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Core Manufacturing: Lessons from Four Global Giants in Canada

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WITHIN GLOBAL FIRMS, THERE IS A BATTLE BEING WAGED AMONG REGIONAL DIVISIONS AND ACROSS PRODUCT LINES FOR INVESTMENT CAPITAL AND SENIOR MANAGEMENT ATTENTION. THE WINNERS SECURE MANDATES TO SERVE NOT JUST LOCAL MARKETS BUT GLOBAL ONES AS WELL.

The views expressed in this paper are our own and should not be attributed to any other individual or organization. We are grateful to our Attracting Global Mandate Project partners, Canadian Council of Chief Executives, Canadian Imperial Bank of Commerce, Industry Canada, IBM Canada and Ontario Ministry of Economic Development, Employment and Infrastructure for their support, and to the senior executives of GE Canada, IBM Canada, Siemens Canada and Toyota Motor Manufacturing Canada for participating in the structured interviews. Bing Feng and Sandra Octaviani provided excellent research assistance.

Introduction

As we saw in the first paper of the "Attracting Global Mandates Project" the established and emerging economies are in fierce competition to be the location for advanced manufacturing in the future.

While in the past, established economies had advantages in technology, skills and consumer bases that were insurmountable to firms in emerging economies, this is no longer the case. As home to the fastest-growing markets and with a burgeoning supply of talent, emerging economies are winning mandates to produce not only for their own markets, but also for markets that were the traditional preserve of established economy firms.

Yet firms in Canada and other established economies are not standing still. The best among them are working hard and succeeding to provide the products and services international consumers demand. Within global firms, there is a battle being waged — among regional divisions and across product lines — for investment capital and senior management attention. The winners secure mandates to serve not just local markets but global ones as well.

In this paper, we look at the experience of four global firms with Canadian operations: General Electric, IBM, Siemens and Toyota. All four firms' Canadian operations have a track record of competing for and securing global production or R&D mandates. Through structured interviews we seek to understand the process they use to allocate mandates globally and the strategy the Canadian senior management employs in such internal competitions. We focus particularly on what senior managers believe were the key factors that led to their past success, and the role played by governments at all levels. Each firm is examined in turn and then we summarize common elements across firms.

GE Canada

General Electric (GE) is a global manufacturing and technology company with segments that include power and water, oil and gas, energy management, aviation, health care, and home and business appliances. The company headquarters (HQ) is in the United States in Fairfield, Connecticut. Globally, GE employs over 300,000 people in 170 countries. Annual revenues exceed US$140 billion with net income of more than $13 billion.[1]

GE Canada is the Canadian subsidiary of GE and is headquartered in Mississauga, Ontario. GE's long history in Canada dates back to 1892. The company employs 7,000 people in more than 20 locations across the country. Elyse Allan is the President and CEO. The company operates in the energy, transportation, health care, and consumer and industrial electronics segments. Paul Boothe and Jean-Louis Schaan interviewed Ross Hornby, Vice-President – Government Affairs and Policy, in his Mississauga office on March 31, 2015.

A Global Aviation Mandate

GE Aviation's Global Robotics Automation and Instrumentation R&D Centre in Bromont, Quebec is a prime example of global mandate attraction. The new R&D Centre was opened in 2013, with an investment of $61 million,[2] including $8 million from the Government of Quebec. A key activity at the Centre will be the development of software to control robotic units in aviation manufacturing. The Centre will support the work of GE Aviation globally, and especially in the Canadian aviation cluster in the Montreal region.

Strategy

GE Canada's strategy is linked to the way the firm is organized. Within GE Canada, each division (e.g., GE Aviation, in the case of the Bromont facility) reports separately to HQ through its division head. At the same time, GE Canada has a Global Growth and Operations CEO, Elyse Allan, who looks for synergies across divisions and troubleshoots when problems arise. Allan is also a member of the GE Commercial Council headed by GE Chairman Jeff Immelt. Allan's strategy is to look for gaps/opportunities in GE business lines that can be addressed in Canada. In particular, she looks for opportunities that bring GE Canada's advantages to bear in the competition for investment capital within GE.

Approval Process

GE Canada produces an annual growth plan (referred to as the "Playbook") that includes proposals for new investments in Canadian operations based on the gaps/opportunities identified. The proposals are pitched by Canadian division heads to HQ division executives, but approvals must also be "blessed" by the global Chairman and Vice-Chairman. The Canadian CEO socializes the ideas informally at HQ, in her role as a member of the Commercial Council and during the annual visits by the GE Chairman and the bi-annual visits by the Vice-Chairman. The role of the Canadian CEO is to "grow the business" in Canada, and Allan views this as one of her key responsibilities.

1. Including GE Capital, now being divested.
2. Unless specified, all amounts are in Canadian dollars.

Key Success Factors

Ross Hornby identified a number of factors that were key to the successful attraction of the Bromont R&D mandate:

- Track record – the plant's track record of innovation and productivity, supported by a strong local management team.
- Relatively immobile talent – based on staff's strong preference for the French-language milieu and high quality of life of the region.
- Flexible labour force – relative to unionized U.S. competitors.
- Proximity – to the Montreal aerospace cluster and the GE aviation supply chain that includes plants in Vermont and Ohio.

Role of Governments

Hornby stressed the importance of the Government of Quebec and (especially) Investissement Quebec as partners in developing and financing the proposal. The federal government's Industrial Regional Benefits (IRB) program allowed GE to use its Bromont investment to qualify as credits against defence procurement contracts. Hornby also observed that the federal government's 1986 decision to use the CF-18 maintenance contract as a catalyst to build the Montreal aerospace cluster helped make the Bromont R&D mandate possible.

Finally, Hornby noted that recent changes to the federal tax credit for Scientific Research and Experimental Development (SR&ED) that excluded capital expenditures made the program less helpful in attracting investment. Further, Ottawa's Strategic Aerospace and Defence Initiative (SADI) funding in the form of loans was largely unattractive because of the negative impacts of additional debt on firms' balance sheets.

Foreign Investment Attractors

Throughout the interview, Hornby pointed to a number of Canada's general foreign investment attractors. Talent was a key factor for the Bromont facility and other GE Canada successes, and the R&D ecosystem and accompanying Montreal aerospace cluster were also very important. Another major aspect was proximity and integration in the GE aviation global supply chain. Finally, government programs — especially the ability to use the investment to discharge GE's responsibilities regarding the IRB program — helped make investments by GE Canada a strong contender in the internal competition for investment capital at GE.

IBM Canada

IBM Inc. is a diversified information technology (IT) and technological services company. It provides value-added, integrated services comprising industry expertise, business services, software, systems, research and related financing. With the exception of its original equipment manufacturer (OEM) technology business, IBM's major customers stem from seven broad industry groups: financial services (banking, financial markets, insurance), the public sector (education, government, health care, life sciences), industrial (aerospace and defence, automotive, chemical and petroleum, electronics), distribution (consumer products, retail, travel and transportation), communications (telecommunications, media and entertainment), energy and utilities, and general business (cross-sector representation of intermediate-sized large enterprises and mid-market clients). The company is composed of five business segments: global technology services, global services, software, systems and technology, and global financing. Its major markets include the G7 countries, the Caribbean, and several European countries.

IBM Canada Ltd. is a leading provider of diversified advanced IT products and services. IBM Canada generates value by developing and implementing integrated IT solutions based on industry-leading software, cloud services, microelectronics, and technology-based solutions to help businesses and organizations maximize operational efficiencies. Its offerings cover a full range of legacy and new applications and solutions, as well as access to IT and business skills, innovative solutions and industry insights. Headquartered in Markham, Ontario, IBM has sales locations in major cities across Canada. The company also has research labs focused on e-business innovation located in Burnaby, BC and Toronto, as well as world-renowned software labs across seven major cities in the country. In addition, it runs its manufacturing and development facilities in Bromont, Quebec. Paul Boothe and Jean-Louis Schaan conducted the interview with Pat Horgan, Vice President Operations at IBM, on March 30, 2015.

Smart Computing for Innovation Mandate

IBM Canada won the mandate to develop the Southern Ontario Smart Computing Innovation Platform (SOSCIP), a new kind of collaborative research initiative between the private sector, the government and universities. SOSCIP was designed to use state-of-the-art high performance computing technology to address urgent economic, social and technological challenges.

The project was led by IBM Canada and involved seven partner universities. Forty research projects were launched together with 30 projects with SME partners using matching funding from the Ontario Centres of Excellence. The project was launched April 10, 2012, with an extendable three-year mandate and was the first of its kind for IBM Canada.

Strategy

For a number of years, IBM Canada did not pitch to head office for production or R&D mandates; this changed as senior executives returned to Canada from foreign postings and realized that, unlike the countries they had been in, Canada did not compete aggressively for mandates even though the country had excellent capacity. These executives set as their goal to develop Canada's value proposition in line with IBM's corporate growth objectives. In practice, this meant working on IBM's next global mission, "Smarter Planet." IBM believes that society can be a "smarter" manager of planetary resources, and that Canada has assets (such as fresh water and healthcare systems) that can be aligned with the theme.

IBM Canada's strategy was based on a new model the company called "the consortium." IBM Global spent $6 billion per year on R&D, with an increasing share in the form of collaborations. The SOSCIP proposal consisted of research projects (water, energy, cities and health) involving IBM researchers, university professors and post-doctoral fellows, and partners in the private sector. A key objective was to align with the IBM commitment to open-source innovation. IBM is a strong believer that the PC market is moving towards the open-source paradigm, and the proposal ensured that all the technology went to its partners.

To support the new strategy for growth in Canada, IBM Canada worked on building internal skills needed to support its execution. The company wanted to work on a vision around the digital economy and the skills of the future. Data and analytics were central to this vision. Big data was the "new natural resource" that IBM needed to be mining to be significant in the future (at national, provincial, and organizational levels). Using data would require strong skills to identify patterns as well as connections among patterns and to develop such skills across fields.

Approval Process

IBM Canada is the only IBM subsidiary reporting directly to head office. The SOSCIP project went to the head office Investment Review Board because the investment required was above the decision limit for Canada. The Board determined that the project was unique and did not fit IBM's normal capital expenditure approval processes. It had no direct competition among IBM subsidiaries in other countries.

The approval process was managed in two phases. First, the proposal was socialized with key stakeholders to gain their support. Second, a concrete proposal with a sound business case and strong and committed partners was developed and presented.

Different levels were involved in the decision-making process and the goal was to make sure that each level supported the project. Socializing the idea required getting buy-in from lead partners in Canada, and the support of top management at head office. It was important to secure commitment from the top; therefore, the engagement of the CEO, the CFO and the Chief Counsel was actively sought. A key factor at the concept development stage was the need to be in line with IBM's open-source principle.

Once the concept was approved by the HQ investment review committee, the Canadian team developed the full business model — leveraging IBM's global networks and capabilities — and worked at securing federal and provincial government support. Government support was seen as a critical ingredient of the final approval of the investment proposal.

When the proposal was ready, the request was made by Bernard Myerson, IBM's Chief Innovation Officer, on behalf of IBM Canada. Myerson had visited Canada to be briefed as the proposal was being developed.

Key Success Factors

- Vision – the proposal needed a fully articulated vision of the future and the model for collaboration.
- Leadership – the proposal required select champions at IBM and at universities to build commitment and support.
- Support across organizational levels – it was important to engage and educate key stakeholders at all levels of the organizations regarding the project and the context.
- Public and private collaboration – Partnerships across sectors of society constituted a critical element of the proposal; they were needed to attract global investment.
- Business case – the business case needed to show the benefits of the proposal for all partners.
- Communication strategy – strong, ongoing communications were needed both internally and with partners and stakeholders.

The Role of Government

Both the federal and Ontario governments played crucial roles in attracting the mandate. IBM Canada was approached by Industry Canada to explore possibilities for cluster development. Industry Canada wanted to know: how can we grow a stronger economy in Canada?

IBM provided a one-page description of its network of cloud centres in Canada and agreed (at the government's request) to build an IT consortium. Once the idea had been tested with potential partners and with head office, it was time to look at government programs. Horgan argued that "if you want to collaborate, you need government on [your] side." To build support at HQ, it was important to have a significant sum from the government as a sign of commitment.

Foreign Investment Attractors

Horgan identified a number of key factors that make Canada an attractive investment destination for multinationals. First, "Canada delivers": IBM Canada had developed a reputation for strong capabilities in execution and achieving objectives. Second, Canadians work effectively in partnerships, and in particular, with government partners. Third, IBM Canada relies on a strong local higher education system. A potential weakness in Canada is the lack of a global mindset. In Horgan's experience this was addressed at IBM Canada by bringing home Canadians with international experience

Siemens Canada

Siemens AG is a German engineering and electronics conglomerate operating globally with core activities in the fields of energy, health care, industry and infrastructure. Siemens is Europe's largest engineering company and manufacturer of medical diagnostics equipment. Seimens AG is headquartered in Munich, Germany. In 2013, the company had global revenue of €80.30 billion and net income of €4.284 billion. Siemens AG employs 362,000 people worldwide.

Siemens Canada Limited is headquartered in Oakville, Ontario and has more than 60 facilities across Canada. The President and CEO is Robert Hardt. Siemens Canada is involved in a number of lines of business, including communications systems, power generation, industrial and building automation, medical technology, railway vehicles and water treatment systems. The company is organized into four divisions: Energy, Infrastructure and Cities, Industry, and Health Care. The firm employs about 4,500 people in Canada. Paul Boothe and Jean-Louis Schaan interviewed Robert Hardt in his Oakville office on March 31, 2015.

A Smart Grid Global Mandate

An example of global mandate attraction by Siemens Canada is the Smart Grid Centre of Competence, opened in January 2013 in Fredericton, New Brunswick. The Centre is a product of Siemens Canada's multi-year partnership with NB Power and will initially employ 23 people. Siemens Canada will invest in technology for grid modernization in order to help businesses and residents manage demand effectively. Using their Smart Grid Compass methodology, Siemens Canada will help NB Power develop its energy road map for the future.

Strategy

Hardt explained that Siemens Canada's strategy is to identify and develop opportunities to contribute to Siemens AG's global priorities. The company identifies opportunities by matching its capacities to develop products and services built on its talent and technologies, which have been developed according to local or international demands. The search for opportunities is continuous and is embedded in the firm's "Country Opportunity Plan" (COP) that is reviewed on a monthly basis by its senior managers and top talent. The review results in decisions regarding the priority and pace of work on potential opportunities, and allocates required development resources. Where the public sector is involved, the review also gauges the degree of government buy-in for the opportunity. When a proposal is judged to be ready, it is presented by the Siemens Canada CEO to HQ senior management through a formal process to win management's notice/approval and any resources required.

Approval Process

While some Siemens regional groups look to HQ for direction, Siemens Canada has earned permission to "think big" based on the CEO's experience and relationships with HQ executives, and the Canadian firm's track record of successful implementation of projects.

The first step in the process is the project proposal. The proposal describes the project, defines the business rationale and lays out the business plan, including market data and executive management strategy. A business unit in HQ reviews the proposal and provides approval to move to the next step of project development. If an acquisition is involved, due diligence is initiated. The next step is the investment application to HQ senior executives, who are asked for a go/no go decision, and provide milestones and key performance indicators for

approved projects. Alignment with Siemens AG's global priorities is critical for approval.

A key factor in gaining approval is preparing the environment though informal discussions and information sharing with HQ and regional staff, and through an annual presentation to HQ senior executives responsible for the larger COP. In the case of projects that include work across Siemens subsidiaries, early and extensive consultation is also valuable.

Key Success Factors

Robert Hardt identified a number of factors that are critical to facilitating projects' approval:

- Bottom-up process – using a bottom-up process allows Siemens Canada to gain a perspective on cutting-edge possibilities based on the views of front-line talent. The review and oversight by senior management and top talent ensures senior executive focus and appropriate resources for development.
- CEO access to HQ – formal and informal networks at HQ and a personal track record of experience and success improves the ability of the CEO to "prepare the environment" for project proposals.
- Track record – a track record of successful implementation of projects increases HQ executives' confidence and reduces the perceived risk of proposals.
- Lean organization – maintaining a reputation as a lean organization assures HQ executives that only sound proposals will be put forward, and scarce capital investment funds will not be wasted.

Role of Government

Hardt suggested that governments should adopt a new approach to investment attraction by actively looking to partner with leading firms, rather than waiting to be approached. His experience with the federal government's foreign investment review process was positive, with timely and efficient decision making. One problem he identified was the difficulty Siemens Canada has encountered in navigating the myriad of government departments and agencies at various levels. Hardt felt Quebec was a best-practice example of a one-window approach to investment attraction by Canadian governments, just as Mexico was regarded as a best-practice example at the national level.

Foreign Investment Attractors

In the course of the interview, Hardt pointed to a number of factors that could be considered as foreign investment "attractors" for Canada. Most fundamental for foreign decision makers was Canada's political and financial stability. Proximity to U.S. markets was also important, along with the logistics infrastructure to deliver products and services to those markets. Another important factor was Canada's R&D infrastructure, especially the cluster of universities and colleges in Southern Ontario that are available to collaborate with firms looking to develop and test new products and services. The products of such collaborations are usually high in value and largely destined for export markets. Relatedly, this cluster also produces the talent the forms the core strength of Siemens Canada and other global firms located in the area.

Toyota Motor Manufacturing Canada

Toyota Motor Corporation (Toyota) is a leading Japanese automotive manufacturer headquartered in Toyota, Aichi, Japan. The company engages in the design, manufacture and sale of motor vehicles, including sedans, minivans, compact cars, sport-utility vehicles, trucks, and related parts and accessories. Toyota sells its vehicles in more than 170 countries and regions worldwide. The company recorded revenues of US$205 billion in 2014, and employs almost 340,000 people worldwide.

Toyota Motor Manufacturing Canada (TMMC) manufactures automobiles in Canada. The company was incorporated in 1986, and operates as a subsidiary of Toyota Motor Corporation. TMMC is known as the first Toyota plant in North America and the only automotive manufacturer in Canada to assemble both advanced technology hybrid (the Lexus RX450h) and electric (the Toyota RAV4 EV) vehicles. TMMC operates a plant in Cambridge, Ontario that manufactures the Lexus RX350, the Lexus RX450h and the Corolla Sedan; another facility in Woodstock, Ontario focuses on producing the Toyota RAV4. TMMC employs over 8,000 team members. Paul Boothe and Jean-Louis Schaan interviewed Ray Tanguay, outgoing Toyota Canada Chairman on March 18, 2015.

A New Production Facility in Woodstock

An example of successful intra-firm competition at Toyota was winning the mandate in 2005 to build a new 1.8 million square foot facility in Woodstock, Ontario to produce the RAV4 SUV.

Strategy

Toyota's global strategy is developed around short-, medium- and long-term plans. However, when it comes to expansion plans, Ray Tanguay suggested that the key is to focus on the medium-term plan (e.g., the next five years) in a specific region.

A guiding principle underlying plant location globally is the firm's preference to "build where you sell." In the North American region, given that the United States is the largest market, U.S. plants have a built-in advantage. However, Canada (with its historically strong infrastructure) and Mexico (with its low wage costs) can compete.

Strategic decisions, such as where to locate within a region, rely on five criteria: demand, supply, risk, return and salesmanship. The analysis is based on the evaluation of the strategic attractiveness of a business opportunity in relation to the location of the capabilities and resources needed to capitalize on the opportunity. Toyota HQ looks for the best arrangements to meet gaps in supply based on least cost and demand for capital, and best ability to plan and execute a project.

Strategic analysis begins with a review of the product portfolio – what are the gaps in Toyota's current mix in the region? What are the capacities? What are the regional finances (i.e., can expansion be financed without a call on HQ)? What are the engineering resources available? The analysis also compares the import versus local production options.

If no regional management group is pitching to grow, HQ will decide. However, if a country sees a gap it can fill effectively, it can make a pitch. In the case of the Woodstock expansion, it was important to fit into the corporate strategic agenda. Evaluating the fit required research and conversations with North American and HQ executives to understand the company circumstances and the growth potential.

Approval Process

Ultimately, approval for expansion decisions resides with the Board of Directors at Toyota HQ. As a result, the marketing approach developed by Ray Tanguay and his team targeted three levels: the North American executive team, the Japanese top management and the Board.

The Woodstock proposal was in competition with an existing Indiana plant and a U.S. greenfield expansion. At the time, Mexico was viewed as too risky. The goal of the Canadian team was to clearly communicate to the Japanese parent company that Canada had a strong desire to get the investment. As Tanguay put it, "The message needs to be sent that Canada supports more investment." To be equal to the United States, given Toyota's "build where you sell" preference, Canada needed to be better. Hence, the team needed to explain Canadian labour relations, the healthcare system and other factors. To do this, Tanguay spoke personally with everyone up and down the line to convince them that Canada had the best proposal. This marketing effort included going to the Chair of the Toyota Board, and to every single Board member.

All the senior executives in this decision-making process (from North America and HQ, including the Chairman of Toyota) were invited to see the land themselves and gain an appreciation for the innovation infrastructure in the region (Perimeter Institute, University of Waterloo, Communitech, etc.). These on-site visits helped crystalize the proposal and management's recommendation.

Key Success Factors

Ray Tanguay identified the following factors as critical in winning the mandate:

- Reputation – Canada had a strong reputation at Toyota for its quality of production (it has received many awards, and opened the first Lexus plant outside Japan) and its ability to successfully plan and execute expansions.
- Innovation – Canada's track record regarding innovation at TMMC (as the owner of 22 patents) and its leading-edge expertise in traceability were key factors in selling the Chairman of the Board (who had a scientific background).
- Strong financials – the proposal offered a winning after-tax ROI and a quick payback (a key metric) of three to five years. It was self-financed from the Canadian balance sheet. Execution risk was minimized by using experienced workers and management from nearby Cambridge plants.
- Strong project management – from the idea identification to the business case preparation to the selling of the project to the highest levels of the corporation.
- Canadian CEO – Tanguay believes that subsidiaries of multinational companies led by a Canadian CEO who wants to build the business in Canada are better positioned to win regional/global mandates.

The Role of Government

Different levels of government can help at different stages of the process. Tanguay believes that politicians need to visit the headquarters of multinational companies to keep educating senior executives about Canada's competitive advantages to maximize profits after tax.

To do this, political leaders need to be well versed in specifics and able to answer any difficult questions that might arise. However, the efforts must be led by the Canadian CEO.

Tanguay suggested that the timing of when to involve whom in the process is a critical decision for the top management team. Government is best involved when trying to finalize the decision by helping to improve the ROI and demonstrate its commitment to the investment. Government must communicate its strong desire to have the investment. Governments can also help by providing accurate and timely information. The Ontario government had valuable data and a good inventory of land available that helped resolve the question of land quickly. In Toyota's experience, Promexico is much better at selling Mexico than Canada's federal and provincial governments are at selling Canada. Promexico acts as a single window to put managers in touch with key officials and suppliers.

Foreign Investment Attractors

A key argument in winning the mandate was the location of the plant in the heart of auto ecosystem in North America. Tanguay had prepared a one-page worksheet for a presentation to Toyota's top management about why Canada was preferable to Mexico or the United States. The worksheet was organized around the strengths of manufacturing in Canada stemming for lower labour rates than the United States, lower hourly healthcare costs to employers and lower corporate taxes. These strengths were built on higher labour quality and length of service in manufacturing, lower energy costs than Mexico and strong support for advanced manufacturing through government incentives.

Conclusion

Although the firms we examined produced very different products and services, a number of important common elements emerged. The first was the role played by Canadian senior executives as champions of their proposals. In each case, senior leaders were focused on building their business in Canada. The second common element was the strong track record of the Canadian firm. This track record gave HQ decision makers the confidence that, if accepted, the proposals would be successfully executed.

The proposal's fit with the firm's global plans and aspirations was a third common element of the cases we examined. Canadian executives ensured that their proposals were well aligned with the overall direction of the firm and, in some cases, filled gaps in the execution of the firm's global strategy.

Canadian executives worked hard to socialize the proposal at all levels, up to and including HQ. All of the cases we examined were based on a compelling business case that leveraged the Canadian advantages such as location, strategic clusters, and supporting public policies.

A final common element was the involvement of governments as committed partners. While competitive financial support was important, it played a role relatively late in the process. Perhaps more important was governments' support of Canadian CEOs in developing and marketing their proposal at HQ.

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