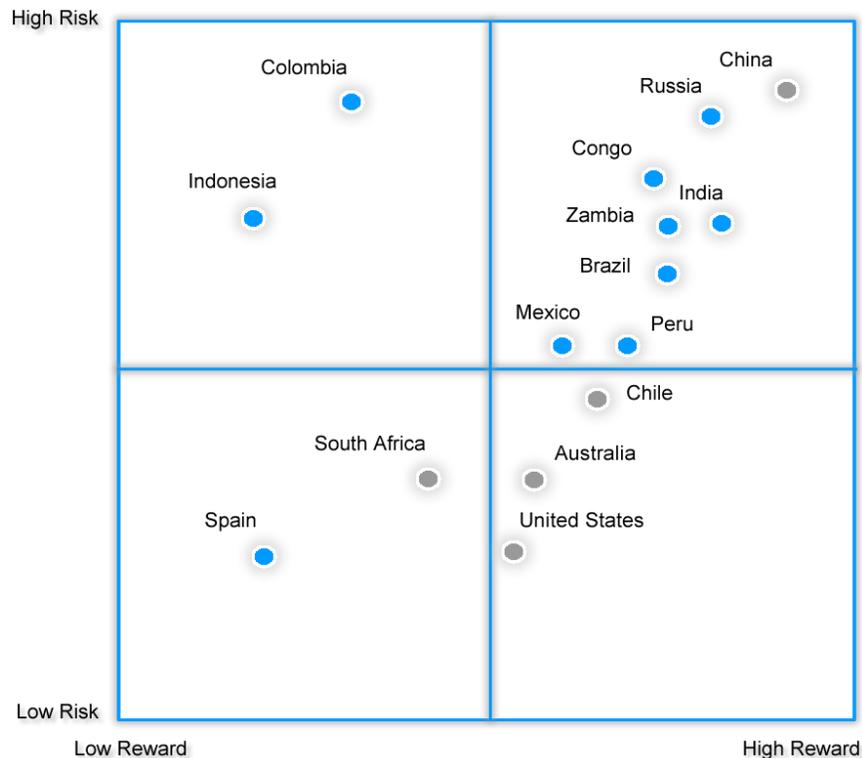




International Market Demand

The project team developed a World Mining Markets Risk/Reward Overview. This macro-level analysis trades-off potential rewards of entering a given market against the perceived risks. The results can be summarized in the chart below.

ES-3: World Mining Markets Risk/Reward Overview



Going Forward: An Action Plan

Following all the research, survey, and SWOT analyses, the project team developed four (4) main go-forward action items for the sector. Each of these four components is viewed as being viable as a “stand-alone”: accordingly stakeholders can refine their own preferred mix. These four are:

- **An e-Quartermaster Capability**

The objective of this action item would be to provide a virtual inventory of products and services of the sector. A historical parallel might be certain *Terminal Railroads*, in which a necessary function is carried out by a jointly-owned subsidiary. The goal would be to raise awareness of sector capabilities, both within and without.

Major benefits would be a common-use marketing and service platform; a path to increased collaboration, internal development & eventual lower costs for buyers & sellers; and it could be readily done in progressive stages & complementary to branding, consortia & quality initiatives.



- **A Northern Ontario Best Practices Standard**

The objectives would be to anchor the assertion that the Northern Ontario sector is world-class (branding) and to differentiate Northern Ontario suppliers as global players. A historical model might be the Vintners Quality Assurance (VQA) of Ontario in respect of Ontario wines.

The benefits would include: a unique marketing tool for this sector; a complementary initiative to consortia formation; and enhanced credibility for smaller (unknown) players to penetrate export markets.

- **Consortia to Provide Total Solutions for Global Mine Opportunities**

The objective would be to overcome virtually the barrier of scale, and to mobilize fast responses to global opportunities.

The benefits would include: a unique selling proposition, worldwide; superior products or services for the sector to sell; increased internal value-add; and it could support specialization, e.g., specific commodity mining (gold), specialized operations (open pit), or geographic focus (Timmins, Thunder Bay, etc.).

There would be challenges. These include: governance; cost management; likely need for branding; and staged development. Nevertheless, the survey showed this action item to be the one most supported by the sector.

- **A Foreign Market Entry Program**

The objective would be to assist sector firms and organizations enter export markets, and to support optimum approaches in terms of partnerships, distributors, and product/service profiles.

The benefits would include: enhanced market awareness of sector products and services; market specific intelligence on local opportunities, regulations, and competitors; and lower costs for Northern Ontario firms looking to export.