

TRANS-DISCIPLINARY MANAGEMENT AND PARTNERING TO BETTER COLLABORATE AND INNOVATE IN A GLOBAL CONTEXT

Clément Demers, Université de Montréal
email: cdemers@qimtl.qc.ca

In collaboration with Joël Thibert, B.A., MUP

Abstract

At the beginning of a project, each stakeholder starts with financial capital as well as with a capital of energy and enthusiasm. However, the lack of collaboration both within and outside of participant organizations often consumes parts of these vital resources. Furthermore, given mounting international competition, constrained government budgets, and the rapidity of technological and societal changes, project managers today are constantly called upon to find ways to do more and achieve better results with fewer resources. As a result of these trends, the project management team in the international context is faced with the need to collaborate more efficiently with professionals and stakeholders, and innovate continually throughout a project.

Based on the successful management and realization of several large-scale construction, infrastructure, and urban design projects in Montreal, several factors were identified which promote collaboration and innovation: a common threat, outside competition, common values and objectives, transparent communication, and adequate organizational structures. In order to create the conditions for collaboration and innovation, two approaches were particularly successful: 1) the transdisciplinary approach, which is based on the involvement of and transparent communication between key actors from the early stages of a project until its delivery, and 2) the prevention of conflicts through partnering. These observations, in turn, point to the necessity for a new kind of leadership in project management based more on emotional intelligence than on technical skill.

Keywords: Project Management; Innovation; Stakeholder Involvement; Partnering.

Introduction

In the early phases of a construction project, all stakeholders: the public or private promoter, the project manager, the contractor(s) and subcontractor(s), the engineers, the architects, etc., come with a given amount of capital, i.e., with a reserve of funds, energy and enthusiasm, or motivation. This capital is not only crucial for starting up a project but it is also crucial for the well-functioning of a project throughout its realization. Furthermore, these reserves may be abundant but they are not unlimited, and must therefore be preserved. Yet, projects often fail because financial resources run out, because managers put time and energy in the wrong areas or simply as a result of demotivation. Indeed, even if only one of the stakeholders in a project is faced with such a predicament, the project as a whole can be compromised.

The need for collaboration and innovation in project management

As for the realization of any project, the main factor which causes the exhaustion of financial capital, energy, and motivation in construction and urban design projects is the lack of

collaboration between stakeholders and participant organizations. For instance, a lack of collaboration between the work provider, the project manager, the engineers and architects, and the general contractor can result in the repetition of tasks by different people, time delays in the production of plans and specifications, cost overruns and the general feeling that stakeholders work for themselves, to their own benefit, and not to the benefit of the project. That being said, the money, time, energy and motivation of a project's stakeholders can be preserved if the individuals and organizations involved are able to collaborate effectively. Creating the conditions for effective collaboration, in turn, is the project manager's responsibility.

The project environment in the Quebec context today is also characterized by other important factors. First, given mounting competition from proactive organizations both in Canada and on the international stage, project managers today cannot simply apply traditional project management recipes and expect to be successful; the success of a large-scale project today is largely determined by its originality and by the ability of those involved to break new ground. Second, Quebec is relatively less affluent than other Canadian provinces and other developed countries; to stay competitive, project managers in Quebec must therefore keep reinventing their practice.

Third, social, economic, and technological changes in our society happen ever more rapidly; the changes, in turn, affect the project environment and our objectives become moving targets. As a consequence, project managers have no choice but to apply adaptive and flexible solutions, and cannot simply recycle solutions designed for simple problems and stable objectives. Finally, because of resource constraints there is constant pressure to increase productivity which means, concretely, that project managers have to achieve better results with fewer resources.

Considering that the realization of a successful project is rarely repetitive and that project managers rarely adopt humdrum solutions to solve complex problems, a successful project must necessarily imply collaboration and innovation. In order to face unexpected difficulties or integrate new critical information, the project manager must rely on the collaboration of participant organizations and their ability to design "custom-made" solutions for specific situations. Given these premises, it follows that collaboration and innovation, whether technological, methodological, or organizational, are integral to problem-solving in project management. The aim of this research, then, is to identify the conditions which contribute to collaboration and innovation, and to propose methodological and organizational models which might help create these conditions.

Research methods

This research is based on the realization of several medium and large-scale construction and urban design projects in Montreal over the last 20 years, as well as on a review of several other case studies. Among the projects which were studied and analyzed, the following are notable:

Projects realized in partnership with public and private funds

- The Montreal World Trade Center and Montreal Intercontinental Hotel (1987-1992)
- The Chaussegros-de-Léry Complex (1988-1992)

Cultural project realized in partnership with three different sources of Public funds

- The Pointe-à-Callières Museum (1990-1992)

Projects in brownfield development

- The restarting of the Anjou-sur-le-lac project (1994-1999)
- The Anjou Business Park (1994-1999)

Projects in urban design

- The Quartier international de Montréal project (1997-2007), (recipient of 29 prizes, including the 2005 PMI Project of the year Award)
- The Quartier des spectacles project (2007 -)

Throughout these projects, several factors leading to innovation and collaboration between stakeholders were noted, and several methodological tools and organizational models were tested in order to identify the best conditions and methods for successful project management. Below, the research questions and objectives are presented.

Research questions:

- What conditions contribute to collaboration and innovation in project management?
- How can these conditions be created in the management of complex and sophisticated projects?

Research objectives:

- Identify the conditions which promote collaboration and innovation in project management.
- Identify and describe the management approaches and practices which contribute to creating these conditions.

Research results and discussion

Factors and conditions

Several factors and conditions were identified which lead to or promote collaboration and innovation in the project environment. These conditions, as well as the management approaches which help create them, are presented below.

Conditions promoting collaboration

First, experience shows that a common “threat” from the outside – whether it be competition for the same resources or the same client – promotes a constructive attitude among the partners and participant organizations of a project. It was also found that partners and participant organizations are more disposed to collaborate if they have common objectives and values, which allows them to see that their ultimate goals are not at odds (even if their proximate objectives might be).

Second, effective communication was found to be a key factor in all cases mentioned above. Indeed, the ability to communicate the right information clearly and transparently to all stakeholders in the early phases of a project was crucial to a project’s well-functioning. If all participant organizations and stakeholders feel that they are “in the loop” and that they are being listened to before *and* during a project’s realization, they are less likely to oppose a project partly or wholly. It is important to mention, however, that good communication does not necessarily mean more information; indeed, to communicate effectively means to choose what information is relevant and to make it accessible to those who will receive it.

Third, the possibility and prospect for both individuals and organizations involved in a project to gain something – whether formal recognition, career advancement, or a financial reward – through collaboration, also promotes an open and constructive attitude among stakeholders. Indeed, the stakeholders in a project must be made to understand that there can be mutual gain and that someone's gain does not necessarily imply someone else's loss. That being said, it is also important to make stakeholders realize that each stakeholder's share of the pie will be larger if the pie is made larger before it is divided. In other words, all those involved in a project must realize that the project's amelioration and enrichment is to their personal benefit *and* to the common benefit of all participant organizations.

Lastly, the importance of adequate organizational structures and appropriate leadership was also noted. In effect, certain organizational structures are more conducive to effective participation and communication than others; for instance, small and multi-disciplinary project management teams tend to be more responsive than large organizations where it is often difficult to identify who is responsible and accountable for what. The way decisions are made throughout a project also impacts the propensity for collaboration; if participation in decision-making is encouraged, for instance, individuals will likely be more motivated to share their ideas and preoccupations.

In summary, it appears as though a common threat, common values and objectives, the effectiveness of communication tools and the participation of stakeholders upstream from the project's realization, the prospect for gain, the size and composition of the management team, as well as the leadership style of the project manager all have a significant impact on stakeholder collaboration.

Condition promoting innovation

The first condition which promoted innovation is similar to that which promoted collaboration: a common threat. Indeed, it was found that in most projects – as in most situations – necessity breeds invention. It could also be said that stakeholders, when faced with a situation where each individual and/or organization stands to lose, have a much higher level of motivation and are more likely to find an appropriate solution to the problem at hand.

The second main factor which encourages innovation in project management is the effectiveness of the communication channels within and between organizations. The choice of information here is also important, but beyond that, the ease of communication and the ability to both emit and receive information are also crucial. In other words, communication must be interactive if the goal is, indeed, to arrive at the best possible solution.

The third condition, which must necessarily be concomitant with the second, is collaboration within and between organizations. In the context of project management, where problems are complex and no one organization can claim all expertise, innovation must be based on the sharing of know-how and experience. Moreover, innovative solutions usually arise from the clash of ideas, which requires synergy and collaboration between the different stakeholders involved. Above and beyond that, collaboration is also necessary to actually implement innovative solutions; it is one thing to come up with a solution, it is quite another to put it in practice.

The last factor which was identified is the importance of adequate organizational structures. As for the promotion of collaboration in the project environment, the promotion of innovation requires flexibility and adaptability in the project's management structure. This, in turn, requires the project management team to be small, dynamic, and trans-disciplinary. Innovation also comes from the ability to form *ad hoc* partnerships to solve specific issues.

Management approaches and practices

The factors and conditions identified above all promote collaboration and innovation and, ultimately, the synergy between them. However, these conditions do not always come about spontaneously; in fact, it often takes time before effective communication channels are put in place and before the different stakeholders trust one another enough to share sensitive information and collaborate fully. From the case studies which form the basis of this research, we know that certain management approaches are more effective than others in creating these conditions. Two of these approaches, and the set of management skills that they imply, are described below.

The trans-disciplinary approach to project management

The first one is the “trans-disciplinary” approach which posits the management team not as a strict hierarchy or pyramid, but rather as professional community. This approach is based on three main premises: 1) individuals in this day and age, whether generalists or specialists, cannot manage sophisticated projects alone, 2) multidisciplinary organizations with strict lines of command and strict disciplinary boundaries lack flexibility and responsiveness, and 3) complex problems in project management today require an open working environment and sophisticated solutions which cross over disciplinary boundaries.

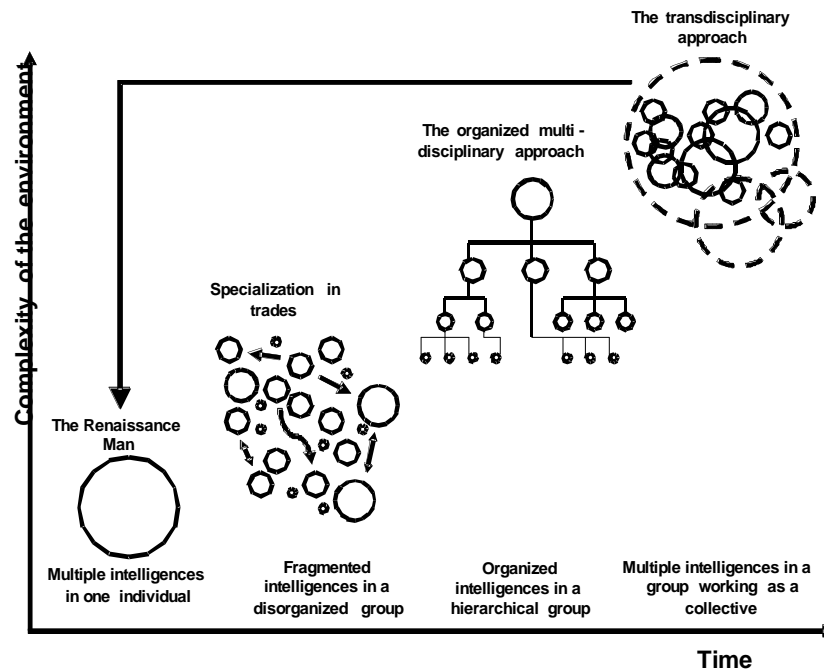


Fig. 1. From the global view of the individual during the Renaissance to the global view of the project management team today

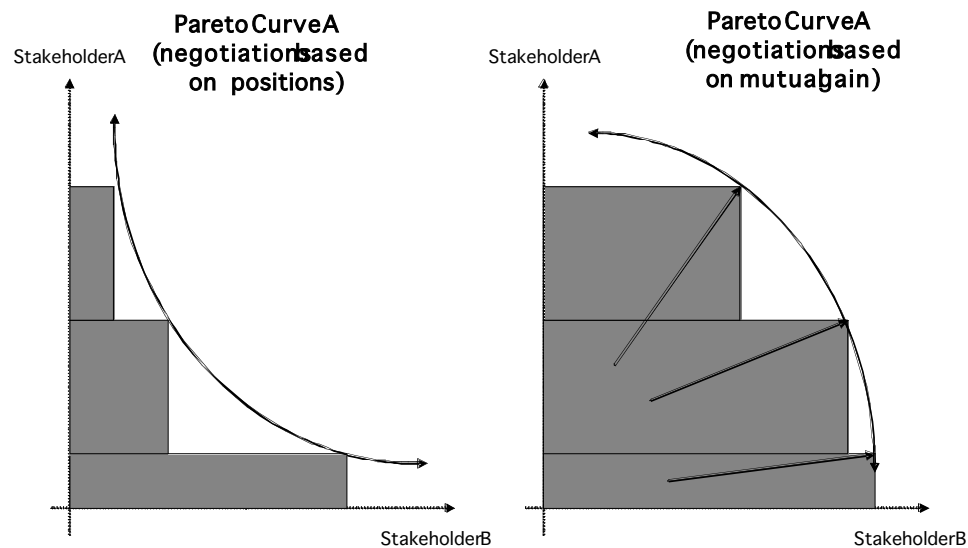
As illustrated in Figure 1, there was a time in human history when an individual could acquire the necessary knowledge and skills to think about an issue globally; he or she could use multiple intelligences to tackle different problems in different ways. With time, individuals became more and more specialized, such that the intelligences required to deal with complex problems became fragmented. Eventually, organizations tried (in vain) to recreate the global view of the “Renaissance Man” through hyper-specialization, the hierarchical organization of disciplines, fields of knowledge, and skills; this is the organized multi-disciplinary approach, such as that of most large bureaucracies. The trans-disciplinary approach takes us one step closer to the holistic

view of the “Renaissance Man”, with individuals working together in an environment where there is no strict hierarchy and where professionals are informed about and involved in the activities of professionals in fields of practice other than their own.

The trans-disciplinary approach in project management promotes both collaboration and innovation as it relies on the sharing of knowledge and expertise, the exchange of ideas, and the participation of all professionals and stakeholders involved in decision-making. Furthermore, this approach to project management requires smaller, more flexible organizational structures, which also tends to promote effective communication, solidarity among team members, as well as greater adaptability and flexibility.

The “partnering” approach to problem-solving and conflict prevention

The second approach or method which helps create the conditions described above, and which is complementary to the trans-disciplinary approach, is the “partnering” approach. Partnering exercises aim to involve and integrate all important stakeholders from the early phases of a project and give them a sense of common purpose. Partnering is based on the premise that problem-solving and negotiations between stakeholders should be based on the sharing of concerns, interests, and objectives rather than on the confrontation of positions, which generally leads to a lowest denominator compromise rather than to a solution that is beneficial to all. Figure 2 illustrates how the utility of stakeholders can be maximized when negotiations are based on mutual gain rather than on positions.



Adapted from a document prepared par John G. Wofford

Fig. 2. The maximization of stakeholder benefits under different negotiating conditions

The three main goals of partnering are: 1) to help prevent conflicts, 2) to consolidate and solidify the “community of professionals” and other stakeholders that the project depends on, and 3) to find innovative solutions to existing and/or potential problems. Concretely, it consists of intensive workshops or work sessions with the stakeholders and the “extended” project team, usually held over two consecutive days and facilitated by an external party. Participation in these workshops is voluntary, but it should be supported by the leaders and decision-makers of each organization.

Partnering promotes collaboration through: 1) the sharing of sensitive information with all participants in the early phases of a project, 2) the revelation, clarification, and (sometimes) elimination of unknowns, 3) the sharing of individual and collective interests, objectives, and concerns, and 4) the clarification of responsibilities among key players and actors in each

organization. This, in turn, allows participants to find, *a priori*, innovative solutions to face potential or hypothetical problems; in other words, partnering allows participants to evaluate risks and opportunities, and respond as a group. More generally, partnering allows for the building of a common perception of the issues, risks, and opportunities at hand among the stakeholders and professionals involved in the project. This, in turn, helps create a sense of solidarity and common purpose among participants, as it makes clear that the difficulties faced by one organization will affect the project as a whole and all other stakeholders.

Emotional intelligence as a prerequisite to trans-disciplinary management

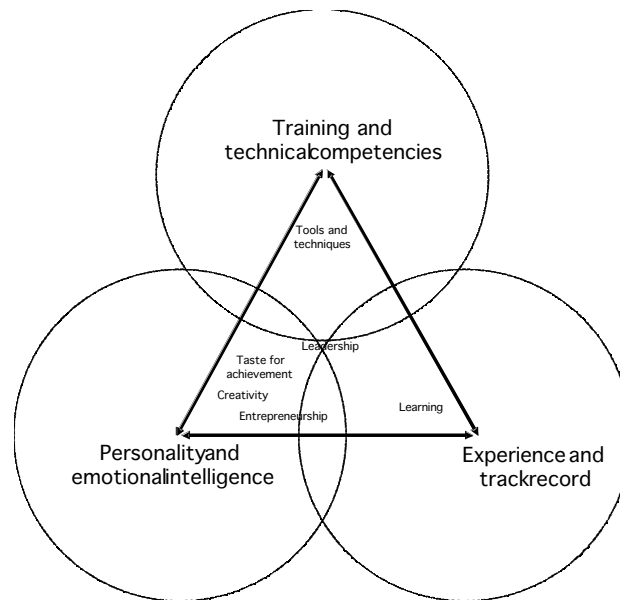


Fig. 3. The combination of abilities required from a project manager

The approaches described above may indeed help create the conditions which will promote and encourage collaboration, communication, and innovation; however, the approaches in and of themselves will have little effect unless they are carried out effectively. This, in turn, requires the project manager and his team to develop not only technical skills but also more importantly, human skills. Figure 3 describes the main competencies and qualities required from a manager and his/her team.

More specifically, the most important abilities and qualities that need to be developed among the project management team members are: the development of a global perspective on the issues at hand, self-sufficiency and self-discipline, the ability to react quickly, to adapt, to anticipate and to seize opportunities, creativity and self-initiative, the ability to negotiate, convince and establish one's legitimacy, empathy and self-confidence, professionalism and a concern for ethical principles, political flair, optimism, and a sense of humour.

In order to develop these abilities, it is important that each member of the team be willing to share his or her know-how, and learn that of the others. Thus, the project environment must foster curiosity and humility rather than over-specialization and complacency. These two qualities must be at the basis of any management approach which tries to bridge over varying professions, decision-making levels, interests and objectives. Indeed, only if each and every professional involved becomes aware that he or she needs the experience and know-how of others, will he or she accept to become an integral part of the professional community.

Conclusions

The solving of complex problems in the global project management context requires the collaboration of all stakeholders in order to find innovative and adaptive solutions which will benefit all parties involved. By and large, the conditions that promote collaboration and innovation are the same: a common threat, common values and objectives, effective and transparent communication, the prospect of gain, and adequate organizational structures. As expounded above, these conditions can, in turn, be created through trans-disciplinary management and partnering.

However, it is not sufficient to preach the importance of inter-disciplinary project management; it is one thing to recognize the importance of crossing over disciplinary boundaries but it is another to actually carry it out. On the one hand, given international competition and the mobility of the labour force, it is relatively easy to sensitize stakeholders to the “threats” which we face from “the outside”. However, establishing effective communication channels and building a sense of common purpose among variegated individuals and organizations in today’s global context is more of a challenge because of cultural and linguistic barriers.

For these reasons, it is important to emphasize the importance of the project manager’s emotional intelligence, as well as his or her ability to develop emotional intelligence among the members of his team. Indeed, the real challenge of the project manager today is not to manage budgets and schedules, but human beings with different apprehensions, beliefs, values, interests, and objectives. The only way to implement trans-disciplinary management, then, is to put human beings at the centre of the project, rather than bricks, and mortar. Project management is first and foremost a psychological and emotional exercise, and not strictly a technical challenge.

Key Lessons Learned:

- The successful realization of sophisticated projects requires collaboration and innovation.
- The conditions promoting collaboration and innovation are more or less the same: a common threat or challenge, common values and objectives, effective communication, and adequate organizational structures
- Trans-disciplinary management and partnering both contribute to creating these conditions.
- The successful implementation of these approaches depends largely on the emotional intelligence of the project manager and his/her team.

References

- Fisher, Roger, William Ury, Bruce Patton. (1991) *Getting to yes: Negotiating agreement without giving in*. Boston: Houghton Mifflin Books.
- Gardner, H. (1983) *Frames of mind*. New York, Basic Books.
- Goleman, Daniel. (1998) “What Makes a Leader?” *Harvard Business Review*, January 2004, pp. 82-91.

Goleman, Daniel, Richard Boyatzis, Annie McKee. (2004) *Primal Leadership: Realizing the Power of Emotional Intelligence*. Cambridge, Harvard Business School Press.

Author's Biography



Clément Demers, architect (OAQ, RAIC), urban planner (OUQ, CIP), and project manager (MGP - PMP) obtained a Bachelor's degree in architecture from Université de Montréal in 1973 and a Master's in Project Management from the Université du Québec à Montréal (UQAM) in 1984.

He has built a distinguished career in the fields of urban planning and project management, most notably at the City of Montréal, where he held the positions of Deputy Director of the Urban Planning Department and Deputy Director of the Housing and Urban Development Department, at the *Société du patrimoine architectural de Montréal*, and at Cadev, the Real Estate Group of the *Caisse de dépôt et de placement du Québec* (CDPQ). Throughout the years, he was involved in several important real estate projects, such as the Museum of Pointe-à-Callière, the World Trade Center of Montreal, the InterContinental hotel, the Chaussegros-de-Léry Complex, the Bagg and Cuvillier-Ostell buildings, and the 1 McGill condominiums project. He is currently General Director of the société Quartier international de Montréal (QIM), which led the urban revitalization project by the same name that has earned 29 national or international awards, including Project of the Year 2005 from the Project Management Institute (PMI).

Governor of the PMI Montréal Chapter and professor (part-time) at the *Faculté de l'aménagement* (Faculty of Urban Planning and Architecture) of the Université de Montréal, Clément Demers has received a number of awards including the Hans Blumenfeld Prize in 2003 from the *Ordre des urbanistes du Québec* (Quebec chapter of Canadian Institute of Planners), the MGP Excellence Meritas Award in 2002, and the Management Performance Award in 2004 from the *Réseau Gestion de l'UQÀM* (the Management Network of the *Université du Québec à Montréal*). His accomplishments also earned him the title of Personality of the Week (journal *La Presse*) in 2005 and the *Institut de design de Montréal's* Personality of the Year Award in 2007.

