

The Montreal Multimedia Sector: A Cluster, a New Mode of Governance or a Simple Co-location?

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The multimedia sector is one of the high-tech sectors that have contributed greatly to revitalizing the economic base of the Montreal region. A relatively young sector, its many applications have created visions of sustained growth, arousing the interest of many public and private actors in the sector. The sector has fulfilled its promises in part and met a number of expectations, to such an extent that for a number of years it actually experienced labour shortage, raiding of workers, high wages, the creation of many firms and significant interest on the part of the financial community. In short, for a few years the sector was an unqualified success.

Unfortunately, today, the reality is somewhat different. Yesterday's euphoria has given way to a certain level of disillusionment as a result of significant changes in the multimedia landscape over the past two years. Today, the multimedia sector is facing many daunting challenges in Montreal, mainly since the Government of Quebec withdrew its support for the sector by eliminating its funding for job creation in the *Cité du multimédia*. The withdrawal of significant government support, which is attributed to the change of provincial government in April 2003, is an important element of uncertainty, one that is exacerbating the difficult economic situation that has plagued the sector since the technological bubble burst in October 2000.

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This paper examines the mechanisms of governance set up by actors in the Montreal region in order to build the foundations of a new industry or what can be called a regional innovation system (Asheim and Gertler 2005). The paper also discusses the factors that helped trigger or motivate the mobilization of the actors involved in creating this sector. In so doing, we try to determine whether the activity observed in Montreal can be considered a *cluster*, a concept which implies important or constant interaction amongst the actors of the sector in order to increase the innovative and competitive capacity of a region or zone (Wolfe and Lucas 2004; Wolfe 2003; Aydalot 1984). We try to determine whether the Montreal multimedia sector has become or is developing into a cluster, as has been observed for various sectors in other countries (Bathelt et al 2004; Cooke 2004) and Canadian regions (Wolfe and Gertler 2004). Increasingly over recent years, there has been interest in policies and practices that can contribute to design innovative and creative cities (Bradford 2003). The social dimensions of innovation and the contribution of associations and community to the innovative process have also been highlighted (Cooke and Morgan 1998; Fontan et al 2004, 2004a) and this process of social or community involvement in sectoral economic policy is of interest to us in the analysis of the Montreal multimedia sector.

Obviously, when we talk about the multimedia sector in Quebec, politics remains a key element in our understanding of sectoral dynamics, while this is less the case in Toronto (Britton and Légaré 2004) or Vancouver (Smith et al 2004). We will show that the governance that has been established in Montreal is rather reactive, i.e. it is the product of a reaction rather than of long-standing, proactive planning, and that it can be considered as joint governance, inasmuch as many social actors are associated in the spatial policy known as the *Cité du multimedia*, as well as the general development of the multimedia sector. We also show that governance has evolved over the years according to information and changes in the environment and that something close to a cluster seems to be emerging in Montreal. Our research highlights the role of various actors in developing governance actions which contributed to the development of the multimedia sector in Montreal, and therefore to the development of Montreal as a Knowledge City.

This paper is divided into four parts. First, a definition of the multimedia sector and the methodology of our research are presented. Second, the concept of governance, a concept that is part of the recent work on local development and territorial or localization issues, is examined; this proved a useful theoretical point of departure for our work. Third, the dynamics of governance and interactions in the multimedia sector in the Montreal region are discussed, particularly the motives underlying the creation of governance, the different actors involved in interactions, their role and the evolution of governance over the years. We demonstrate that the government has been a key actor, through the implementation of many tax measures promoting job creation, but especially through the creation of the *Cité du Multimédia* in Old Montreal. Finally, we conclude by answering the question of whether in this context, the interactions observed between the actors and the governance process have led to the creation of what can be considered a multimedia cluster in Montreal or whether it is a simple co-location of firms.

Questions of Methodology and Definition

Methodology of the Research

As regards methodology, the results presented come from a survey carried out in 2003 in the multimedia sector, mainly in the Montreal region, although a few interviews were conducted with governmental bodies in Quebec City. We interviewed 75 individuals who work in the different spheres of what may be termed a cluster -- i.e. the multimedia firms, as well as venture capital corporations, economic development organizations, educational institutions, different public administrations and consultancy firms. The face-to-face interviews were based upon a semi-structured questionnaire and lasted one and a half to two hours on average. They were fully transcribed and coded with NVivo, under the following broad themes: history of the sector; categories of actors (multimedia firms, venture capital corporations, economic development organizations, educational institutions, public administrations and consultancy); interventions in the sector; networking; localization factors; innovation; human resources management.

The firms were selected on the basis of lists of multimedia firms which are available from multimedia associations². We identified over 640 firms in the Montreal region on the basis of these three specialized lists, but we chose the firms to interview not mainly because of their importance in terms of employment, but rather because of their role in the development of the sector or cluster and in the dynamics of innovation. Independent experts helped us identify these firms and the interviews themselves led to other actors which appeared important to interview. We should also add that documentary research on the sector was also important, especially websites of associations and governmental bodies offering programs for the multimedia sector, but also websites of various firms. We start by presenting a definition of the multimedia sector, since this is often a source of debate.

Definition of the Sector

According to the various definitions put forward, the term 'multimedia' refers to an information technology that can be used to simultaneously manipulate sounds, images and texts using one suite of software interactively (Tremblay et al 2004). By extension, a multimedia product is the result of the integration or transformation of the contents of multiple sources, such as texts, voices, data, images, graphics and video. This integration takes place in environments of interactive communications which can be disseminated digitally using a fixed support (e.g. CD-

2. The lists of Alliance NumériQC, La Cité du multimedia and Le lien multimedia. On the multimedia industry in Montreal, we also consulted: Interactive Multimedia Producers Association of Canada (2001); Manzagol et al (1999); Mission économique de Montréal (2002); Robitaille and Roy (1999) and SECOR (1997). And finally on Paris multimedia: Robitaille and Roy (1999).

ROMs, DVDs, diskettes) or via a network (Internet, Intranet or Extranet).

In Quebec as in Toronto or Vancouver,³ multimedia is a new sector and our Vancouver colleagues actually refer to it as the New Media sector (Smith et al 2004). It has given rise to dozens of new multimedia occupations, i.e. designers, computer graphics designers, writers; however, it must also be recognized that a number of these occupations or jobs strongly resemble those found in the information technology sector. This is true of programmers, who are applying their knowledge in a new sector but whose work is nevertheless quite similar to what it would be in the information technology sector.

Four categories of organizations can be identified as operating in the multimedia sector. First, the multimedia producers, who make up the core of the sector, are responsible for multimedia applications. Second, some firms in traditional sectors (e.g. media, telecommunications, creative industries, advertising agencies) are attributing more and more importance to the development of multimedia applications in the context of their activities, in both areas of production and dissemination of contents. Third, manufacturers of the products and material needed for creation and dissemination, but also for the use of multimedia applications. Finally, an increasing number of representation, training and research organizations revolve around the multimedia sector. In Quebec, the best known organizations are *Alliance NumériQC*, *Réseau Interlogiqc*, *Centre NAD*, the *Institut national de l'image et son*, and the *Regroupement des producteurs en multimédia*. In our research, we centred the interviews of firms around firms that are active as multimedia producers, i.e. the core of the sector, and we excluded telecommunications or advertising firms that might have some activity in multimedia.

In Quebec and Montreal, the last Quebec Government data led to the identification of some 3175 establishments in this sector in Quebec, this sector being of course larger than the multimedia per se.⁴ Amongst these firms, 1791 (56.4 %) were considered specialized and 1384 (43.6 %) non specialized. The specialized group is defined as having over 50 % of their income coming from electronic services and multimedia (ESM) while the non specialized group has less than 50 % in that sector. We should add that some 1284 firms were active only in the ESM sector, according to official data.⁵ According to the same source, 72.5 % were in the Montreal region, 11.4 % in the Quebec City region, and the rest elsewhere in Quebec.

The contours of the multimedia sector are difficult to determine and our 640 firms correspond to very precise criteria, i.e. requiring that the majority of the activity of the firm be in multimedia. Because its boundaries tend to be vague, available statistics on the sector are often partial and incomplete. Some estimate that there are between 1200 and 1500 multimedia firms in Quebec, using a rather

broad definition (Chrétien 2004). This is a clear regression since more than half of the firms appear to have disappeared, compared to 1999 data. The *Institut de la statistique du Québec* estimated that there were approximately 3200 multimedia firms in Quebec in 1999 (Tremblay et al 2004; Chrétien 2004). The sector has certainly experienced a degree of local consolidation of firms through mergers and acquisitions. However, the sharp decline in the number of firms can be explained essentially by the large number of firms that have had to close down. According to data gathered by *Alliance Numériqc* in November 2002, there were between 11,000 and 13,000 jobs in Quebec's multimedia sector, the vast majority in Montreal. Let us now turn to the issue of governance. Our 640 firms are in Montreal and are firms that are mainly active in multimedia; it is from this list that we chose the interviewees.

The Notion of Governance

Today, governance is a well-established term in the vocabulary of the social sciences, and amongst others in the field of the local development of cluster analysis. This interest in the notion of governance can be explained by the recent interest in approaches that consider the importance of the local community as an agent of development and change in our societies, approaches which help to define new forms of public action (Cooke and Morgan 1998). In this new context, the local community has been called upon increasingly to contribute to economic development (Klein et al 2004, 2003, 2003a, 2001). In the face of the failure of former modes of regulation, new approaches to public action have emerged⁶ and governance based on the interaction of a diversity of actors seems to constitute an effective new mode of governance.

This part of the paper is comprised of three sections. The first section proposes a definition and some general considerations related to the concept of governance. The second section examines the reasons behind the appearance and rapid dissemination of this concept in recent years. Finally, the third section sets out a typology. It goes without saying that this part does not claim to be an exhaustive presentation of the concept of governance. Rather the aim here is to establish a few reference points to help define the concept in relation to our research.

Origin of the Concept

Although it was recently re-introduced into the social science disciplines, the concept of governance was first used by the American economist Ronald Coase (1937). The notion of governance was subsequently broadened and took on various

3. Which were also studied in the context of the ISRN (Innovation Systems Research Network) of which this is part; see Britton and Légaré (2004) and Smith et al (2004).

4. Institut de la statistique du Québec (2001), *Rapport d'enquête sur l'industrie québécoise des services électroniques et du multimédia 1999, analyse descriptive*, page 12.

5. ISQ, *Rapport d'enquête sur l'industrie québécoise des services électroniques et du multimédia 1999, analyse descriptive*, août 2001, page 20.

6. "By public action, we mean any operation (facilitation, planning, funding or other) that justifies itself through goals that correspond to the collective interest (beyond the individual interests of a person or organization)" (Grossetti et al Salles 1998) (translation).

meanings. Today, it is part of the family of concepts related to partnership and *concertation*, which were introduced in regional science over the past decades. Governance is not the prerogative of Western societies since developing countries are also interested in it (de Alcantara 1998).

To help us define governance, we borrow the definition proposed by Le Galès (1995: 90):

“... the capacity to integrate, to shape local interests, organizations and social groups and, on the other hand, in terms of the capacity to represent them externally, to develop relatively unified strategies in relation to the market, the state, other cities and other government levels” (translation).

The concept of governance refers to a dynamic process, a construction that is part of a temporal process. This temporal process refers, on the one hand, to a past process of acquiring knowledge, skills and experience and, on the other hand, to the future characterized by the capacity of different agents to anticipate, hope for and thus to create a capacity for achieving future desired states. Nevertheless, this construction does not eliminate the possible divergences of interests between the actors but refers to the means of action that allow them to achieve common goals by finding compromises between sometimes divergent interests and goals. Governance relies on efforts to find a consensus and creates the possibility of taking action in an environment where uncertainty often reigns.

According to Allemand (2000: 16), governance can have two dimensions: “For some, governance contributes to a democratization of government functioning and thus opens the field to initiatives and to new civic mobilizations. For others, it means first and foremost a revaluation of the role of economic actors and reappraisal of government intervention” (translation). As we see below, our research highlights the role of various actors in developing governance actions which contributed to the development of the multimedia sector in Montreal, and therefore to the development of Montreal as a Knowledge City.

Governance is also multidimensional in that its field of intervention may cover a vast range of spatial references. In fact, it is possible to talk about local governance (Stone 1989), metropolitan governance (Bassand 1997), regional governance (Balme 1996), national governance and even international governance (de Alcantara 1998; Valaskakis 1998). These scales are not exclusive and can go beyond the context in which they first emerged. Thus, an issue that seems a priori to be local in nature may change, have national or even international repercussions and the actors may cover different levels.

Governance has also adopted a multiform character. It may associate a variety of actors of different origins. In fact, governance mechanisms may be the result of private organizations (e.g. firms, associations), parapublic organizations (e.g. development corporations) or public organizations (government bodies). It may also include individuals who act in their own name. Precise trajectories cannot be inferred from the type of actors involved. In fact, private actors may espouse actions of general interest while the inverse may also occur. While government action may spontaneously come to mind when the concept of governance is men-

tioned, it actually refers to a broader vision which goes well beyond the various government or spatial levels (Le Galès 1995). In our research, we are mainly interested in the nature of actors.

Basic Postulates

The recent re-emergence of the concept of governance is not a coincidence but rather the result of major changes that are affecting society. According to Merrien (1997), it is possible to identify three postulates or foundations that can explain the increased use of the concept of governance as a tool to better understand the dynamics of economic activity and its localization. The first foundation is the governability crisis. Democratic societies are increasingly complex and differentiated, which makes them difficult to govern. The nation-state no longer controls economic and social phenomena. “The nation-state has become too small for the big problems and too big for the small problems of modern life” (Bell 1996 as cited by Savoie 1995: 6) (translation). It is no longer able to respond effectively to the requests for democracy demanded more and more vociferously by a population whose desire for change is obvious. In this regard, studies based on a regulationist analysis provide a good illustration of these changes (Jessop 1995; Esser and Hirsh 1989).

The second foundation is based on the exhaustion of traditional forms of public action. For long, public action has been exclusively associated with government actions, but from now on this monopoly will be called into question. In fact, the role of the government has changed. Although it is still a key actor, its role has been somewhat reduced and other actors are called in to act with government actors. “It has become just one of many actors, or rather different segments of the government have become actors among so many other actors in the process of developing and implementing policies” (Le Galès 1995: 59) (translation). Responsibilities that were traditionally incumbent upon government authorities are now either left to other actors, shared, or completely abandoned and taken up by other actors. The movement for political and administrative decentralization, deregulation and privatization is increasing the perception that from now on development must be local, self-managed and sustainable for each of the communities of a territory.

The third foundation is the appearance of a political trend that is bringing out a new form of governance, one that is apparently better suited to the context. According to Bagnasco and Le Galès (1997: 37), “the policy here is above all the mobilization of social groups, institutions, public and private actors who are building coalitions, developing collective projects in order to, on the one hand, attempt to adjust to economic changes and, on the other hand, to put up some resistance against the effects of the market” (translation). Thus, the interest is not in government-oriented issues, with its powers and instruments, but rather in alternative mechanisms of coordination between the various groups involved who are likely to influence and sometimes even to thwart government actions. “The issue of governance thus refers to the interactions between government and society

and to the modes of coordination that make public action possible" (Kooiman 1993: 43) (translation), in the spatial policy field as in many others.

Typology of Governance

The different actors who participate in governance (private and institutional actors) acquire a capacity to pool "their resources, know-how and goals" (Stoker 1995) in order to create a social response to a given situation. Pecqueur (2001) points out that governance could be characterized by the key actors of territorial coordination. He proposes a typology comprising three categories, which we use in our own analysis.

The first category is *private governance*. This refers to situations in which an organization is the key actor of the territory. This actor may be a private firm or a government enterprise (crown corporation), or a group of private firms that belong to a formal association with goals that stem from its members' concerns (e.g. sectoral association, chamber of commerce). Pecqueur refers to the latter form as *private collective governance*.

The second category is *institutional governance*. This category may bring together one or more institutions as key actors. These actors may come just as easily from the government sphere (departments) as from a more broadly defined public sphere, for example, from research centres, universities or even non-private associations, and they will work together on various issues -- including spatial, employment or innovation issues.

The third category has been referred to as *mixed, partnership-based or joint governance*. This category appears when private actors and (generally public) organizations co-operate and jointly constitute the key actors of the territory. This form of governance may be more complex because it may include a group of actors with individual and sometimes divergent goals. It is normally more demanding because it may impose concessions and compromises on the participants.

It should be mentioned that these categories are not exclusive. In fact, governance is recognized as a process characterized by its dynamic nature. Thus, underlying the construction of this governance, there are key actors upon whom organizations may be grafted, thus changing the form of governance from the first to the third category. In addition, the initiators of governance can be replaced. Thus, they may give up their place to other actors or be abandoned or even ousted. In fact, the original goals of a process of governance may also undergo changes. These changes may result from environmental stimuli and usually give way to some form of innovation, or social innovation (Fontan et al 2004, 2004a). As shown in our analysis of the multimedia sector in Montreal, the development of the multimedia sector is strongly, although not exclusively associated with the spatial policy of the *Cité du Multimedia*, and is based on some form of mixed or joint governance.

The Construction of Governance in Montreal's Multimedia Sector

Although the multimedia sector is relatively young, it does nevertheless have some history and the current situation is in large part the result of its past and of past governance; we therefore provide some elements of the history of the construction of the more recent joint governance, on the basis of information collected in our interviews. We should first mention the most crucial element in the history of the sector in Montreal, according to all actors, i.e. the arrival of the French game company Ubisoft. The arrival of the French gaming firm Ubisoft permanently upset the Montreal landscape and triggered the construction of governance in the Montreal space. Thus, our starting point will be the establishment of this firm.

We briefly present the main stages of the firm's establishment and the actors associated with it. We then examine the many highly mobilizing consequences of its establishment and their impact on the territorial construction of the multimedia sector in Montreal. On the one hand, mainly under the leadership of local firms, local actors were intensively mobilized and, on the other, institutionalized relations were established between the provincial government and the different actors working in the multimedia sphere. Finally, we provide an assessment of this governance structure and process and its achievements in the Montreal space. This analysis is based on information gathered in 75 interviews conducted in the sector, as well as on archival documents (general and specialized press articles).

The Role of Ubisoft

The arrival of the French firm Ubisoft⁷ in the Montreal region was an important milestone in the development of the city's multimedia sector. The firm, which specializes in entertainment, more specifically recreational games that can be used on different consoles, was looking for a location where it could set up in order to position itself in the North American market. Although the firm's establishment was an important element in the construction of this sector, it would be wrong to credit it with the sector's birth. In fact, prior to the arrival of Ubisoft, a number of firms already existed, but the sector was viewed as marginal and enjoyed little recognition at the various government levels.

Sylvain Vaugeois, the well-known Quebec lobbyist, was the instigator and promoter of the project to establish Ubisoft, a project known as the *Plan Mercure*. Instead of providing financial support to firms through tax credits or large investments in their fixed assets, the plan proposed that the government invest in the labour force (\$25,000 annually per employee for five years) in the promising multimedia sector. The *Plan Mercure* was presented to the provincial government but received little support because it was seen as too expensive from the point of view of public finance.

7. The firm was founded in France in 1986.

Despite this, Vaugeois went to Paris of his own accord to meet with Ubisoft's senior management. Attracted by this tempting offer and under the impression that it came from the government and involved a firm offer of partnership, Ubisoft's representatives made an exploratory trip to Quebec. During their visit, they were astonished to discover that this was not the case. Embarrassed by the media coverage blaming it for the possible failure of Ubisoft to set up in Quebec, the Government of Quebec met with Ubisoft's senior management to discuss the question.

The French firm pointed out that it could set up elsewhere, specifically mentioning the Boston area, and at this point the City of Montreal got involved and put pressure on the governments. Ubisoft was immediately approached by Frank McKenna's government in New Brunswick. From that moment on, the Government of Quebec was faced with the possibility of losing 500 jobs in a fast-growing sector and losing all hope of becoming a Knowledge City, as was envisaged with the *Plan Mercure*.

It was therefore necessary to come up with a plan that would respect the government's budget constraints, while being sufficiently attractive to Ubisoft. The solution was the Cyrenne Report,⁸ which proposed that tax credits be used to provide training for local young people and attract firms to Quebec. The then Minister of Finance Bernard Landry announced the introduction of tax credit measures for multimedia development but these measures appeared to be far less interesting for the French firm. To make up for the discrepancy between the measures announced by his government and those advanced initially by Vaugeois, Minister Landry turned to the federal government.⁹

The Minister of Human Resources Development at the time, Pierre Pettigrew, agreed to subsidize the creation of 500 jobs over a five-year period, at a rate of \$10,000 per person per year.¹⁰ The goals of the federal government in taking this measure were simple: it wished to strengthen the positioning of Montreal as a world multimedia centre and make the most of the potential spill-over effect of the French firm's arrival. Ubisoft will finally benefit from a grant of \$25,000 per employee, as planned initially in the *Plan Mercure*. The Quebec government contributes \$15,000 while the federal contributes \$10,000 per employee.

The incentives offered were so generous and tempting that they succeeded in convincing Ubisoft to choose the Montreal region as the location from which to launch its North American expansion. Some consider that the fact that Montreal is a French-speaking city in the North-American environment may be seen as well

8. Named after its author Yvon Cyrenne, a partner with the large consulting and accounting firm Raymond, Chabot, Martin, Paré.

9. At the time, a rumour was circulating within the Quebec government to the effect that the Minister expected and even hoped to be turned down in order to be able to blame his federal counterpart for the failure to attract Ubisoft.

10. The formula chosen by the federal government was a discretionary form of assistance provided on an exceptional basis. Obviously the sector's actors contested this intervention. Faced with this dissatisfaction, Ottawa promised that firms with promising projects could obtain similar assistance.

as an important advantage to a French-based firm. Also, some highlighted the importance of qualified human resources in Montreal, and the fact that Montreal was seen as an innovative and creative city (Tremblay et al 2002; Bordeleau 2003). In return for setting up business in Montreal, Ubisoft undertook to create 500 jobs over a five-year period. In 1997, it set up on Montreal's Saint-Laurent Boulevard in the former offices of the firm Discreet Logic, which was going to relocate in *Faubourg des Récollets* in Old Montreal. This relocation was also important because it had significant effects on the sector's dynamics and on the possible development of a cluster in Montreal.

Today, Ubisoft employs over 1000 persons and is one of the major actors in the multimedia sector, and especially in the gaming sector. Over the years, the Montreal subsidiary has become the largest of Ubisoft's 12 subsidiaries. It was entirely responsible for the design of the game *Splinter Cell*, which has sold more than five million copies and is considered to be a formidable success according to this industry's standards. The French firm, the third ranking game publisher in Europe and the sixth in the United States, is considered to be a giant in the electronic games industry.¹¹

It therefore appears that Ubisoft has made a major contribution, with the multimedia subsector helping to position the Montreal region on the world map, and in particular on the world map of multimedia centres, as one of our interviewees indicated:

"It's like Ubisoft has helped to introduce video games, in fact, the production of video games to Quebec. It's especially on that point that they've helped us... at the government level, they've done the spadework for us..." (translation of interview).

According to all our interviewees, the arrival of Ubisoft institutionalized what seemed at the time to be a marginal sector.

"Yes, but it was a lot more underground... That's why I think that since Ubisoft has been around, there have been some flagships... small firms that have started up but which have begun to ride the Ubisoft wave, introducing the general public to video games, or in fact the video game market... No, there were quite a few small ones, but not very well known, and there were more like two, three or four people..." (translation of interview).

The arrival of the French firm has also created an *atmosphere* that is conducive to developing the sector:

11. In 2004, Electronic Arts also opened up in Montreal, which makes the gaming industry all the more important in Montreal.

"Ubisoft gave rise to all sorts of small things that can't necessarily be identified, but can be sensed...that were a breath of fresh air to the industry...it put wind in the sails of the industry and gave the Montreal region credibility."

Thus, Ubisoft has greatly contributed to raising the profile of Montreal's video game sector and created an "industrial atmosphere" which may be compared to what is referred to as industrial or marshallian districts (Tremblay 2004; Beccattini 1992).

Mobilization of Actors

The emergence of the multimedia industry has been accompanied by the appearance of new coalitions and associations that would not have existed within the old economy. Since 1995, the Montreal local community has become highly mobilized and many associational structures have been formed. Among the most important are the *Forum des inforoutes et du multimédia* (FIM, information highway and multimedia forum), the *Centre d'Expertise et de Services Applications en multimédia* (CESAM, centre for multimedia expertise and application services), and the *Association des Producteurs du Multimédia du Québec* (APMQ, Quebec multimedia producers association).

In reaction to the considerable advantages accorded to the French firm, the multimedia sector firms organized themselves, rallying all the local actors gravitating around it. The local community mobilized itself and asked for government assistance similar to what had been offered to Ubisoft.

"The arrival of Ubisoft in Quebec created a sort of movement in the young industry which is highly competitive, everybody is checking each other out but nobody wants to talk to each other because they are all trying to build their own little world, and then along comes big bad Ubisoft who lands here and gets the red carpet treatment with exorbitant tax credits, and people go "Well, that's interesting. They arrive, create 300 jobs. Here we are, 300 businesses that are creating more...and we don't have anything!" So that led to lobbying, a voice...an industry association so that the industry gets organized. Basically, that was a good thing. Today, Ubisoft still has a better deal than any other business in the industry because it isn't restricted to one area, it isn't confined to one square foot at an exorbitant price...and it gets \$25,000 per employee."

That was the beginning of recognition for the sector and of the institutionalization of the relationship between the local multimedia sector firms and the Quebec government. From then on, the sector would be seen as a distinct sector with specific needs.

In terms of actors' mobilization, a distinction should be made between two movements which, of course, have definite points of convergence, but also some-

what different goals. The first movement can be described as having a sectoral vision, essentially seeking institutional recognition of the local industry. The aim of this institutional recognition is to receive assistance similar to what the governments gave Ubisoft. The second movement can be identified with a spatial vision, focusing on issues related to the ways of appropriating space and the desire to be part of the future mission of the territory. Both are closely intertwined in the mobilization and governance developments.

Actors in Spatial and Sectoral Mobilization

Spatial and sectoral mobilization can and often does play a crucial role in governance structures and governance outcomes (Klein et al 2004; Klein et al 2003, 2003a). Following the Quebec government's announcements regarding the establishment of CDTIs (*Carrefour pour le développement des technologies de l'information* -- Centres for the Development of Information Technology), discontent intensified and could be heard from all quarters. The source of this dissatisfaction was related to the eligibility criteria for the CDTIs, which were seen to prevent Quebec firms from benefiting from the same advantages as foreign firms. Starting in February, local multimedia industry representatives were consulted about the Cyrenne plan and they clearly stated their disagreement with the plan's recommendations due to the following reasons: first, only firms created after the provincial budget were eligible and, second, they could not be the continuation of an already existing firm. However, foreign firms such as Ubisoft could carry out in Quebec the activities that they already operated abroad and still be eligible for the tax credits offered by the CDTI. Then, the criteria for location also became points of contention. The requirement that firms first locate in the CDTI and then later in the *Cité du multimédia* were the focus of debate between the government and local associations. Moreover, it was as a result of these discussions that the CDTI concept evolved into the *Cité du multimédia*. Except for location in designated zones, most of the obstacles were removed through gains for the local producers.

In order to defend their position, some firms decided to act collectively within organizations, mainly three associations, described below. The local actors thus convinced the government to modify the eligibility criteria to the CDTI.

The *Centre d'Expertise et de Services Application Multimédia* (CESAM) was created in 1995 at the instigation of the *Centre de recherche en informatique de Montréal* (CRIM, Montreal Centre for Research on Information Engineering). CESAM is not an association but a business group that hoped in this way to create a critical mass that would allow it to take a leadership position in this potentially fast-growing industry. CESAM's goals were, among others, to establish a "technological watch" centre, to promote multimedia training, to incubate businesses, and to extend the influence of Quebec's multimedia industry even further.

CESAM was selective; because of the high annual fees, only large firms could afford to join. The fee for firms with annual sales of less than \$20 million was \$15,000 and \$25,000 for those with annual sales over \$20 million. CESAM (25

members) was made up of the industry's major firms.¹² The association administered government funds to manage assistance and support programs for firms.¹³

The second largest association was the *Association des producteurs en multimédia du Québec* (APMQ). It was created spontaneously in the wake of the controversy surrounding Ubisoft's arrival in April 1997. In fact, the arrival of Ubisoft was a good thing because it spurred the industry to take charge of itself and the Quebec government to demonstrate that it was sensitive to the sector's problems.

"...Ubisoft arrived and it was a big, big fish in the multimedia ocean. All of a sudden, everyone was talking about games, the open-line talk shows were all about multimedia, so that definitely triggered things. It also allowed or helped or I'd even say caused the creation of the multimedia producers association, which had a group of about ten producers... and Paul Allard from ZAC was the instigator there, and they saw that it wasn't right, they were rolling out the red carpet with all those measures... anyway, if they were there, we had never heard about them, so..." (translation).

The members of APMQ (firms only) thought that CESAM did not meet the aspirations of small firms. From the beginning, APMQ was determined to stand out from the associations that promoted producers and facilitated networking, such as the *Forum des inforoutes et du multimédia* (FIM) or the *Centre de promotion du logiciel québécois* (CPLQ, Quebec Software Promotion Centre).¹⁴ Rather it saw itself as an association of lobbyists.

APMQ defended the interests of entrepreneurs. The association strove to defy international competition but was also interested in high visibility issues such as the protection of intellectual property in the new media and improving the working conditions of the artists. It was also on the front line over the *Cité du multimedia* issue. APMQ had argued in favour of the other firms -- those located outside the designated zone and those that did not wish to move into *la Cité* to be able to benefit from funding. It wanted to reach an agreement that would allow producers who did not want to move into *la Cité* to benefit from advantageous though less generous conditions. However, it did not succeed.

CESAM and the APMQ contributed to creating some links between firms, but

these appear to have been more of a social nature than related to production or commercialization. While firms were keen on supporting these associations and asking them to lobby for them in front of the various levels of government, this did not contribute to develop strong productive links between the firms. While a few joint commercialization efforts were observed, with some 3-5 firms getting together to try to invest in the American market, they were not numerous.

The third player was the *Forum des inforoutes et du multimédia*. In June 1996, about 15 distributors, developers and others, concerned by the multimedia explosion, founded this forum. A non-profit organization, FIM's mission was to promote the digital content and interactive applications industry. Some 120 people attended the organization's first public activity. Unlike the two previously mentioned organizations, FIM was open to all individuals. It acted as a forum for debate and discussion on the important issues of the day. In particular, it initiated important discussions that took place during 1998 on the issue of the evolution of Internet advertising and was responsible for the creation of the *Bureau de la publicité sur Internet au Québec* (Internet Advertising Bureau in Quebec). In April 1999, it received funding from the *ministère de la Culture et des Communications* (Ministry of Culture and Communications) to produce training tools and hold seminars aimed at getting advertisers to increase their use of the Internet as an advertising medium.

In December 2000, the members of the *Association des producteurs en multimédia du Québec* (APMQ), the *Consortium multimédia* (CESAM) and the *Forum des inforoutes et du multimédia* (FIM) approved a joint agreement to create *Alliance numériQC*, a merger of CESAM and FIM. APMQ survived the process under a new name, the *Bureau des producteurs en contenu interactif* (BPCI, Bureau of Interactive Content Producers).¹⁵ It preserved one component of its programming, the management of labour relations between the multimedia artists and producers. BPCI would eventually negotiate collective agreements between multimedia producers and artists' unions. Two hypotheses can be used to explain this regrouping of the various associations. The first suggests that the regrouping is a more effective way to bring out a global vision of the industry. The existence of different organizations made it difficult to implement common action and a coercive vision. The second hypothesis relates to the wishes of the governments,¹⁶ which had strongly insisted that the associations join together for logistical reasons. In fact, the government authorities did not want to continually negotiate with the three associations. They believed that such a merger would simplify matters, thus reducing costs but especially reducing potential conflicts and the need to arbitrate between the groups. Both hypotheses have their defenders and are no doubt valid and complementary.

Alliance numériQC is a non-profit organization which is supported by the

12. Its members included Vidéotron, Téléglobe, General Datacomm, Transcontinental e-media, Québecor multimédia, Bell Canada, CAE Electronique, Concordia University, CDedrom-Sni, le Centre National d'animation et de Design (NAD), Digital Equipment, Famic, the Groupe conseil Innovitech, the Groupe Image Buzz, Silicon Graphics, the Société Radio-Canada (SRC) and SoftImage/Microsoft.

13. In December 1997, CESAM received \$4.7 million from the federal and provincial governments (Federal Office of Regional Development (\$2.2 million), Minister of State for Greater Montréal and *ministère de l'Industrie du Commerce, de la Science et de la Technologie* (\$2.5 million)). It obtained the equivalent from the private sector for total investments of \$10 million.

14. Known today as *Réseau Interlogiqc*.

15. It later became the *Regroupement des producteurs de multimédia du Québec*.

16. The 2000 provincial budget also recommended that the merger of the three organizations would be viewed very positively. In other words, the budget clearly stipulates that the Government of Quebec would invest in these associations on the condition that they group together.

federal government (Economic Development Canada) and the provincial government (*ministère de la Culture et des Communications du Québec* and *ministère du Développement économique et régional*). It includes 238 members, 75 % of which are private firms. Most of these firms are micro-enterprises and Small and Medium Businesses (SMBs) operating in different niches, for example E-learning, games and Internet applications. The Alliance takes action in three main areas. The first is support to firms in their marketing, finance, and market scanning and information activities. The second involves the development of skills, i.e., the transfer of skills and knowledge, skills training and development and raising awareness among the different actors (governments, firms, educational institutions). The third area concerns relations with governments, and the role of interfacing with governments. Within this association, committees called *Réseaux d'intérêt d'Alliance numériQC* (RIAN, Interest Networks) have been created. These committees are intended for all stakeholders in the digital industry who are members of the association. They are formed at the initiative of people who wish to discuss subjects of common interest, often by sub-sectors. It should also be mentioned that the alliance encourages networking among the firms themselves, but also with other stakeholders such as universities, and research centres. Some linkages between firms were created through this association, but they were mainly observed between firms and other stakeholders, rather than between the firms themselves.

Government Response

The local producers were dissatisfied with two aspects of the Quebec government's response. First, they wanted to obtain the same advantages as those given to Ubisoft. But the provincial government reacted to this dissatisfaction by setting up the CDTI and subsequently the *Cité du Multimédia*. However, these measures did not meet the expectations of local producers. Second, they were against the idea of being confined to designated zones so as to qualify for government assistance. They were also against the conditions imposed for setting up business in these zones, mainly the requirement that activities could not be the continuation of existing activities. The local producers pointed out that Ubisoft was not obliged to set up in these zones even though its activities were simply the extension of those carried out elsewhere. The government reacted by abolishing a number of criteria and proposing alternative measures. Amongst the criteria that were abolished, the main one was that firms be entirely new firms or that the specific activities covered be new. Various new measures were developed to sustain these firms.

Numerous actors within the governments and the ministries with an economic, technological, cultural and regional development mission were interested in the multimedia sector. This interest was based on two factors: first, the broad definition of multimedia allowed many firms to qualify for government assistance and, second, the sector seemed to have such a promising future in the context of interest for the Knowledge Economy.

The Government of Quebec made the multimedia sector an important element in its economic development policy. It foresaw an enormous potential for job

creation in this sector, particularly for young people. Indeed, the speed at which the various measures were introduced appears to confirm the government's interest in this area -- in less than two years, a definite economic policy was implemented in this sector. Through these various measures, the provincial government's intention was to promote the investment in local firms in addition to attracting foreign firms¹⁷ to follow the trail blazed by Ubisoft. As our interviews and research revealed, numerous actors were involved in the implementation of a range of measures to support the development of the multimedia sector in the Montreal region.

The federal government also got involved. The multimedia sector fitted well into its national policy centred on the development of a knowledge-based economy. Moreover, the federal government wanted to position the Montreal region as a multimedia centre on the world stage. Just like the provincial government, but to a lesser extent, it introduced numerous measures conducive to the industry's development. As was the case at the provincial level, several ministries and government agencies were interested in the multimedia sector (e.g. Canada Economic Development, Industrial Research Assistance Program).

Two major types of interventions to promote the development of this sector can be identified: general measures and specific measures. In terms of general measures, they are not directly intended for firms. For example, the provincial government invested in the introduction of multimedia training programs in colleges (CEGEPs). Preferential purchase measures were also introduced.¹⁸ In more concrete terms, in its 2000 Budget, the provincial government invested \$343 million to turn Quebec into a wired society. This strategy is mainly based on three measures: first, a \$125-million budget to help connect 200,000 low-income families; and second, a 40 % tax credit granted to SMEs wishing to set up a transactional Web site (\$126 million over three years). Third, \$15 million were earmarked for the deployment of a fibre optic network in the region to support local electronic trade activities. It must be stressed that the federal government also introduced similar measures.

As for specific measures, they are directly centred on the development of firms and can include two sources: public or private funding. Though fewer in number, private financing includes venture capital corporations (*Fonds de solidarité* of the FTQ) and private funds (*Fonds Bell* or the *Fonds de Daniel Langlois* -- creator of Softimage). Public financing from the ministries makes up almost all of the assistance granted to firms. These measures include programs, grants, tax credits, investment in capital stock and loans offered to firms. The various governmental measures have several goals and can be associated with the following government policies which contributed to shaping the dynamics and linkages in the sector: sectoral policy, spatial policy and cultural policy.

17. They had hoped to attract a ratio of 50 % foreign firms/50 % Quebec firms.

18. According to the individuals interviewed, particularly in E-learning, the government completely abandoned this policy which had provided business opportunities and was highly appreciated by firms.

Spatial Actors and Policy

First, it should be mentioned that any policy related to a multimedia firm, at least in Quebec, is highly spatialized. This is true because 90 % of multimedia activities are concentrated in the Montreal region (Manzagol et al 1999). It should be recalled that spatial policy is essentially shaped through the *Centres de développement des technologies de l'information* (CDTIs) and the *Cité du multimedia* policies and programs.

In 1997, the provincial government first developed a program promoting the establishment of CDTIs. CDTIs drew on the formula of business incubators and applied to a building designated by the *ministère des Finances*, in which eligible firms received substantial grants. The firms had to carry out all their activities inside this building. To be eligible, they had to create new jobs. This was done to prevent existing firms from moving into the building to take advantage of the government measures. However, these can include new subsidiaries or existing firms which develop a new project or service.

In Montreal, the designated building is on Queen Street in the historic area of Old Montreal,¹⁹ more precisely in the *Faubourg des Récollets*. The building is a former plant that originally housed textile activities. This building was equipped with high-tech equipment (fibre optic) to serve the firms in the building.

A new program was created in 1998, *Cité du multimédia*, and put under the responsibility of the *Bureau des Centres de développement des technologies de l'information*, which broadened, in both the literal and figurative senses, its assistance to the multimedia sector. The goals of the Government of Quebec regarding the *Cité du multimédia* were highly ambitious,²⁰ since it hoped that the *Cité* would generate nearly 10,000 jobs over a 10-year period. The measures proposed were relatively similar to those of the CDTI. However, rather than applying to a building, they applied to a larger physical space, several blocks around the CDTI.

To provide firms operating in these designated spaces with the ready cash needed to carry out their activities, the provincial government provided for a temporary tax credit funding program, the *Programme Garantie PME* (SME guarantee program) under the tax credit temporary financing component, which was administered by *Investissement Québec*. Moreover, although the buildings in which firms were going to set up business were not yet built, the firms could nevertheless benefit from the allocated tax credits if they had signed a lease.

In April 2003, a new government was elected in Quebec, with the Liberal Party replacing the Parti Québécois, which had initiated the measures to support the multimedia sector. While the multimedia sector had been viewed very favour-

19. The other CDTIs are located in the former building of the newspaper *Le Soleil* in Quebec City, in Hull Technopark, in the *Parc scientifique et de haute technologie* in Laval and on Wellington Street in Sherbrooke.

20. When the *Cité du multimédia* program was announced, the Quebec industry had 600 firms. Minister Landry pointed out that 40 % of these firms did not exist three years before (*Le Soleil* 16/6/1998). The provincial government even hoped that the multimedia sector would employ as many people as the aeronautics industry or even the pulp and paper industry.

ably by the PQ government, the LP government saw things differently. Multimedia firms (mainly those located in the *Cité*) were concerned about this change and there was already uncertainty in the multimedia sector, which had begun to be affected by a reduction in grants from the previous government.²¹

Firms in the sector had good reason to be worried. In fact, in the 2003 provincial budget, the Minister of Finance announced the termination of tax advantages granted to firms in the technology sector in the designated zones.²² In his view, the maintenance of 12,000 jobs and the creation of 5,000 other jobs in the designated zones would have required a total public investment, in the form of tax credits, of up to \$4.5 billion by 2010. Moreover, according to the Minister, out of the 17,000 jobs linked to the designated zones, 12,000 already existed. In light of this conclusion, the tax credit programs were not expected to last much longer.

However, it should be specified that the new government will respect the commitments made to firms already established in the *Cité*. Firms that have not moved into a site but have received their approval certificate can also obtain the tax advantages provided. Moreover, firms that are expanding will continue to receive tax credits on new employees' wages. However, the government has reduced the leasable areas of eligible buildings on the various sites, so that the tax credit will no longer be available beyond a certain expansion. Three sites are targeted, including the *Cité du multimédia*. Its area was decreased by 110,000 square metres and Phase VIII (a huge building currently on sale) was cut. It should be added that the *Cité du multimédia* was sold to a Toronto real estate developer in early 2004 (except for the building that corresponds to Phase VIII).

Another measure of the 2003 Budget went through relatively unnoticed. The Minister of Finance imposed a serious constraint on firms that are already registered in the program and continue to receive grants. In the case of control acquisition, the registered firms will no longer be able to receive tax exemptions. In other words, if a subsidized firm is bought by a competitor, it will immediately lose its tax advantage. In theory, this new government measure reduces the value of the firm for a potential buyer.

Sector Actors and Policy

As mentioned previously, it is difficult to separate sectoral and spatial policy when one knows that 90 % of the multimedia sector is concentrated in Montreal. We will nevertheless look at elements related to what is usually defined as sectoral policy, which of course has spatial impact. In addition to the *Cité du multimédia* measure, the Government of Quebec offers a wide range of new and existing assistance programs to firms that set up both within and outside the *Cité*. These include

21. In the last budget of the previous government, the Minister of Finance had opened the door to a decrease in the percentage of tax credits offered to the sector.

22. It should be mentioned that the biotechnology centres were spared but their tax credits were decreased.

programs to assist with pre-startup, startup, capitalization, export, dissemination, distribution, production, international marketing, development and R&D. While these last measures are not exclusive to multimedia, they nevertheless play an important role in this sector.

According to *Alliance numériQC*, 11 provincial programs apply to multimedia firms. The main lending agencies are the *Caisse de dépôt et de placement du Québec* (Quebec Deposit and Investment Fund) and its subsidiaries, the *Société générale de financement et Investissement Québec* (Quebec General Finance and Investment Corporation). As can be seen on the websites of these various bodies, and as was indicated in some interviews, the assistance provided pertains to all development stages: capitalization (*Capital d'Amérique CDPQ Managed by the Caisse de dépôt et de placement du Québec*), Startup (*Accès Capital Managed by the Caisse de dépôt et de placement du Québec*) and Development (*Fonds pour l'accroissement de l'investissement privé et la relance de l'emploi (FAIRE)-Investissement Québec*, managed by Investissement Québec or Impact PME managed by the Industry Department; and finally Marketing, Export, Distribution support, with Programme Garantie PME managed by *Investissement Québec*.

There are three lenders at the federal level who are actors in the multimedia sector: the National Research Council of Canada; the Business Development Bank of Canada; and finally, Economic Development Canada and its regional agencies.

In Quebec, EDC subcontracts the management of its program to *Alliance numériQc*. It should be noted that before the merger of the three associations, CESAM also had a similar mandate.

While there seem to be many measures both at the provincial and federal levels, our interviews indicate that they are difficult to apply in the multimedia sector. The eligibility criteria are high and do not necessarily correspond to the specificities of the sector. Let us quote one person interviewed:

"projects considered are usually over the 10 million mark, and often well over that...it is difficult to put 10 million in a firm that is not valued at least 20 to 30 million...And in the multimedia sector, this basically does not exist. The industrial base is burgeoning, it is based on micro-entreprises, artisan businesses, really small SMBs in this sector..."

Also, for example, while the firms are often sole proprietorships, the funding agency may require participation in the form of capital stock.

"When we looked for financing to develop our products we discovered that many of the persons interested wanted a participation in the firm. This situation did not interest us. My associate and I did not want to lose control, we thought this would not be viable in the long term."

It should be mentioned that more recently, the sector has been blacklisted as a result of the bursting of the Dotcom bubble. One of the main obstacles is the high costs in terms of time and resources needed to meet the requirements of these

measures, which exclude many SMEs.

"I would say, three years ago, if you had asked me this, I would have said we did not look at these things. We started looking into this and even if we are a good team, some 10 employees, these kind of things take time, a lot of time. You almost need a full time person to take care of all the paper work, and it took so much of my time that I almost abandoned; it took much more time than I had envisaged!"

Cultural Actors and Policy

Cultural policy can also be viewed as a manifestation theme of governance in the multimedia sector. The policy has three main orientations: the individual (i.e. the artist), the firm, and the sector. We will restrict our examination here to measures that concern firms.

Among the best known measures in Quebec are the SODEC (*Société de développement des entreprises culturelles*) tax credit, which encourages the release of multimedia titles in French for the general public, as well a variety of funds: information highway, culture and communications, development of Montreal and of the national capital, and those associated with private investment growth and employment revitalization. The SODEC was mentioned by many interviewees as having an important impact, especially in the edutainment or gaming sectors.

Finally, let us mention that in addition to the programs offered by the provincial and federal governments, there are other forms of aid that are offered to firms in the multimedia sector by various types of organizations, that we might call associative or third sector organizations. Many are from the parapublic sector and we must add the Bell Fund, which is in the private sector. Each of these organizations has its own objectives and criteria. The support offered by these touch all dimensions of the business such as startup, capitalization and distribution.

We must add to this list the *Financière des entreprises culturelles* (FIDEC), a financial organization for the cultural industries created in 1999. It was created by the association of nine firms of the cultural and financial sectors. Amongst the creators, we find the *Société de développement des entreprises culturelles du Québec* (SODEC), the *Fonds de solidarité des travailleurs du Québec* (FTQ), the National Bank of Canada, the TV group TVA, CINAR, Daniel Langlois (founder of Softimage), Remstar Corporation, France Film, DKD! Spectacle/Centre Molson and Rosaire Archambault. This new financial group has some 45,5 million in capital aimed at supporting Quebec firms on the international scene.

At the federal level, the Multimedia Fund, announced in June 1998 in Banff by the Minister of Canadian Heritage, is a \$30 million fund covering a five-year period and administered by Telefilm Canada. It is generally considered that Quebec has often benefited from federal government cultural policy, for example, through investments in television production in French, but there are no available studies specifically on the multimedia sector. Also, the Business Development Bank of Canada also offers specialized, flexible funding to small firms working

in book and magazine publishing, sound recording, film and video production and multimedia.

Conclusion on Governance and Clustering

Let us conclude on a few elements related to governance in the multimedia industry, or cluster in emergence. As was observed in this article, many actors intervene in the sector: public, private, associative, financial as well as community actors²³. In this sense, there appears to be participation of many social actors in the development and support of a real industrial policy aimed at the multimedia sector and aimed at making of Montreal an important centre of multimedia development, and ideally a real cluster.

As already indicated, there were various plans put forward by various actors, but very quickly, the various levels of government -- federal and provincial, joined to support the French firm Ubisoft. Local Montreal actors were then critical in creating a social mobilization in order to obtain some support more or less equivalent to what had been offered to Ubisoft. The Montreal administration as well as some private actors in the financial, cultural and multimedia sector per se all supported at various levels and in various ways the development of this sector and some tried to support linkages or relations between firms in the sector.

There was consensus around the idea of developing this specific sector and over the years, firms were more and more interested in having some form of public intervention in order to support them in the development of products, but even more in the commercialization of these products. There was clear interest in developing a form of intervention in the Montreal area which was simultaneously of a spatial and sectoral nature, the actors and authors of the policies apparently considering that proximity and local governance actions would have an important impact on local development of the multimedia industry (Veltz 1994; Tremblay et al 2004).

Interactions in the Multimedia Sector : Is this a Cluster ?

We have shown above that the governance that has been established in Montreal is rather reactive, i.e. it is the product of a reaction rather than of long-standing, proactive planning. We have also shown that this governance can be considered as joint governance, since many social actors are associated in the spatial policy known as the *Cité du multimedia*, as well as in other forms of intervention in the sector. Finally, we saw that governance has evolved over the years following changes in the environment and that something akin to a cluster seems to be emerging in Montreal, although it is not yet fully developed, according to our interviewees. The discussion has highlighted the role of various actors and pro-

23. We do not insist on the latter here, having done so elsewhere (Tremblay et al 2001, 2004).

grams in developing governance actions which contributed to the development of the multimedia sector in Montreal, but in order for this to be considered a cluster or an innovative milieu, we need to see if specific conditions are met that would permit the actors' interactions and interventions to be qualified a cluster.

Is There Clustering in Montreal ?

Concerning geographic distribution, Manzagol et al (2000) indicate that 90 % of multimedia firms are in the Montreal region. More precisely, our own list of some 644 firms, developed within the ISRN project indicates that the multimedia sector in Montreal is strongly concentrated in a commercial zone composed of old industrial buildings, close to the centre of town, where a large number of small firms are clustered. This is similar to what was observed in Vancouver and Toronto, where other authors observed a large number of small firms clustered in redesigned buildings close to downtown (Britton et Légaré 2004; Smith et al 2004). In Montreal, there appear to be two main clusters, according to our list of firms. They are largely concentrated on and around St-Laurence Boulevard, and in or around the Multimedia City (previously called *Faubourg des Récollets* district; see Bordeleau 2003, Tremblay et al 2002).

In order to determine whether the cluster is largely dependant on local relations, which is often seen as an important indicator in the definition of a cluster, we analyzed the data on sales in the sector, since these give indications of important commercial relationships.

According to Quebec official data, in 1999, multimedia firms' sales were mainly oriented to the Quebec market (79.1 %). The Canadian market outside of Quebec represented some 7.7 %, Europe 7.2 % and finally the USA, 5.3 %.

Our interviews with over 50 firms as well as our analysis of the list of 644 firms that we considered to be active in multimedia in 2003-2005 also permit us to say that the relationships between firms are mainly of a local nature and very few international links were identified in our survey. In fact, our interviews indicate that the Montreal multimedia firms are mainly Small and Medium-Sized Businesses, while telecom or IT Firms are of much larger size and have more international links, either for subcontracting or for sales. A few multimedia SMBs have managed to sell some of their products abroad, mainly in the edutainment sector, or if they are a part of a large multinational (Ubisoft and Electronic Arts are the two main such players in Montreal). However, since the crash of the IT sector in 2001-2002, even more firms have had to turn to traditional activities such as web page design to keep afloat, and these less creative or innovative niches are definitely more related to the local market. Thus, many firms indicate that their clientele and their subcontracting is essentially local, although there is relatively little subcontracting in the Montreal multimedia sector.

The clientele is composed mainly of businesses, that is 68.2 %, according to the ISQ official data). Private individuals and the public sector represent respectively 23.7 % and 6.9 % of the clients of the Montreal multimedia firms, again according to 1999 ISQ official data.

If we now try to determine whether the two zones where many multimedia firms have been identified in Montreal can be considered a cluster, we need to question ourselves as to the interdependencies and linkages that exist between the firms and other organizations (presented earlier), whether these links exist at the level of production processes, or as relationships between educational institutions, business or community associations. Indeed, our research did aim at trying to determine if the Montreal multimedia firms are embedded in a network of businesses and institutions which could be seen as constituting a cluster, as these have been defined in the literature on clusters (Wolfe and Lucas 2004; Wolfe 2003) or on innovative milieux (Maillat 1995; Proulx 1994).

Networking and Linkages in the Montreal Multimedia

On the basis of our research, that is interviews with over 50 firms and up to 25 other associations and groups related to the multimedia sector in Montreal, as well as interviews with some 50 workers in the multimedia sector (Tremblay 2003a), and on the basis of information presented above, we have to conclude that there are not many relationships between the firms themselves, and that they act mainly in a competitive fashion towards one another, despite some developments observed in terms of joint governance, based on some form of cooperation between various social actors. However, if there are not many links between the firms themselves, and especially very few linkages between firms related to production per se, we observed important linkages between the workers and we might well hypothesize that the innovative capacity of Montreal multimedia firms is highly influenced by the linkages existing between the workers themselves, since they exchange information, insights, and collaborate in problem resolution and the like (Tremblay 2003a). Indirectly, this contributes to the innovative advantage and competitive capacity of firms as proposed in the works of Maskell and Malmberg (1999), but we cannot say that there are important links between the firms themselves as organizations, as theories on clusters or industrial districts propose (Tremblay 2004).

As one firm mentions, "We are definitely an independent studio. We have our resources, our game designer, our visual designer, our internal writers, our internal programmers, our internal engineers, our project managers, everything, everything...everything is internal". And, another confirms, "this product was developed inside from A to Z."

The lack of development of networks and linkages has been attributed by firms to various elements, which we have summarized in four points: the temporal dimension or the youth of businesses, the internal dynamics of the sector, the length of life of products and finally, the fast pace of the industry. Let us go over these, drawing upon the interviews.

The temporal dimension relates to the fact that many firms mentioned that it takes time to establish trust, to build relations, for the firm itself to be known and recognized, which will eventually make it possible to establish relations with others. In other words, trust as well as reputations need to be built first and many

multimedia firms are young and have not yet established their reputation, much less developed trust relations with others. As one firm puts it, "You need to develop a strategy for large firms to respect you. And respect comes with the years. We're 10 years old and now we've got a bit of respect from all firms...". And another firm mentions, "relations can develop in firms that have some experience, maturity. You can't start from scratch. You need some trust, some basis to get together, build consortia. Businesses that are just starting up have other things to do than develop their relations with others".

Concerning the internal dynamics of the sector, this refers to the instability of the sector. As mentioned by some firms, "The difficulty is the instability of the sector. We establish links, we develop products, and from one day to the other, a change in the partners' activities brings us to question everything" (translation).

The life of a multimedia project is also limited, which according to many firms reduces the possibility to develop lasting relationships. This is related to the fast pace observed in the industry, and the limited volumes of production of many firms.

Thus, if there are relatively few relations between firms, at least to date, our observations indicate that community and business associations did however play an important role in the development of the sector. Also, the public sector, with the Quebec government at the forefront, played an important role as well.

We are thus inclined to conclude that the Montreal multimedia sector may be a cluster in emergence, in the sense that while the relationships between SMBs and firms in general are not very developed, the relationships between various institutional actors and firms are not negligible at all and have led to the development of a situation of joint governance, with important activity involving community, educational, financing and public sector actors. We might also consider the Montreal multimedia zone as a learning region (Morgan 1997), a region that is learning from present developments and whose innovative and competitive advantages can grow with experience of collaboration between actors in the context of the joint governance observed.

Conclusion

It must be recognized that the multimedia sector remains quite young of course, and that it is difficult to guess regarding its future, considering changes that have occurred in the last year, especially the abolition of the City of Multimedia program, at least for new firms.

However, we think that the data collected in our interviews and the analysis of the programs offered to the sector clearly indicate that there were important governance measures over the years and that most of these have contributed broadly to the development of a multimedia cluster, even if this cluster is not yet fully grown and its future uncertain, precisely because of uncertain developments in the broader IT sector. Thus, while our interviews and analysis of the data on the sector indicate that there is co-location in certain zones of Montreal, there appears to be somewhat more than that, since there are interactions between various actors

and various forms of collective organization (including Alliance NumériQC). However, interactions between firms do not appear to have yet developed to the level they usually are in a fully-fledged cluster.

Also, politics, governance structures and programs as well as social mobilization remain a key element in our understanding of sectoral dynamics in the multimedia sector in Quebec and in the Montreal cluster in particular. We have shown through our analysis that the governance structures created have been mainly of a reactive nature, i.e. they were clearly the product of a reaction to the risk of Ubisoft settling elsewhere in Northeastern North America, rather than of long term, proactive planning. Nevertheless, this is to a certain extent understandable since the multimedia sector is recent and did require quick action in order to preserve a possibility of developing an industrial sector which was rapidly developing in other countries (Bathelt et al 2004; Cooke 2004) and Canadian regions (Wolfe and Gertler 2004; Britton et Légaré 2004; Smith et al 2004). We also illustrated throughout our paper how governance structures and outcomes have evolved over the years following changes in the environment. We intend to update the research in a few years time, to see whether the Montreal multimedia sector has bloomed into a fully-fledged cluster or not.

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