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NETWORKING INTERNATIONALLY: THE WAY OF THE FUTURE

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ABSTRACT

Like numerous high tech parks around the globe, we, at the Quebec Metro High Tech Park (QMHTP), were conscious of the importance of opening up to world in order to keep up with the latest trends and to create opportunities for our companies. In recent years, the QMHTP management has decided to take action: we hired an international marketing specialist, we organized last year's IASP World Conference and we developed formal ties with foreign parks. This paper aims at sharing the Park's initiatives towards internationalization. Prior to discussing these initiatives, it presents the context in which the Park was created. Subsequently, the bilateral and multilateral approaches used toward reaching internationalization are discussed and, lastly, we introduce the concept of "innovation process" and its relation to the Park's international cooperation.

WHERE ARE WE COMING FROM: THE CONTEXT

The Quebec Metro High Tech Park (QMHTP) was the first technology park of its kind in Canada. In 1988, the Park was officially created after years of discussions among the business, research and political communities. In order to present the Park's history, it is first necessary to describe the context in which the Park was created. The following will explore the socio-political situation before the 1980's, the 1983 Regional Summit, and the positioning of the region in terms of technology.

The 1960's were characterized by the Quiet Revolution, a period of intense social change, of modernization of Quebec and of profound redefinition of the role of the Quebec government. After years of isolation and social conservatism in the 50's, the government of Quebec initiated a series of reforms in the 60's and early 70's that substantially altered social and business conditions. The province's capital, Quebec City, being the seat of the government, was at the heart of the aggressive development undertaken by the provincial government. As the government was expanding, the Quebec City region experienced economic growth, which reached its highest point in late 1970's. The region was, however, strongly affected by the downward trend in the economy at the beginning of the 1980's. As in other regions of the province, high levels of inflation and unemployment prevailed. Unemployment particularly hit the region's economy as the number of jobs created became drastically stagnant. The government, being the main employer in the region, ceased its expansion, ceased to hire in large numbers, and it became obvious that the region's economy was too depend on the government.

During the 80's, the region was also affected by a new phenomenon: "the brain drain". The region's university graduates, especially those specialized in sciences, were leaving the region to go to bigger economic centres like Montreal. Quebec City had major research centres and a university offering valuable programs, but it could not compete with other cities due to the limited number of opportunities. Moreover, while Université Laval teachers had large numbers of articles published in prestigious magazines which were renowned for the quality of their content, very few of them actually patented their ideas and products or started businesses.

1983: REGIONAL SUMMIT

In an attempt to stimulate job creation and to diversify the region's economy, university representatives, economic development authorities and leaders of the scientific community organized a summit, which would become the turning point in the recent history of technology in the region: the 1983 Regional Summit. For the first time, leaders collectively recognized technology as a major regional strength. The summit launched a concerted movement among the research centres, namely: Université Laval's science departments, the INRS[1], and the CRIQ[2].

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[1] INRS: Institut national de recherche scientifique. Branch of Université du Québec, this Institute is involved in different sectors such as water, earth and environment; energy, materials and telecommunications; human, animal and environmental health; urbanization, culture and society. www.inrs.uquebec.ca

[2] CRIQ : Centre de recherche industrielle du Quebec. This public research centre carries out applied industrial research projects for its clients on a risk-sharing basis. www.criq.qc.ca

It was at the summit that we laid the foundations for the creation of the Quebec Metro High Tech Park. "The Park has been created to reinforce the links among the financial, business and university communities while promoting entrepreneurship and improving scientific and technological infrastructures in the entire region".

The QMHTP, therefore, was the centre of the 1983 action plan. In 1984, the provincial government passed a law which set the creation of Park in motion. Three years later, once a consensus among the municipalities involved had been reached, the Park was officially opened.

THE PARK'S HISTORY

In 1988, the Park was a state-owned organization. It was built around two major research centres: the CRIQ and the scientific complex[3] of the Government of Quebec. The High Tech Park occupies a truly strategic location. With Université Laval and its research centres only five minutes away, the Jean-Lesage International Airport approximately ten minutes away, and downtown Quebec only a short commute of fifteen minutes, the QMHTP is at the heart of the metropolitan Quebec. The concentration of research institutes in the Park and the Park's formal association with Université Laval make it a unique concept. While other technology parks existed in Canada, the QMHTP was the first Canadian technology park of the aforementioned nature.

In 1999, the Park was turned into a private not-for-profit corporation. A new management team was put into place and the Park experienced constant growth. From 40 companies in 1999, the Park now consists of 85 companies, which operate in the following sectors of activity:

- Optics and photonics
- Biofood and biomedical
- New materials
- Environmental technologies
- Information technologies
- Forestry

Most of the companies are local start-ups that are owned by local interests. The Park's management team provides assistance to companies seeking funding, qualified human resources, business opportunities and new markets. In an effort to help companies developing new markets, the QMHTP has developed the services it offers and now has cooperation agreements with other science parks throughout the world. Further attention is devoted to the Park's foreign partnerships in a later section.

Before elaborating on the Park's current orientation and services, we will present, in the following section, major regional research centres, companies and other technological initiatives that led to the creation of the techno-region.

[3] Scientific complex of the government of Quebec host the research centres of different government ministries such as agriculture, environment, transport, etc.

A CONCERTED EFFORT: THE PARK AND OTHER ALLIES

Although the Quebec Metro High Tech Park was at the centre of the 1983 Summit, other projects were identified. For instance, in 1985, the INO[4] and the CQVB[5] were inaugurated. In 1987, the CEFRIO[6] was created, followed by the ITM[7] in 1989. Each centre was specialized in a specific field and their aim was to further define the region's high tech positioning.

At the beginning of the 1990's, other valuable projects were announced. The Centre Hospitalier de l'Université Laval's research centre announced a $30 million investment for the creation of a new laboratory. A vaccine developed in the hospital's labs led to the creation of a new company, Biovac[8], which later produced its vaccines in the QMHTP. The 90's were characterized by the development of the geomatics and environmental sectors. The establishment of Forintek, a leading wood research institute, Envirotron and the CDG[9], demonstred the expansion of the environmental and geomatics sectors.

In order to support the economic development of the region and to provide information to innovation centres, the Greater Quebec Economic Development Corporation (SPEQM) was created in 1989. Its purpose was to foster the growth of the regional economy and, more specifically, one of its mandates was to encourage the emergence and development of technology companies. Today, the SPEQM still operates and has identified eight major sectors of activity of which seven are related to technology. SPEQM has developed many partnerships with other economic development organizations such as business incubators and the QMHTP, and it can refer entrepreneurs to venture capital firms.

In 1994, Innovatech, a government venture capital corporation specializing in pre-startup and startup financial assistance to technology-intensive companies, created a new division dedicated to the Quebec City region: Innovatech Quebec. The establishment of Innovatech Quebec was definitely a sign that there was a critical mass of innovation projects in the region. Within less than ten years, Inovatech Quebec has invested more than $150 million in startups.

Overall, the above well illustrates the concerted efforts that have been deployed by economic development authorities to diversify the economy vis-à-vis technology. Now that the context in which the Park was created has clearly been explained, the following will discuss the QMHTP's priorities in the coming years.

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[4] INO : Institut national d'optique. The National Institute of Optics is a world-class centre of expertise in optics and photonics that assists companies in improving their competitive edge and developing their business. www.ino.qc.ca

[5] CQVB : Centre québécois de valorization des biomasses et des biotechnologies. The mission of this organization is to stimulate innovation and technology transfers from universities to private companies in the bio-industry. http://www.cqvb.qc.ca/

[6] CEFRIO : Centre francophone de recherche en informatisation des organisations. This organization focuses on three fields of knowledge: corporate competitiveness using information technology; transformation of public services using information technology; knowledge management. http://www.cefrio.qc.ca/english/indexAccueil.cfm

[7] ITM : Institut de la Technologie du Magnésium. This company has developed the unique expertise required to design, prototype and cast Magnesium. http://www.intermag-modelex.com/default.htm

[8] Biovac became Biochem Pharma and then was bought by Shire Pharmaceuticals Group plc. http://www.shire.com/default.asp?wci=main.

[9] CDG: Centre de développement de la géomatique. The Centre for the development of Geomatics acts as a catalyst between the key players of the sector. http://www.cdg.qc.ca/anglais/index.html.

INTERNATIONAL PARTNERSHIPS: THE STEPS TOWARD INTERNATIONALIZATION

In 2000, the QMHTP's board of directors hired an international marketing specialist to develop a strategy to internationalize the Park's networking and to support the tenants in their efforts toward international partnerships. It was clear for the board that especially our SMEs needed close accompaniment in their international deployment. The board was aware that the Park's IASP membership was a tremendous opportunity to develop its network among the most dynamic parks around the world. All these steps aim also at fostering international joint ventures and R&D partnerships or technology-transfer between our tenants and those at other STPs.

On a regional level, internationalization was a part of our strategy to become recognized as economic development leaders able to connect our local high tech companies to a global network. It was also a way for the Park to increase our local, national and international visibility knowing that Canadians usually tend to be low profile on the international scene. Finally, our board of directors felt there might be opportunities in terms of international exchanges involving technology Parks and universities.

After consulting our tenants, we realized that most of them had a very good knowledge of the US market. They usually consider the Canadian and US markets as one big North American market. Our companies belong to US trade associations and scientific communities. They participate in the biggest trade shows and scientific conferences south of our border; and many managers, researchers and other professionals obtain masters and PhDs from US universities. All these facts indicate that US/Canadian networking is based on long-term relationships. Therefore, by taking all these elements into consideration, we concluded that we could meet the needs of our companies by focusing on other regions of the globe.

In general, our tenants were looking for:

- New partners, of course, to develop international markets
- New products to add to their product lines
- Contacts with research centres in their area of activity for possible joint work in R&D
- Licenses, technologies or even companies to buy out
- Contacts with foreign sources of venture capital
- New ideas or ongoing research projects, as well as new employees or trainees from abroad
- And finally, strategic locations for future subsidiaries.

From there, we sought partners by visiting almost every STP web site on earth and by questioning our tenants on their knowledge of interesting clusters in their sector. We narrowed our search to strategic countries and regions that we could work with on a win-win basis. Our criteria were: similar sectors of activity, similar values and types of organization, and similar Park and city sizes. Seven years ago, the Park had had its first foreign partnership experience with a European STP, but the results were disappointing due to the lack of similarity between the two parks. This time, the task was not easy since the board was looking for a maximum of ten partners and expected concrete results after a two-year period.

BILATERAL AND MULTILATERAL APPROACH

At a first step toward the development of these partnerships, we contacted potential partners to discuss our proposal. This proposal was strongly inspired by the ``shopping list`` of needs we had collected from our tenants and by our criteria. With a few of our prospects, the initial contacts discouraged us from going further; and with others, our objectives proved to be incompatible. After the IASP World Conference in Bilbao, we visited a few STPs in Europe and we finally signed our first partnership agreement in the subsequent weeks. Meanwhile, we received some partnership propositions from foreign STPs but, due to our different objectives, no commitments were made except in one case where, by coincidence, we also had planned to contact them to talk about a partnership.

We currently have bilateral partnerships with Hsinchu Science-based Industrial Park in Taiwan, Savoie Technolac and Technopole Anticipa in France, Taguspark in Portugal, UCL Science Park in Belgium and Warwick University Science Park in England. All these partnerships have been signed over the last 18 months by keeping in mind the main objective: increasing communication and cooperation between companies, research centres and universities. We agreed to exchange information about our tenants, to find new opportunities for both parties and to work on a university student exchange program where students would study abroad and also get work experience in a company located in our respective STPs.

During this 18-month period, we were involved in a multilateral partnership (the E+ project) that included Environmental Park in Italy, Neopoli in Finland, Technology Park Western Australia in Australia, Stockholms Teknikhöjd AB in Sweden and ourselves the Quebec Metro High Tech Park in Canada. This project focuses on the environmental sector and its innovations. The five partners wish to increase cooperation between their companies, research centres and universities through a better knowledge of industries in each of the regions. Moreover, to achieve this goal, partners are currently working on the implementation of an intranet system that would only be accessible to their regional partners for the moment. We already have had meetings with researchers and business people in three countries and, after the present conference, we will be in Turin where, again, we will meet potential partners for Australian, Canadian, Finish or Swedish companies and research centres.

WHAT HAVE WE ACHIEVED AS RESULTS FROM THESE PARTNERSHIPS?

Of course, we should view this primarily on a long-term basis, but so far we are satisfied by what has been achieved. Our board of directors is pleased that our international efforts led to real long-term relationships between international partners that are looking for win-win cooperation, not just signatures on cooperation agreements.

First of all, those agreements that were signed allowed us to get to know park managers who are facing the same challenges and problems that we are in Quebec City. In order to keep our cooperation agreements alive, we have scheduled frequent phone conversations and exchanged e-mail on a regular basis.

Secondly, we exchanged information about management of parks as well as on our tenants, their products, their markets and, more importantly, we try to put them in contact with each other when it is relevant.

Thirdly, in certain cases we wrote about our partners in internal newsletters to communicate the existence of the agreements and the possibilities attached to them. This was designed to promote our partners among businesses and research centres as locations of interest to do business and to find partners.

Fourthly, in collaboration with partners we organized a seminar about opportunities in foreign markets not only for our tenants but also for companies located throughout the whole region.

Fifthly, we benchmarked our financing, practices, policies and efficiency so as to compare these against those of our partners.

Finally, in the last few weeks we started to work on a student exchange program in which Université Laval would welcome students from our partners' regions for a year and we would find them summer jobs in our companies. The idea behind this is, obviously, to allow students from the Quebec region to get the same treatment abroad.

CHALLENGES

On the other hand, we have faced real challenges over the last months to justify the energy spent on our partnerships, to get the resources needed, to keep in touch with certain partners and, lastly, to adjust our mutual priorities. As in every organization, human and financial resources are limited and most of the time we look for short-term results when allocating resources. Regionally, with local partners, we had to position the QMHTP in the economic development organization chart and justify our international efforts to network companies or research centres since other organizations were also supporting companies in their internationalization projects.

Another big challenge was communication between partners. We all have a tendency to think that if we speak the same language or we can switch to a common language (i.e. English) we will understand each other without any problem. As most of you know, this is not true. Language has little effect on communication skills. The cultural dimension is much more important than words and a good example is the culture pertaining to the Internet. For North Americans like us, a quick reply to an e-mail is very important even if it is just to say ''I got it, I will answer you in few days.'' In other countries, people prefer to wait before replying to messages. E-mails are considered more formal and people tend to put them aside for a few days or even weeks before answering them. All this comes down to our conception of time, and reminds us that time is a key factor in intercultural communication. Even if we all use Microsoft products, read the same news in magazines and know the same gurus of economy, we all have our own local way of doing business and of communicating. We have to know and to understand these differences.

INNOVATION

What is the link with innovation, you may ask? To get innovation in a region, you need labs, researchers, entrepreneurs and funding, of course. But what are the ingredients for innovation? First of all, innovation can come from problems or even chaos. It can come from a need for improvement but also from the motivation to be better or, in certain cases, from the will to survive.

Innovation comes from creativity, and creativity is the discovery of new connections between ideas, materials, functions, problems, and such like. Innovation is not limited to the product itself but has to be seen in a wider picture including manufacturing processes, customer service, distribution channels, and so forth. To discover new connections, one could imagine new ways of using products or services, look to other industries or areas for inspiration or imagine doing the opposite of what is expected. The stimuli can come from external sources such as trade shows, scientific conferences, magazines, competitors, universities, etc. It can also come from internal sources like employees, especially new staff, stakeholders or other business units or departments.

But inspiration alone is not enough; you also need well-managed information system. A clear understanding of the nature and scope of the problem at hand, of the alternatives available, and of similar experiences both within and outside of the organization are crucial to success.

Creative people are known to have certain traits such as ability to work cooperatively, a keen sense of observation and a wide range of interests. But the key factor is the open-mindedness of people. By teaming-up different people from different backgrounds and cultures and by discerning their capabilities and innovation potential, we will make individual and collective gains. Researchers and managers can be very active on a regional level and many have developed local networks. But, in today's innovative era, one can no longer be cut off from the rest of the world. At the QMHTP, this is what we think is our role: to enhance communication and networking to build-up the spirit of innovation. With the Internet era, inspiration has no frontier and ideas can be found at the other end of the world and may be found where nobody's looking.

The innovation process is the heart of our international networking project. Considering that knowledge grows more or less at the same pace in most of the industrial countries and that more and more developing countries like China, India or South American countries follow the same trend, we, at the Park, believe that SMEs need partners overseas to speed up their growth and become increasingly innovative. Of course, SMEs need to sell their products, but they should also look for products or services to add to their product lines or to their product features. In other cases, they should also be open to licensing their technologies or to looking for licenses they could obtain from foreign partners. Finally, certain companies should sell their patents or should be part of research projects not only with Université Laval or other companies in our region but also with partners overseas.

Furthermore, we would like to encourage existing relationships between research centres and create new collaborations while promoting joint research projects, technology transfers, and exchange programs for researchers. Most of the foreign venture capital funding is currently coming from US firms. However, our companies are always open to diversifying their funding sources.

That is, in short, what our goals are when we think about international partnerships with other STPs around the world. What we outlined here is a vision of the future, a roadmap for the coming years, and a new way for us to better support our tenants and, by extension, the entire region. We really believe that this is a good way to intensify communication, cooperation, partnerships and, we hope, synergy between companies, research centres and universities. Our organizations will be more knowledgeable of foreign markets and it will give them new inspiration in their innovation processes. Finally, we can say without any hesitation that at the Quebec Metro High Tech Park we strongly believe that developing international relations is clearly the way of the future.