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Strategies of Cooperation: Control and Commitment in Mega-Projects

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Public private partnerships are increasingly popular within infrastructure projects. Public administrations and private companies work together in order to successfully realize complex projects. One of the central themes of inter-organizational cooperation in project-based alliances is the control-versus-commitment dilemma. The autonomy of a project organization and the authorization of partners are central in this dilemma, claim Child and Faulkner (1998). When dominant control is exercised by the project organization it involves risks of partners losing commitment to the project. Mega-projects involve a high degree of uncertainty, risk, and complexity; a mixture that is not ideal for hierarchical control (Clegg, Pitsis, Rura-Polley and Marooszeky, 2002). This paper explores how the dilemma of control versus commitment has been dealt with in the Environ Mega-Project.

INTRODUCTION

Mega-projects in the construction of infrastructure are becoming more popular with national governments. Usually commissioned by governments, they are increasingly delivered by private enterprises under a variety of contract conditions. A few examples are the Channel Tunnel (private), the Metro of Copenhagen (public) and the High Speed Train between Stockholm and Arlanda (public-private partnership). The contracts that are most popular seek to overcome the limitations of control where outcomes are delivered by increasingly disparate project teams rather than a vertically integrated organization; Design and Construct (D&C) and Build Own Operate Transfer (BOOT) are two of the most frequently used approaches (Clegg, Pitsis, Rura-Polley and Marooszeky, 2002). As these have grown in popularity it no longer tends to be public service engineers but private enterprises that design and control the construction of bridges, railroads, dikes, motorways and other physical elements of infrastructure. Effectively, the public officers become a contracting agency in a context in which politicians determine the goals and public servants attempt to make these goals and means clear. After that, the partnership may be arranged for the delivery. It is argued that this mode of project delivery helps to improve the efficiency of the public sector (Politt and Bouckaert, 2000).
It is the scale, complexity, number of partners, and duration that distinguish mega-projects from traditional projects. Projects with a multi-

million Euro budget, thirty partners, and duration of twenty years are no exception. These project-based alliances constitute hybrid organizations that combine features of conventional hierarchical management with those of networks. In addition, many mega-projects are characterized by a high degree of uncertainty, as well as a mixture of joint organization and sub-contracting of elements of the workflow to legally separate partners, which, together, make for a high degree of complexity. The partners can be competitors but will still need to collaborate with each other in order to transfer complementary technologies, either because of the sheer scale of the project, or because of some other motives for reciprocal collaboration. The potential for conflict between government and contractor is supposedly reduced as their interests are aligned through focusing on the whole-of-life efficiency of the facility (Clegg et al., 2002: 321); because the contracting agency accepts an operational risk, usually for the first 30 years of the project's operation —in exchange for the profits accruing from the operating lease— it is argued that the public sector will receive a well-designed and well-executed product, built to last, with all the problems that may have been inherent in its functioning resolved. Much of the debt that otherwise would have been bestowed upon the taxpayers on behalf of the government will instead be carried as risk capital by the developers. Apparently, everyone is a winner here: taxpayers pay less tax and get better facilities; governments can be slimmer (reduced in number) as they no longer have to maintain a civil engineering design facility, and contractors gain access to the long-term operating profits derivable from major pieces of public infrastructure, either through charging tolls on users, or through leasing arrangements with government.

In practice, the partners all want to benefit; each of them wants to control the execution of tasks and needs to support the alliance in one or more strategic key areas, any one of which may easily break down (Yohino and Rangan, 1995: 17). Mega-projects are often captured by sectional interests. The promoters of the project, usually a consortium headed by a major investment bank, such as the Macquarie Bank, persuade politicians and bureaucrats to support specific projects. Government, as both keeper of the public interest and partner of the commercial contracting organization, can be placed in a position of structural conflict and incompatibility between its watchman and commissioning roles. Public servants are increasingly exposed to commercial life and its temptations, especially in salary terms, and the more able often opt for a switch from the public to the private sector, because of the greater rewards evident therein. Politicians who are in charge of key portfolios in government make extensive connections with the infrastructure consortia and related providers, and often cash in on them after retiring from public life, causing a decline in public trust in the integrity and neutrality of the political process. Moreover, the vast majority of mega-projects (are seen to) exhibit a paradox: «More and more mega-projects are built despite the poor performance record of many projects» (Flyvbjerg, Bruzelius and Rothengatter, 2003: 6). The main cause of this paradox is inadequate deliberation about risks, and

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a lack of accountability in the project decision-making process (Flyvbjerg et al., 2003). The majority of mega-projects overrun on costs, often fall behind schedule, and fail to deliver in the terms that were used to justify their need in the first place.

In many cases, a mega-project starts with a feasibility study and the identification of alternatives, after which a safety study and an environmental impact study are executed (Flyvbjerg, Holm and Buhl, 2002: 87). Based upon this information a project appraisal is written and a first decision made by the governmental apparatus that exercises control over the budget area in which the proposal has been made. After approval, an enterprise is established to implement the project; applications are made for the required permits, and a financial budget is reserved by the government (Flyvbjerg et al., 2002). The project recruits consultants for its supervision, and contractors are selected for the design and construction. These mega-project phases are often confronted with many (technical) uncertainties, unclear decision-making processes, public protests, conflicting interests, competing power relations, uncertain politics, and extensive media attention given the great prestige involved. Consequently, «power play, instead of commitment to deliberative ideals, is often what characterizes mega-project development» (Flyvbjerg et al., 2002: 7).

The dilemma of control versus commitment is one of the central issues in the organization of activities in project based alliances (Faulkner, 1995; Yoshino and Rangan, 1995; Child and Faulkner, 1998; van Marrewijk, 2004b). In this article the question of how mega-projects deal with the dilemma of control versus commitment will be addressed. To answer this question the case of the Environ Mega-Project will be examined[1]. The findings of this study show that Environ Mega-Project was set up as an autonomous project with control over the (human) resources of all partners. The fighting spirit in the Environ Mega-Project committed employees to the project but drove partners away. They lost their commitment and refused to support the project with employees and knowledge. Only after the project culture had changed were these commitments restored.

The structure of the paper is as follows. First, organizational collaboration and the role of commitment and control are discussed followed by a description of the research methods. Third, the case of the Environ Mega-Project, the project organization, and their partners are introduced. In considering the case, the partners' different perspectives on the Environ Mega-Project and their opposite interests will be highlighted. Further, cultural differences between two partners and the laborious nature of the cooperation between the project management and partners are discussed. Finally, some conclusions are drawn.

1. The name is a pseudonym for a very large European multi-billion Euro project in Otherland, designed to improve the accessibility of costal islands. All partners involved in the project have been renamed.

ORGANIZATIONAL REFLECTIONS ON PROJECT COLLABORATION

Child and Faulkner (1998: 41) state that alliances have to recognize and support a dynamic perspective on dilemmas which stem from their

hybrid nature. Pitsis, Kornberger and Clegg (2004) propose a dynamic perspective on interorganizational cooperation which includes power, cultural fragmentation, ambiguity and complexity. Trust, leadership, culture, contract, and power are critical for a successful synthesis in an alliance. Synthesis occurs between two or more organizations when organizational collaboration is effective (Pitsis et al., 2004: 47). Therefore, an exploration of the control-versus-commitment dilemma in mega-projects should include consideration of power, organizational culture, fragmentation, and ambiguity.

An important question is how a balance between control and commitment can be organized to meet the mega-project's objectives. The organization of cooperative activities can assume a spectrum of forms (Child and Faulkner, 1998: 38). At the one end of this spectrum, a dominant partner organizes the mega-projects according to hierarchical lines. At the other end would be a network model in which collaborating partners are linked together by a variety of relationships. Wijnen, Renes and Storm (2001: 188) distinguish three basic types of cooperation in complex projects. The first type is the consultation or coordination model in which the project coordinates issues concerning content. Project management has little power and authorization, while partners have considerable authority to realize projects goals. The second type is the matrix structure in which project management coordinates issues concerning context and initiates activities. Partners execute and manage sub-projects. Finally, the 'pure' project structure gives little power to partners. Project management initiates, executes and controls all activities. Partners participate with people, knowledge, and resources. In order to reach objectives, each large project has to discuss the focus and the extent of mechanisms of control with the partners involved (Child and Faulkner, 1998: 187).

CONTROL IN MEGA-PROJECTS

The focus of control is a sensitive issue for cooperation in mega-projects. Given extensive media interest in their enormous budgets and the considerable social impact that these mega-project alliances can have, they can fall subject to a permanent political focus (Flyvbjerg et al., 2002). As a result, intensive financial audits and control by parliament are likely to be executed. As to the extent of control, Child and Faulkner (1998: 188) distinguish three categories of alliance. In the first category one of the partners is dominant in decision-making. The second category is called a shared management alliance. Each partner has an active role in the management of the alliance. In the third category the alliance management has autonomy in decision-making. Flyvbjerg advises that project development and execution should be concentrated in one project organization (presentation by Flyvbjerg in The Hague, September 2004). The project organization can be public or private and is able to request accountability from constructors, (sub)contractors, and operators. Flyvbjerg holds that it is the project organization and its management that is responsible for cost overruns, errors in design, and delays in schedules.

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Geringer and Hebert (1989) claim that the success of an alliance is positively related to a relaxed attitude towards control from the side of the partners. The lack of complex control systems stimulates feelings of autonomy and increases motivation, they suggest. Child and Faulkner (1998: 194) identify different types of control mechanisms that can be divided into financial, bureaucratic, and socialization modes. Financial control mechanisms such as input and output control facilitate action on the grounds of controlled conditions and intended results. Bureaucratic control mechanisms include hierarchical and lateral structure. The hierarchical structure emphasizes and supports partner and alliance goals by means of a Board of Directors, the appointment of managers, and a reporting line. The lateral structure influences people to interact across formal boundaries by means of gatekeepers on both sides to ensure accurate communication, and by cross-partner teams. Socialization control mechanisms include important elements such as value socialization, adaptation socialization, behavioral control and personal involvement (Child and Faulkner, 1998: 194). Value socialization defines and creates a common identity through new rituals, traditions and belief systems. Adaptation socialization makes employees familiar with each other's cultures in cultural sensitivity programs and skills standardization. Behavioral control specifies the correct way for the employees to do the work by means of policy, plans, supervision, and specification of methods. Finally, personal involvement signals what partner managers think is important, by means of visits, participation of managers and spoken communication.

COMMITMENT IN MEGA-PROJECTS

Faulkner (1995: 49) observes that commitment is decisive for the success of an alliance. Commitment in a project can be created by internal as well as external alliance management (Yoshino and Rangan, 1995). External alliance management can improve the relation with partners by hiring both partners' employees and specialists for the project. In this way mega-project employees have lateral networks in partner organizations. A strong example of alliance management was the Sydney Harbor Northside Storage Tunnel project in which partners worked together, based upon a minimal contract (Pitsis, Clegg, Marosszeky and Rura-Polley, 2003). In stark contrast with traditional project management, the emphasis here was on socio-technical systems of project management, as the project managers sought to realize a future perfect strategy, in which the central idea was the simultaneity of a notion of something being projected into the future and being thought of at the same time as if it were already completed. In mega-projects which occur under conditions where detailed planning is not viable due to ambiguity, risk and complexity, this future perfect strategy recommends itself (Pitsis et al., 2003). Excessive control in the organizational network may hinder the development of cooperation and commitment between the partners (Josserand, Clegg, Kornberger and Pitsis, 2004). In day-to-day practice, employees become depen-

dent on their colleagues to deal with (technological) uncertainty, ambiguity and difficulties. Employees may experience a double commitment to the partner as well as to the project, which can cause conflict in situations that involve an opposition between the perceived partner's interest and the project's interest.

Cultural incompatibility can obstruct the building of commitment (Cauley de la Sierra, 1995; Lorange and Roos, 1995; Yoshino and Rangan, 1995). In fact, cultural differences can be held responsible for the collapse of many outwardly logical partnerships set in motion with the best of intentions (Spekman, Isabella, MacAvoy and Forbes, 1996). If partners are unable to cope with diverse management styles and cultures within the alliance, decision-making processes can slow down and tensions are likely to emerge. The cultural distance between partners is an indication of the expected cultural difficulties during cooperation (Hofstede, 1991; Trompenaars, 1993). Moreover, successful cross-cultural cooperation is related to cultural differences between partners, balances of power, possible historical ethnic tensions, and formal and informal strategies of cross-cultural cooperation (van Marrewijk, 2004a).

Child and Faulkner (1998: 245) argue that the dominance of a partner's culture and the attempt to integrate partners' cultures are two fundamental choices related to managing cultural diversity, for which they formulate four different strategies (Child and Faulkner, 1998: 245). The synergy strategy merges partners' cultures. The domination strategy integrates partner's cultures based upon one dominant partner's culture. The segregation strategy keeps a balance between the partner's cultures. The breakdown strategy, in which cooperation ends because one partner's culture dominates the other partners against their will. Although it appears not to be a rational option, this last strategy sometimes emerges in cooperation strategies in which strong emotions are involved (e.g., van Marrewijk, 2004a).

In conclusion, if the dilemma of how to keep a balance between controlling a mega-project and securing commitment from partners is explored from a dynamic perspective, financial control, bureaucratic control, socialization control, power relations, attitudes to control, project culture, and cultural compatibility of partners need to be included.

METHODS

Data for this article has been collected as an integral part of a larger evaluation research on the organization and management model used in the Environ Mega-Project. The evaluation research was executed between September 2003 and September 2004 by a team of four internal and two external researchers under my supervision. The evaluation explored the organizations involved, their expectations, and their reactions to critical incidents. Critical incidents were events during which the social, political and cultural system was under pressure. Data, methodological and researcher triangulation were applied to increase the reliability of the research ('t Hart, van Dijk, de Goede,

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Jansen and Teunissen, 1996). The methodological triangulation that was used included biographical interviews, observation, participant observation, group interviews, and desk research. Participant observation was executed for a year at the project's headquarters, the regional offices, and the offices of principal partners. All interviews were conducted by two researchers, one taking notes, the other doing the interview, which 't Hart et al. (1996) call researcher triangulation. Finally, data triangulation was applied; interviews, biographical interviews, observations, websites, public reports, management reports, internal reports, and interviews with identities uncovered from public investigations were consulted. Eighty-five biographical interviews were distributed over the management and work floor of Environ Mega-Project and different partners to increase the representativeness of the research. Biographical interviews helped understanding of the development of value orientations and stimulated reflexivity on the part of those interviewed (Koot and Sabelis, 2002). Interviews typically lasted from one and a half to two and a half hours and were, when necessary, extended. During the execution of the research, a group of managers of large projects has, on two occasions, reflected upon the findings. Furthermore, findings were discussed with employees during lunch readings in the project offices and in knowledge sharing meetings.

THE CASE OF THE ENVIRON MEGA-PROJECT

The Environ Mega-Project is a Public Private Partnership that started in the early 1990s and was finished in 2004. The project used non-proven technologies; it involved participants from different industries and focused on a result that was difficult to split into rational parts. The project was a Public Private Partnership in which the national government, construction firms, engineering and consultancy firms, investors and private companies participated (**Figure 1**). It was partly pre-financed by the national government and partly by private banks and investors. The Ministry of Public Works controlled the project budget in order to avoid cost overrun and reported to the Minister. Two departments of the Ministry of Public Works were responsible for the project. Steer was responsible for the initiation and decision-making phases, while Flow was in charge of the realization phase (**Table 1**). Another important partner in the project was Straight, a centre of expertise for project management and infrastructure construction, that gave account to Steer. Different control mechanisms were used to avoid cost overrun, time delays and changes in scope.

CONTROL MECHANISMS IN THE ENVIRON MEGA-PROJECT

Financial control mechanisms were used to avoid cost overrun and to predict financial risks, especially during the execution phase of the project. During this phase the reserved budget is spent and it is at this stage that possible deficits come to light. Independent agencies did

regular financial audits on the legitimacy and appropriateness of expenditures, which resulted in recommendations to improve control cycles. A small professional control unit within the Environ Mega-Project supervised the implementation of these improvements and could, if necessary, report directly to the Ministry of Public Works. Informants perceived this control unit as the corporate 'conscience'. Furthermore, the accountancy department of the Ministry of Public Works and the financial department of Flow executed financial controls. According to the project manager, the implementation of such a tight financial control system was successful in predicting budget spending:

«We were successful, because at the moment we spent money, we had an auditor's certification. We could make prognoses all year round of our costs for that year with a margin of less than one percent. That was impressive.» (Interview with project manager).

As the Environ Mega-Project was an independent project, rather than one run from within the bureaucracy of the public sector or the hierarchy of a single company, bureaucratic control mechanisms were not

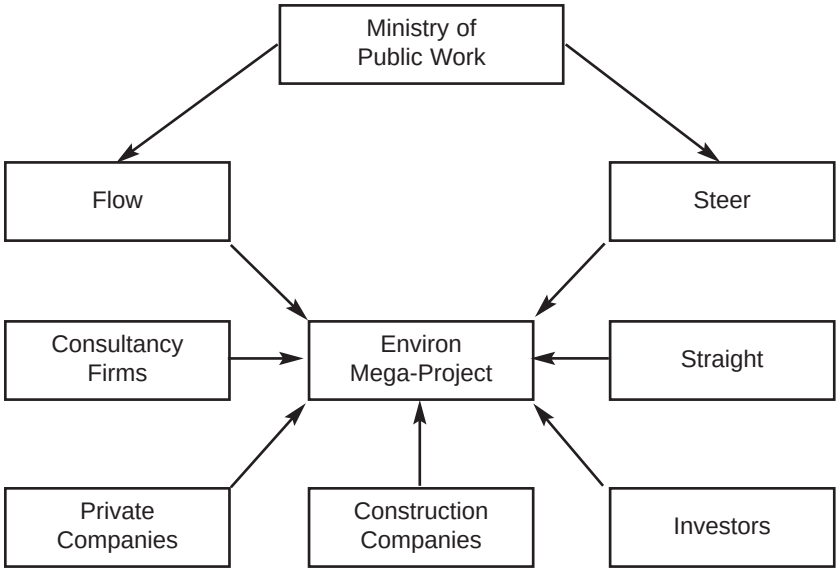

Figure 1. Partners Involved in the Environ Mega-Project

Table 1. The Different Phases in the Environ Mega-Project

Period	Phase	Organization
1988 - 1991	Initiation	Steer
1991 - 1998	Decision-making	Steer
1995 - 2000	Preparation for realization	Steer
1999 - 2004	Realization	Flow
2004 -	Exploration maintenance	Steer

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very clear. The project organization experienced a lot of freedom in the initiation and decision-making phase. Control of the project was at its most blurred in the year 1999, as the project was under the supervision of both Steer and Flow at the same time. Flow was responsible for parts of the project that could already be realized while Flow was responsible for parts that were still in the process of decision-making. The decision to split the Environ Mega-Project in this way was opposed by the project management. These two departments, Flow and Steer, represented two different organizational cultures. The project management was afraid of loosing control over the project as these two departments had a poor record of cooperation. The advantages of splitting the project were that it would give it maximal flexibility to adapt to political developments in the context of public administration. The disadvantage of this situation turned out to be vague bureaucratic control and cooperation problems between Flow and Steer.

«Environ Mega-Project had a vague structure, in which Flow, Straight, consultancy firms all did something but in which the responsibilities were not clear. Straight wanted a structure with a clear commissionaire role» (Interview with manager, Straight).

Due to their relatively independent situation, the management of the Environ Mega-Project initiated, managed, and executed all activities related to the construction of infrastructure. All other partners, including Straight, had little authority in the project. That was remarkable, given that Straight is a centre of expertise for the construction of infrastructure. The Environ Mega-Project needed Straight as a partner. To include the cooperation of Straight and other partners a steering committee was set up, in which all partners would participate to prepare for the realization phase. However, the partners did not agree on the organization of activities recommended for the project and the result was that the Environ Mega-Project was in a state of conflict between nearly all partners, so serious, in fact, that these partners no longer wanted to cooperate. Informants stressed the lack of enthusiasm for the dominant and autonomous position of the project organization. Partners had no direct influence on decision-making or control over the activities, as they would only be responsible for support in terms of people, knowledge, and experience. The partners preferred to opt for a matrix model in which they would have extended authority and would be responsible for specific parts of the project. They wanted to design infrastructure and manage a part of the project themselves.

«Our proposition was to give certain parts of the project to the different partners, and that these partners would give account to the project management» (Interview with manager, Straight).

During the preparation of the realization phase, the management of the Environ Mega-Project selected a non-classical model of project management to support the innovative character of the project. The model was based upon transparency, a orientation on organizational processes and a coaching leadership style in contrast to the more traditional model used in Flow, in which control and hierarchy dominated.

«Flow is a control organization, completely different than the life-cycle principle of our project. There was a dilemma of freedom versus control. I didn't want to control the project but to make it transparent in order that all involved organizations could easily follow the process.» (Interview with project manager).

Flow perceived the Environ Mega-Project as a project full of risks, due to the lack of focus on control. When Flow took over the project during the realization phase they replaced the project manager. With the introduction of a more traditional project manager from Flow, conventional control and hierarchy were re-established. The management supervised compliance in terms of the formal rules and stipulated procedures, and was supported in this by the controller. Employees were now confronted with less freedom and a more bureaucratic organization.

Socialization mechanisms hardly worked in the Environ Mega-Project. Only a few employees of the partner organizations participated in the project. During the preparation of the realization phase, the project organization's autonomy gave rise to much irritation and discussion within the ranks of Straight, Flow, and Steer.

«There was a strong identification with the project. Consequently they were not open and developed an attitude that put others off. They went their own way.» (Interview with manager, Steer).

The project was considered by its partners to be a project at a distance. Partners did not want or were not able to support the project with employees and knowledge. Consequently, it was hard to find experienced, qualified employees. More than 95% of the employees working on the Environ Mega-Project were hired from engineering consultancy firms rather than sourced from within the partner companies. Therefore, the experience and knowledge of Flow, Straight and the other partners were not included to a great extent in the Environ Mega-Project.

«We have had sessions with the partners to discuss the cooperation model. But there wasn't a cooperative attitude.» (Interview with manager, Ministry of Public Works).

INTERVENTION IN THE PROJECT-CULTURE

A strong commitment was needed of employees to guide the project through the initiation and political decision-making phase. The project management of the Environ Mega-Project tried to obtain this commitment by developing a 'fighting spirit' project culture based upon values such as independency, innovativeness, entrepreneurship and goal orientation (see **Table 2**). The employees of the Environ Mega-Project strongly identified themselves with this project culture, which they also referred to as the episode of the 'Gideon's gang'. In the bible story, the Lord has chosen Gideon to head up the deliverance of Israel from the Midianites. God told Gideon that he needed only 300 out of his army of 30,000 men. It was better to have a small army of men who trusted God than to have a big army that included the fearful, because fear is contagious. Gideon's gang is a metaphor for a brave group of men that

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knows no fear and uses creative, innovative methods to reach their goals. As many of the employees working in Flow, Steer, Straight, and the Ministry of Public Works have a protestant history, the group of employees in the Environ Mega-Project was called 'Gideon's gang'. These employees were proud to be working on an innovative project with technological challenges.

Although the fighting spirit was functional in the decision-making and preparation for realization phase, it was dysfunctional with the realization phase in which financial control became predominant. Organizations in the infrastructure sector run the risk of becoming locked in to what Bate (1994) calls a dysfunctional culture. A static perspective on transformation, a low capacity for self-reflectivity, an inside-oriented focus, and no experience with market orientation, all decrease the possibility of self-unlocking. If this is the case, interventions from outside the organizations are needed to unlock and achieve organizational transformation. This type of thinking seemed to be the reason behind Flow's taking over of the project in the realization phase and the installing of a new project manager. An intervention in the project culture by the new project manager resulted in cultural change. Flow's organizational culture was introduced into the Environ Mega-Project and slowly the overall culture changed toward a more traditional, formalized project (see **Table 3**).

Table 2. Project Culture during Decision-Making and Preparation for Realization Phases

Themes	Project Culture
Artefacts	Special logo, flag, paper, headquarter apart from government
Rituals	Get-togethers, farewell parties
Myths	Speaker's corner, speeches of the project director-engineer Heroes: engineers
Rewards and punishment	Rewards for creative and innovative behavior Punishement for not sharing the vision, being conservative
Communication	Internal: informal, based on personal networks External: focused on public relation, information giving
Recruitment and selection	Competences: creative, dealing with chaos, entrepreneurial, independent, result-oriented, young, non bureaucratic, committed Using personal networks for recruitment 90% external contracts
Management style	Visionary, chaotic, hectic, creative, ad-hoc, non-conformist
Metaphor	Gideon's gang
Value Orientations	Traditional project management will not bring the project to a success Innovation is necessary to be successful Making somtehing that is never been made is great The Environ Mega-Project is a unique project with unique solutions The best people together give the best result Budget is important but reliability of the solution is more important
Basic assuptions	The project is a reorganization of the infrastructure market Technologic rational orientation: reduction of complex problems to technologic problems Protestant ethics, work hard, service the public, be honest, lawfulness Strong loyalty to national government, the minister has to be served at all times Trusting personal networks

LABORIOUS COOPERATION BETWEEN PARTNERS AND PROJECT

Although the project management of the Environ Mega-Project was successful in creating a project culture, it was not doing well in obtaining the commitment of partner organizations during the preparation for the realization, and actual realization, phase. Extending a common project culture beyond the limits of project alliance partners' sovereignty is difficult; when stakeholders have to deal with the world of other organizations and individuals outside their sovereign realms, they lack authoritative resources to impose their will (Clegg et al., 2002). The commitment of involved partners was seriously under pressure, due to different interpretations of the Environ Mega-Project goals. Five of these can be distinguished (see **Table 4**). According to the findings, the project mission and goal were clearly formulated and relatively constant across time. However, the interpretation of partners differed across both time and setting. The meaning given to the formal project goals was dependent on organizational context and interests.

Furthermore, the commitment of the partners involved was under pressure during the preparation for realization, and the realization phase, due to different interests. Four different and sometimes opposing interests can be distinguished (see **Table 5**).

Table 3. Project Culture during Realization Phase

Themes	Project Culture
Artefacts	Using the logo of the Ministry of Public Works, flag, paper, integration of regional offices
Rituals	Celebrations of project goals Company days
Myths	Heroes: financial controllers, risk managers
Rewards and punishment	Rewards for control and integral management,diplomatic behavior, calculating risks Punishment for isolating, focusing on own project, independent behavior and bad control
Communication	Internal: formal External: emphasizing the benefits of the project for Danish citizens
Recruitment and selection	Competences: risk avoidance, diplomatic, empathetic, trustworthy, control Civil servants
Management style	Diplomatic, avoidance of conflicts, cooperative, centralized, control, procedural
Metaphor	Diplomats
Value orientations	Control, hierarchy and traditional project management bring success Innovation is no longer necessary to be successful Risks have to be avoided or be communicated well in advance in order to prevent political unrest Lawfulness, integrity, political stability Conflicts can be avoided
Basic assuptions	Technologic rational orientation: reduction of complex problems to technologic problems Protestant ethics; hard working, serve the public, be honest, lawfulness Strong loyalty to governement, the minister has to be served at all times Trusting personal networks

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FIGHT FOR POWER BETWEEN FLOW AND STRAIGHT

The commitment of Flow and Straight to the Environ Mega-Project was crucial for success. However, the omen for successful cooperation was not good. Both Flow and Straight operate in distinct cultural settings, due to their technical specialties. Both organizations comprise closed communities of specialists. In the past, conflicts over control had occurred between Flow and Straight. Therefore, joint projects were called 'touchy works', for which a very detailed protocol of cooperation needed to be designed. In these protocols responsibilities were demarcated in discourses. Therefore, a joint venture was proposed as way of coming to a solution.

Given the size of the project, the complexity and the changes in such a project for innovative organization of construction as well as technologies, it is necessary to maximally utilize all the available knowledge (Cooperation agreement, 2000).

During the preparation for the realization, an advisory council was installed to coordinate the interfaces between both subprojects. Both organizations were integral in their responsibility for the realization of the project. However, Straight's role was minimized by both Steer and the government. European regulation prohibited Straight gaining competitive advantage, compared to other competitors, in the realization of the project. From the perspective of Flow, Straight was unable to bring

Table 4. Different Perspectives on the Environ Mega-Project

Partner	Period	Perspectives
Straight	Preparation for realization	Build and operate the infrastructure Being a serious partner in the realization of the project
Steer	Preparation for realization	Possibility to reform the monopoly in the infrastructure sector
Gideon's tribe	Decision making Preparation for realization	Not a construction project, but an innovative concept Fundamental change of the infrastructure sector Introducing new concepts of project management
Bridge Builders	Realization	Getting control over financial risks Integration of fragmented project
Flow	Realization	Becoming a monopolist in the management of infrastructure projects

Table 5. Different Interests among Partners

Period	Interest
Environ Mega-Project	Independently realizing an innovative concept
Steer	Provoking changes in Straight organization
Flow	Monopolist in the management of infrastructure projects
Straight	Preservation of monopoly on infrastructure project

about the innovation necessary for this large project. Furthermore, Flow's administrative system of control was chosen as a platform for the Environ Mega-Project system. According to Straight, these facts gave too much control to Flow. The equal cooperation envisaged turned out to be project control by Flow with (human) resources and knowledge inputs from Straight. This was not acceptable, and Straight threatened to resign from the project. When it became clear that the control was indeed in Flow's hands, Straight ended its cooperation and no longer supported the Environ Mega-Project. The project manager of the Environ Mega-Project reflected upon this period:
«My most impressive personal experience with this project was the clash of cultures and structures.» (Interview with project manager, Environ Mega-Project).
During the realization phase the commitment the Environ Mega-Project and the partners Straight, Flow and Steer was slowly being restored. The project management acknowledged that it needed the cooperation of other partners in order to reach the objectives successfully. A number of public employees from Flow joined the project and changed the management style in the project to a more diplomatic style, avoiding conflicts, and focusing on cooperative behavior. The organizational culture changed towards a centralized hierarchical organization with a focus on procedures, (financial) control, and human resources. Through knowledge management and the exchange of knowledge organizational networks were restored with Straight. Although the project management encounters old sores and antagonists, slowly more and more partners committed to the Environ Mega-Project.

CONCLUSIONS

In this paper the question of how mega-projects deal with the dilemma of control versus commitment has been addressed. The complexity, duration, fragmentation, time schedule, organizations involved and budget of mega-projects make it difficult to study these phenomena from a traditional project management perspective. However, considerations of power, cultural differences, different interests and project culture were not included when the management of the Environ Mega-Project adapted a 'pure' project structure with little power given to the partners. According to the management, the autonomy of the Environ Mega-Project was crucial for success, but little reflection was made on the cultural risks of such a model. The management was successful in stimulating a strong identification of employees with the project by creating a project culture in which entrepreneurship, innovation, creativeness and independency were highly valued. This 'fighting spirit' resulted in a strong commitment of employees but irritated the partners. The autonomous position of the Environ Mega-Project decreased the partners' commitment. Opposed interests and different interpretations of the project objectives resulted in a power struggle over control between project organization and the partners. The non-relaxed attitude towards control by partners and project organization was not very

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fruitful, an explanation which is consistent with the premise of Geringer and Hebert (1989) that a relaxed attitude is necessary for success. Lack of commitment resulted in the participation of very few employees from partner organizations in the Environ Mega-Project.

Interestingly, in the Environ Mega-Project case, there was a lack of reflection on the development of a project culture during the different phases. In their work on alliance culture, Clegg et al. (2002) do not mention this issue of cultural change. The innovative, creative and entrepreneurial project culture was functional during the decision-making phase but started to become dysfunctional during the realization phase. An intervention by Flow and the new project manager changed the project culture.

The synergy strategy to include Flow and Straight in the Environ Mega-Project failed as both demanded authority over the project. The shift from a synergy strategy towards a domination strategy is a risk for many project-based alliances (van Marrewijk, 2004b). The domination strategy of Flow was not approved by Straight. The struggle between the two partners ended in what Child and Faulkner (1998) call a breakdown strategy. With the withdrawal of Straight, the Environ Mega-Project lost an important source of knowledge and experience.

The results of this empirical study have implications for the management and study of future mega-projects. Much emphasis will be put on control mechanism in these future mega-projects, now that politicians give more attention to their outcomes, as critiques such as those of Flyvbjerg become more widely known. Flyvbjerg suggests to abandon the myth that every project is unique (presentation of Flyvbjerg in The Hague, September 2004). One of his recommendations is for governments to use one project organization that is responsible for both development and realization. Implicitly, this seems to presage a control vested in government methodology, where government seeks to retain control over both planning and implementation, following from Flyvbjerg's diagnosis that if government can control both design and implementation then a blow-out in costs is less likely to occur. The results of the case studied here, however, suggest that special attention should also be paid to the control-versus-commitment dilemma in future mega-projects, irrespective of a government's role. Pitsis et al. (2003) have already shown that explicit attention for the commitment of partners in a mega-project during the initiating and decision-making phases can lead to success. Therefore, we require more explicit attention for the socio-technical aspects of mega-projects in future organizational studies.

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