Managing intra-organizational conflict in projects; a case study at network operators

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Abstract: Many internal actors are involved in the execution of infrastructure projects at network operators. These actors share an organizational goal but also have individual interests that can be conflicting with each other. Intra-organizational conflicting interests are difficult to manage because among others the complexity of the network and projects, organizational segmentation and complex procedures. There are three station projects at the Dutch rail operator ProRail, one project at Schiphol and one project at Rijkswaterstaat analysed to research how they deal with intra-organizational conflict and what makes its management difficult. Improvements for managing intra-organizational conflict at ProRail can among others be made by changing the project team structure, transferring the project teams to asset management and by making process agreements in the beginning of the conflict. The recommendations made in this research need to be worked out in detail because they will have other effects on the organizational performance as well.

Keywords: conflict management, infrastructure projects, intra-organizational conflict, process management, project management.
Introduction

Modern societies would not exist without infrastructure like railways, roads, airports and electricity networks. In this decade $22 trillion will be spend on infrastructure projects worldwide (Flyvbjerg, Garbuio, & Lovallo, 2009). Infrastructure projects are not only necessary to maintain the network, but also to meet the ever-changing demand, increasing safety standards and environmental goals (Arts, Dicke, & Hancher, 2008). One of the organizations that executes many infrastructure projects is ProRail, the Dutch rail infrastructure operator. ProRail is responsible for the maintenance, construction, management and safety of Dutch railways (ProRail, 2012). These projects are challenging due to their effect on the complex rail network, multiple external stakeholders (like contractors, municipality, province and inhabitants) and the many departments of ProRail that are involved and have different interests.

A problem with managing these projects is that there are many internal with conflicting interests. The departments have of course shared organizational goals, but trade-offs always need to be made. Examples are trade-offs between safety and costs or maintenance and design. These examples sound simple but can be difficult to resolve, certainly if tensions between departments heat up. If the conflicting interests are not resolved properly the project or organizational performance can be affected. Therefore it is important that intra-organizational conflicting interests are managed well.

Organizational conflict occurs when actors engage in activities that are incompatible with those of colleagues within their organization (Roloff, 1987). These activities are often related to change and are organized in the form of projects. Think of a change to an organization, network or product. Causes for conflicts can be actors with unaligned attitudes, values, interests or goals and interdependence in the performance of functions or activities (Rahim, 2002). In this paper the word conflict does not refer to a fight or argument but only to a situation where actors with opposed interests need to reach an agreement, often through a negotiation. Conflicts can even be useful to a certain level because they can prevent groupthink and stimulate criticism & innovation. Different values of an organization need to be safeguarded in order to be successful (Rahim, 2002).

Too much conflict will however distract from normal business, create a hostile work environment and make necessary cooperation impossible (Huczynski & Buchanan, 2007). The effectiveness of an organization does not depend on the success of each department’s fulfilment of its specialized task. The integration of each departments tasks, so that their activities aid or at least do not conflict with those of the others, is equally important (Wall, 1985). This stresses the importance of managing conflicting values properly and to prevent escalation into disputes.
Already a lot is written about intra-organizational conflict, especially in the sixties and seventies, but this is never specifically applied at infrastructure projects. This research analyses how ProRail handles intra-organizational conflicting interests at station projects and a comparison is made with two other network operators (Schiphol and Rijkswaterstaat). This leads to the following research question: How do network operators manage intra-organizational conflicting interests in projects and how can this be improved? There will be focussed on the factors that cause conflict, which interventions are possible and how the management of intra-organizational conflict can be improved.

First the research set-up will be elaborated by explaining the choice for case studies as research method, the framework that was used and how the cases were selected. Secondly the outcomes of the case studies at ProRail will be explained. Thirdly the case studies at the other network operators are explained. Finally the conclusions will be drawn and recommendations to improve the management of intra-organizational conflict at ProRail are given.

Research set up

After a literature research about project management, conflict management, intra-organizational conflict and process management, three station projects at ProRail were analysed. In each of these projects three conflicts were reconstructed by interviewing the involved people. Next one project at Schiphol, the Dutch main airport, and one project at Rijkswaterstaat, the operator of the highways, were analysed at the other network operators. In this section it is shortly explained why case studies are chosen as research approach, which cases are selected and which framework is used to structure the research.

Case studies as research approach

Case studies can be described “as an empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used” (Yin, 2003). Case studies are suitable for this research because a “how” question needs to be answered, the control about the research object is little and the context is considered to have a significant effect (Yin, 2003). The case studies are analysed in depth to reconstruct events and to explain why certain decisions were taken. Therefore only a few cases were analysed in depth in instead of analysing many cases superficial.

A commonly heard criticism on case studies as research approach is that there cannot be generalised from a single case. Therefore multiple carefully selected cases were analysed. Another criticism is that the data in case studies is often handled unsystematically (Yin, 2003). To resolve this a framework was used in this research to collect the data in a systematic way. This also helps to compare the cases with each other.
This research uses a multiple case design because it is stronger than a single case regarding generalization. Besides, multiple cases are needed to make a comparison to find success factors for conflict management. An embedded case study set-up was used instead of holistic one because there was also paid attention to the subunits and processes within each case instead of only analysing the global nature of the subject. This allows comparing the subunits, like an intervention, with the subunit of another case.

Case selection
The cases must fulfil multiple requirements in order to be suitable for this research. First of all there must be enough information present to analyse the projects. This means that the employees must be willing to cooperate, that they project documentation should be available and that email messages can be analysed. A second requirement concerns the amount of conflict. Two projects were analysed which had a lot of conflict and one project that had little conflict. A third requirement is that the context of the projects must be different. One large project and two smaller projects were analysed. All three projects were managed by different project manager. The individual conflicts are selected together with the project managers because they have the best overview. The following projects are chosen (Op de Woert, 2013):

Nijmegen-Goffert Station
Nijmegen-Goffert is a regional new station project in the east of the country and is almost in the execution phase. The project had many intra-organizational conflicts because it deviates from multiple regulations and has a more challenging design than standard station projects. Hence conflicts occurred between different departments in the project. The project is well documented and the project team is willing to cooperate so there is enough information available.

Rotterdam Central Station
Rotterdam Central Station was analysed because the project has because of its size a completely different context than the other two regional station projects. The project had many external conflicts but these were settled by the externally hired project manager. The project is more complex due to its size and has a high priority in the organization. The project requires a lot of flexibility from other departments but not many internal conflicts occurred. The project is almost completed and is still on schedule. The project documentation is difficult to analyse due to the size of the project but the project team is willing to cooperate.

Westervoort Station
Westervoort is a project that just like Nijmegen-Goffert was built for the city region Arnhem-Nijmegen. It was also a regional new station project and went in service in 2011. The project is managed by a different project manager and is slightly smaller than the station of Nijmegen-Goffert. The project is managed well but is still not transferred to the operational
department. There is much documentation available and the project team is willing to cooperate.

**External case studies**

The situation at ProRail was compared with that of two other network operators; Schiphol, the main airport of the Netherlands and Rijkswaterstaat, responsible for the high- and waterways. Because time was limited only one conflict in one project was analysed at each network operator. At Schiphol this project was about centralising the security check (budget of 354 million euro), the project at Rijkswaterstaat was about widening the highway A28 (budget of 100 million euro).

The organizations operate different infrastructures and differ in size but showed many similarities. All three can be categorised as high reliability organizations and have a separate project, asset management and traffic control department. All have a network that is both technical and organizational complex which makes the management of intra-organizational conflicts more difficult. They are also bound by strict regulations and are controlled by the government.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Project</th>
<th>Conflict</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProRail</td>
<td>Nijmegen-Goffert</td>
<td>Location of station</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maintainability of glass wall</td>
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<tr>
<td></td>
<td></td>
<td>Innovative handrails</td>
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<tr>
<td></td>
<td>Rotterdam Central</td>
<td>Station furniture</td>
</tr>
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<td></td>
<td></td>
<td>Platform floors</td>
</tr>
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<td></td>
<td></td>
<td>Decommissioning of train platforms</td>
</tr>
<tr>
<td></td>
<td>Westervoort</td>
<td>Project administration</td>
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<tr>
<td></td>
<td></td>
<td>Visibility of signals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tendering of back-office contract</td>
</tr>
<tr>
<td>Schiphol</td>
<td>OneXS</td>
<td>Tendering of the gatehouses</td>
</tr>
<tr>
<td>Rijkswaterstaat</td>
<td>Widening of A28</td>
<td>Construction of sound barrier</td>
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</tbody>
</table>

**The framework**

A framework was constructed to analyse the conflicts in the projects in a systematic way. The framework is based on the literature and theory that was analysed in the beginning of the research. The framework, which can be found in table 2, consists of five parts. First the project context will be analysed so more information will be known about the environment in which the conflict took place. The context factors are based on Boggelen (2011) but are specified for this research. Next the process of the conflict will be reconstructed by describing the different phases that Pondy (1967) distinguishes. As a third step the underlying structural causes of conflict will be analysed. These factors are deviated from an extensive literature research. In the fourth step the interventions that were done to manage the conflict will be analysed. Finally the success of
the interventions will be analysed by looking from a project, process and organizational perspective. Part two till four of the framework must be repeated for each individual conflict, part one only for each project. The interview templates that were used to analyse conflicts is based on this framework (Op de Woert, 2013).

Table 2 The framework for analysing conflicts in projects

<table>
<thead>
<tr>
<th>Subject</th>
<th>Question</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Project context</td>
<td>What is the context of the project?</td>
<td>Internal &amp; External stakeholders, Contract, Nature of project, Project team</td>
</tr>
<tr>
<td>2  Conflict process</td>
<td>How went the process of the conflict?</td>
<td>Aftermath, Latent, Felt &amp; Perceived conflict, Conflict manifest, Aftermath</td>
</tr>
<tr>
<td>3  Structural causes of conflict</td>
<td>What were the structural latent factors of conflict?</td>
<td>Organizational structure, Project complexity, Working methods</td>
</tr>
<tr>
<td>4  Conflict interventions</td>
<td>Which interventions were done to manage the conflict?</td>
<td>Latent, Felt &amp; Perceived conflict, Conflict manifest, Aftermath, Overall</td>
</tr>
<tr>
<td>5  Success of conflict management</td>
<td>Were the interventions successful?</td>
<td>Project performance, Process performance, Organizational performance</td>
</tr>
</tbody>
</table>

Data gathering

Multiple employees at ProRail were interviewed before the actual conflicts were analysed. This “sketching of the scene” was necessary to get background information about the working methods and project life cycle. The specific conflicts were analysed by interviewing all of the involved actors, so all sides of the stories would be heard. These interviews were recorded, written down and if desired checked by the interviewees. Forty people were interviewed in total for research of which some multiple times. The project documentation like reports, minutes of meetings and email messages were analysed as well to prepare and complement the information of the interviews.

Findings from the case studies

The most remarkable findings from the case studies will be elaborated next. The cases were compared by looking at the differences and similarities of the different variables that were found in the case studies.
The findings are categorised according to the structure of the framework. More detailed comparison can be found in Op de Woert (2013).

Project context
When comparing the project context it was noticed that the variable project size is related to the availability and commitment of internal actors. Large projects are regarded as more important for the organization and the actors are therefore more committed. This commitment is important for successfully managing the conflicts (Jehn, Rupert, Nauta, & van den Bossche, 2010; Walton, Dutton, & Cafferty, 1969). If project managers are aware of the fact that smaller projects have a lower commitment and availability of internal actors, they can take this into account while managing the project.

The small projects had to hire expertise from the matrix organization while these were part of the project team in the large projects. Although these experts were part of the project department they were not regarded as part of the project team because they only worked a few hours a week on the project and were located at their own offices. Conflicts with these employees are difficult to resolve because there is no clear hierarchy with the project team and they do not feel committed to the project. Large projects do not have these problems because the employees fall under the responsibility of the project manager and they work in the same office. Therefore they are more involved in the project.

The conflicts with better process agreements were managed more successfully. These conflicts had better process agreements because they had interfaces with other projects and were therefore taken more seriously. Other conflicts often had no process agreements because the project managers did not see the value or no problems were expected. Another finding was that the conflicts in which the number of actors increased during the process were managed less successfully. The actors that were involved in a later stage were less constructive to resolve the conflict and were not always aware of the interests of the other actors.

Process variables
Frustrations had a negative effect on the satisfaction about the process. Giving room to talk about frustrations was proven have a positive effect on the successful management of conflicting interests, just like Fisher, Ury, and Patton (1999) indicated.

The conflicts with periodical meetings scored better on communication, especially formal communication, like expected. However only meeting on a regular basis was proven not to be sufficient for a successful process, especially if the actors have not worked with each other before. They should be accompanied by clear process agreements.

In multiple conflicts the number of actors increased during the process of the conflict. The new involved experts had a very narrow role orientation and there was clearly conflict asymmetry because the
employees were not aware of the interests of the project department. Project managers must be aware that the actors that are involved later will probably cause a decrease in conflict symmetry and will require additional effort to be convinced.

**Structural causes**

The first thing that was noticed when analysing the structural causes in the case studies was that all of the structural causes, with segmentation, complexity, and procedures in particular, played an important role in the intra-organizational conflicts. Due segmentation the actors had different interests and had difficulty to emphasize with each other’s values. Sometimes the actors were also geographically segmented which made it difficult to communicate and to involve the actors in the project. This relationship between communication, commitment and geographically segmented team was already acknowledged by Hinds and Bailey (2003). Periodical meetings were proven to be useful to compensate the negative effects of segmentation.

The (technical) complexity made it difficult to resolve the conflicts and led to the involvement of experts with a narrow role orientation. The procedures stimulated functional conflict but were often unclear and led to an evaluative role of the involved actors. The procedures did not always lead to a clear hierarchy between the actors. The conflicts with an unclear hierarchy that were managed successfully had conflict symmetry; if both actors regard the conflict as important there is no need for one actor to be in charge.

A remarkable finding was that the conflicts in which the solution space was small, were managed more successfully than the other conflict, especially regarding satisfaction of the actors. This can be explained by analysing the process of the conflicts. In these conflicts the actors could not find a solution for the problems so when an opportunity appeared, the grabbed it with both hands.

**Interventions**

Escalation, conciliation, mediation, problem solving, forcing and negotiation were used as interventions to manage the conflicts. There were also smaller interventions were also made by the actors which contributed to the successful success of the previously mentioned main interventions. Think of involving the actors early, separating frustrations and emotions, focussing on conflict symmetry and increasing the number of options. The conflicts in which the interventions were not successful scored lower on satisfaction.

Escalation as intervention led to a lower satisfaction and was only successful when both actors escalated. Conciliation and mediation were only successful if both parties agreed with the third party involvement on forehand. Problem solving was a successful interventions technique but was due the technical complexity not always possible. Forcing had a negative effect on the satisfaction of the process and result as expected.
The conflicts in which negation was applied as intervention were managed more successfully on average but the intervention not always succeeded. It was proven to be important that there are no frustrations like Fisher et al. (1999) already indicated. Other important factors were that multiple options and clear process agreements should be present to make negotiations successful. Noticeable was that negotiations were not used in complex conflicts, possible because actors are afraid that they lose control.

Conclusion

Answer to main research question

The three Dutch network operators analysed in this research all recognized the issue of conflicting interests between the project and the rest of the organization. The conflicting interests of these departments were often complex and required difficult trade-offs between for example cost and quality or safety and capacity. Many of the analysed conflicts were between the asset management department, the future owner of the project, and the project team, but there were also conflicting values inside the project department.

To deal with conflicting values and to ensure that the right trade-off is taken, the organizations have many procedures and regulations. These have, together with the other structural causes, process variables, project context variables and interventions, effect on the success of managing intra-organizational conflict.

Overall the conflicting interests did not lead to serious problems that harmed the project and organizational performance. This does not mean that the management of intra-organizational conflict cannot be improved; especially not from a process point of view. Comparing the cases showed that there were multiple problems during the management of intra-organizational conflicting interests that have a negative effect on the management of intra-organizational conflict. These problems can be intervened in different ways by the project manager or the other involved actors. Examples of these problems were low commitment of the actors, lack of process agreements and conflict asymmetry.

Recommendations

The recommendations following from this research are divided in three sections; recommendations for the project manager, recommendations regarding the organizational structure and recommendations for further research. The recommendations are adapted from Op de Woert (2013).

Project managers must invest in the number of personal contact moments to increase the commitment of actors. Periodical meetings, accompanied with clear process agreements, contribute to successful conflict management but can be time consuming. An important recommendation for project managers is to make clear process agreements in the beginning of the project. Simple arrangements like
periodical meetings, a demarcation of each other’s tasks and agreements about the documentation flow can prevent misunderstandings and reduce the organizational complexity. Project managers must be aware that they do not only involve the other actors through the procedures but that they make them part of the project. The procedures stimulate conflict too late, so after the design choices are already made, and do make the actors feel responsible for the project.

When using the interventions it is important that certain factors are taken into account. If escalation is used as an intervention to end the conflict, it is important that the conflict is escalated symmetrical, so to the superiors of both actors. Otherwise the outcome is not be binding and the actors can continue the conflict if the outcome is not satisfying. If conciliation or mediation is used the actors should agree on which third party will be involved and if the outcome will be binding. Forcing can be useful but is not appreciated by the other actors. Managers must choose wisely if it is worth unsatisfied actors, or compensate them in another way. Negotiations should be accompanied by clear process agreements, there should be multiple alternatives and the frustrations should be separated from the process.

There are multiple recommendations to improve intra-organizational conflicts from an organizational perspective. A first recommendation for ProRail would be to move all the main offices into one central office. This makes it easier for actors to communicate (in person). Another recommendation would be to execute the project from the region. This withholds that asset management hires a project team to execute the station projects. This recommendation will lead to a clear hierarchy between the projects and asset management and will make asset management feel more involved. Because there is a lot of conflict between the project team and the matrix organization it is recommended to create large project teams with fixed people that manage multiple projects together. Specialists like tender managers and juridical employees will become part of the project team just like in the large projects, and will fall under the responsibility of the project manager.

Further research
A first recommendation regarding further research would be to execute an experimental research testing the recommendations made in this research. It is interesting to analyse which interventions are the most effective. The recommendations must also be further analysed because they will also have other effects on the organizational performance. The conflicts are analysed from a project management perspective and not a psychological perspective in this research. Including a psychological perspective would offer the possibility to analyse why people react the way they do and what motivates them during the management of conflicts. The focus of this reason was on conflicts within in an organization but also many conflicts with external parties were perceived,
especially with the NS and contractors. It is therefore interesting to analyse inter-organizational conflicts in station projects at ProRail.

References


