FACILITATING INNOVATION: UNDERSTANDING THE DYNAMICS OF ACTORS' INVOLVEMENT IN THE CONSTRUCTION INDUSTRY

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Abstract

Purpose of the paper:
In the construction industry, it has been the usual standard that the role of facilitator is played by one of the stakeholders, for example the architect. Facilitation embodies different roles, competences and activities The present research discusses how a facilitator may have different roles at different stages of a process.

Research method:
Three cases demonstrate how differently users and other actors are involved during the process, and how this will inflict on the role of facilitator. The cases are viewed from a network perspective offering possibilities as well as limitations for innovations.

Findings:
In construction processes the facilitator holds the important role of assisting and enabling the process to proceed. To achieve this, the facilitator has to align the activities of the various stakeholders. The facilitator achieves alignment by influencing the other stakeholders, based on his competences and his role in the process. It is also found that the role of the facilitator changes over time, as the project develops.

Contributions:
The paper contributes to the understanding of the role of facilitator, the change of this role over time and its importance for innovation projects in the construction industry.

Introduction

This paper deals with facilitation of innovation in the building industry. Buildings are designed and constructed all the time, however, the reason for or purpose of a new construction project varies. Buildings are constructed to provide housing for 1) people and things, 2) leisure and recreation, 3) work activities or 4) a mixture of these. Therefore the demands will differ according to the specific user requirements. For this reason buildings will be more or less unique in their design and functionalities, and the degree of innovation will also vary. Different designs and functionalities require different competences from the involved actors or stakeholders. Architects, engineers, consultants, builders and others are involved as expects to solve a number of tasks, sometimes even to develop the task. Other stakeholders will use the building as owners and/or users. In a construction project the stakeholders will apart from different competences also have different aims and interests. These aims and interests derive from various roles as user, client, architect and others.

Often construction projects are set up with new stakeholders (Christiansson et. al, 2008). Sometimes stakeholders will have worked together on projects on previous occasions, but this is not necessarily the case. In other words the purpose will vary, the involved stakeholders will shift from project to project and stakeholders will often have different aims, interests and competences. Aligning all these factors may present a number of challenges, and there is a risk that a project will get stuck or proceed very slowly (Corsaro & Snehota, 2011). To make sure that construction projects advance properly it is common to facilitate the process. Facilitation is a means to make sure that the project possibilities are investigated, defined, described, developed and delivered (and to make sure that each of these stages comes to an end). In the facilitation process alignment is pivotal. If the involved stakeholders reach some kind of alignment, the project will not progress. As construction projects vary as to content and process, the requirements for facilitation will vary. This requires different competences from the stakeholder acting as facilitator. Still it is demonstrated that the facilitation of construction projects is beneficial (Shen et al. 2003; Thyssen et al. 2010; Thomson et al. 2012).

The paper therefore seeks to explore how different contingencies influence on facilitation:

1. Which different roles, competences and activities does facilitation embody under different contingencies?
2. Which challenges do the different facilitator roles present and what can be done to minimise the problems arising from double or ambiguous roles?

The remaining part of the paper is divided into five sections. First section includes a discussion of the contingencies in connection to the states around which construction projects evolve and the implications for facilitation. Next, a methodology section reveals the reason for the selection of the three cases. A case section presents the cases: an extension to an existing family house, guesthouses in relation to an exhibition and conference complex and an officebuilding complex. This is followed by a section discussing the three cases, and, finally, conclusions and implications are presented.

Facilitation and project contingencies

Because construction projects have different purposes, they will vary with regard to content and process. Still, at a generic level building construction can be said to include a number of stages

(Storvang, 2012). The decision whether to build or not can be seen as the first step of a construction project, but may also come up again at a later stage of the process, for example when requirements and design are formulated. Identifying requirements and discussing design are two other central steps that should be completed before the actual construction of the building starts. However, new or changed requirements or re-design may also be met during the actual construction stage. As an example, requirements are changed and the right technical solutions found because a new partner has been found and connected to project. Another example could be the need to reduce the cost of the building in accordance to budget. When construction has been completed, the building will be handed over and taken into use. The stages of the construction process are not necessarily progressing in a straight forward manner but should been seen as a continuous learning process concerning the issues at stake (Love et al. 2004; Scarborough et al. 2004; Le and Brønn 2007; Bygballe 2010).

On the other hand it is without any doubts that focus will change over time, and that different stages or states of a construction project exist. Several stakeholders are involved in developing new solutions in the construction industry (Love et al. 2004; Newcombe 2010). These stakeholders will have different aims and interests in a construction project. The aims and interests of stakeholders may go in the same direction or may be in opposition to each other. At the same time stakeholders can have complementary as well as competing competences. As an example, architects and engineers each have distinct competences but also some overlapping competences. They may therefore compete to take over some of the same tasks. In the same way consultants cannot solve various tasks without collaborating with for instance architects and engineers. Aligning the tasks of different actors therefore may present a challenge (Corsaro & Snehota, 2011). If alignment of the activities in the construction process is not achieved, at least to some extent, it may be difficult to get on with the project.

In the construction industry a facilitator is often used in order to get some degree of alignment of the activities to be carried out, how and when in the process (Yang et al. 2011; Thomson et al. 2012). The focus of the facilitator is to bring the project forward (Thyssen et al. 2010). The facilitator holds a pivotal role in construction projects. The focus of this paper is on the role as facilitator. In connection to this it is important to understand the contingencies under which the facilitator operates.

Facilitating means assisting and enabling. But what needs to be assisted and enabled? In other words, the need is to understand or highlight the contingencies and what steps could be taken to make the particular construction project progress. Each construction project has a purpose, for example to provide housing for a family or a shelter for goods, offer the possibility to display and to sell goods. A purpose is not always totally clear from the start as a purpose may evolve over time and become more detailed or shift (Gish et al. 2009; Storvang, 2012). To some extent the purpose of a construction project describes the project, but construction projects may also have different aims for novelty (Håkansson & Ingemarson, 2011). Innovation theory offers a perspective on the challenges in projects that differ with regard to novelty (Christensen, 1997) Less novel projects include more incremental elements, whereas a high degree of novelty indicates that radical innovations have been made (Håkansson, 1987). Consequently, facilitation differs in the need to enable more or less radical novelty. As construction projects are not carried out in isolation, but through the involvement of various stakeholders, the competences of these stakeholders are pivotal to achieve the innovation aimed at within the project (Håkansson, 1987, Freytag & Ritter, 2005). At a generic level, a number of stakeholders are involved in the process: The client, the user, the

architect, the engineer and the consultant. The client and the user may be the same actor, but not necessarily as buildings may be let out. The involvement of specialists will also vary according to the purpose of the construction. Different purposes therefore require different competences from the specialists to be involved. Architects, engineers, consultants, client advisors, contractors, builders etc. will hold such competences.

Setting the right team of specialists to be involved is a complex task as construction projects differ by purpose and competences needed. The fact that the purpose often evolves over time and very often is not known in detail at the beginning of the construction project adds to the complications. For this reason it is often expedient to facilitate the process in a way that includes the involvement of the right specialists and takes the aims and interests of the client and users into account. Other stakeholders may be important, such as building authorities, political interests or potential interests to be taken into account regarding regulations and permissions. Under such contingencies the competence to act expediently as a facilitator therefore becomes crucial. Innovation takes place within a given network, however, the network will change from project to project. Still, there will be expectations based on previous experience as to whom is in charge of the various tasks (Håkansson & Waluszewski, 2007)

As already pointed out a construction project evolves over time. Different activities are carried out at different stages according to the overall purpose of the project. To carry out the activities specific competences will be required. Therefore each stakeholder will have a particular role in the project, and this role will be related to the stakeholder's professional expertise. Still, the roles will shift over time as roles hold dynamic and processual aspects that derive from given access to resources(Öberg, 2010). Each actor provides resources to solving the tasks in the construction process. The interaction between stakeholders during the process will develop the roles of the stakeholders (Medlin & Saren, 2012). The stakeholders will either know how a problem at hand is solved or they will learn how tasks might be solved as resources are re-combined (Håkansson & Ford, 2002). In the interaction process stakeholders will take advantage of the position they hold, but they will also try to develop the role along with the aims, competences and purpose of the project (Anderson et al 1998). In other words, roles are taken and roles are made in the interaction process (Biddle, 1986).

How a role can be played depends on the very nature of it (Goffman, 1983). Users can be testing or judging the construction project and at the same time they can be a part of the innovation process(.Öberg, 2010), This provides the user with two different possibilities to play the role depending on the contingencies. In the same way the role of the facilitator may shift over time depending on the stage of the construction project. For example, the role of the architect can shift from being a designer at the early stages of the project to being the project manager at site at the later stages of the construction project. An engineer may shift from being a consultant to undertaking specific tasks, and the client adviser can shift from being the one to point out deficiencies to be the one that proposes solutions. The dynamics of a construction project can be understood through the specific 'position-and-role' that links actors' positions and roles in the network (Anderson et al. 1998). In the attempt to reveal the dynamic and processual aspects of the facilitator role an in-depth analysis can create the foundation for understanding the contingencies under which these aspects take place.

Methodology

To highlight central aspects of the facilitation role in the construction industry under different contingencies three case studies have been applied. One of these, the guest housing case, has been followed as an action research process. The choice of using case study methodology is related to the notion that *'the interaction between a phenomenon and its context is best understood through in-depth case studies'* (Dubois and Gadde 2002:554). Case studies are a unique method to build and utilize understandings of an empirical phenomenon with a view to developing theory (Harrison and Easton 2004). The cases attempt to illustrate what facilitation is and how it varies across different contingencies. In other words, the three cases have been selected to demonstrate how the way in which users and other actors are involved in the process will inflict on the role as facilitator and vice versa (Miles & Hubermann, 1994) The three cases have been selected based on variation, and they each represent maximum variation in terms of functionality, usability and user groups in accordance with the number of users involved, whether users are known, unknown or a mixture of identified and unidentified users. The three cases are exemplified by:

1) A housing project: Represented by an extension to an existing family house
2) A leisure project: Represented by a development of guesthouses for an existing exhibition and congress centre
3) A work related project: Represented by a new office building with multiple users

Some of the cases have more than one purpose and they all hold unique facilitated processes that can shed light on the role of facilitation in construction processes and how this can vary across different contingencies. All together data have been collected from 11 qualitative interviews with professionals as well as users/clients, 3 workshops, 2 focus group meetings, a board meeting and various project meetings. Also included are secondary data from preliminary project design material, design documentation, articles from professional journals, publicity in newspapers, descriptions on web pages together with conversations and dialogue about the projects development.

The cases are viewed from a network perspective (Håkansson, 1987, Ford & Håkansson, 2006), offering possibilities as well as limitations for innovations. Actors bring in different resources, which can be combined and re-combined in a number of ways. Different solutions can be generated in the network, however idea generation will depend on previous choices and other obligations (Håkansson & Waluszewski , 2007). The purpose of the cases is not merely to highlight the way in which facilitation changes over time, causing various challenges, the purpose is also to develop theory about facilitation. An improved understanding of how and to what extent actors align with each other to be able to combine and re-combine resources is needed or as Corsaro & Snehota phrase it (2011, 1051)"..,there is still much space for further research".

The three cases

In the following the three cases will illustrate how the facilitator role can change during the process and in which way the cases differ as to the extent of user and stakeholder involvement and, finally, how the cases apply at the different stages of the construction genesis.

The case of an extension to an existing house

The first case is a client family housing case, which holds a new extension to an existing house. In this case the client is a family, which has grown from two to three members, and it is therefore necessary to make an extension with some extra rooms. Furthermore, the family experienced problems with acoustics in relation to the existing open plan of the house, for which reason some alterations to the existing house are also needed. After a turbulent and long start-up period the family first entered into an agreement with one architectural firm, which developed a project that was refused by the planning authorities. The family then hired a new architectural firm. The architect assigned to the project was a partner in the architectural firm, but after a short while he decided to withdraw from the company, leaving the client to have again another new architect on the project.

After this the family decided to put the role as facilitator completely in the hands of the architects instead of performing the job themselves. The reason for this was, partly, because they realised that they did not have the necessary skills to perform the task themselves, and, partly, because they had no desire to spend a lot of time to familiarize themselves with all the professional and technical decisions. In this case the entire process was therefore controlled and coordinated by the architects, including the specification of user requirements, the client consulting, the regulatory process and the choices as to involving other consultants in the construction. The architect therefore had many roles, being the designer, the adviser, the consultant, the project manager, the facilitator and the moderator in meetings with the professionals etc.

On one occasion, the architect decided to withdraw from the role of the facilitator, as agreed with the client, because of the fear that his role would be too dominant and create negative impact on the development of the project. This has been negotiated with the neighbours, since seven other houses surround the site. To be sure of getting the project through the regulatory process with no objections from the neighbours, including demands for changes and alterations, the aim was to clarify with the neighbours what they would agree to. The clients therefore took the initiative to inform the neighbours what they wanted to build.

The clients knew beforehand that the extension could be complicated because they wanted to build right up to the boundary of some neighbours. Another complication with one specific neighbour was caused by an old dispute that had been inherited from the previous owner. The clients decided to take the role as facilitator and invited the neighbours individually to find out what the neighbours would allow and get their acceptance of the project. During the negotiations with the neighbours, the architect who gave guidance and advice regarding changes and alterations of drawings and prepared new visualizations of alternatives to support the dialog with the neighbours supported the client.

In this client case project the architect has a consistent role at all the stages of the construction, from the very open and exploratory stages at which the family put forward the first thoughts about the new extension to the more closed stages at which it has been necessary to retain and control processes to a much greater extent to secure progress. This case revealed a situation in which the process to a great extent is controlled and managed by the facilitator. At the same time the degree of novelty was low. A primary task for the facilitator was to compile the concerns and aims of the various stakeholders, being the client, the authorities and the neighbours, to achieve some degree of alignment. In addition, the requirements from the clients themselves changed during the building process, as they realised that they were expecting a baby. This meant another change of the layout of the new extension.

The case of the guesthouses

The second case describes the development of guesthouses in connection to an energy centre. The centre consists of an exhibition hall and conference facilities. The conference centre was established a couple of years earlier as a central facility for knowledge communication on climate and environmental activities. Shortly after the exhibition and conference centre was developed, it was proposed to extend the centre with some guest accommodation in which scientists or environmentally concerned tourists could stay for a shorter or longer period of time to participate in some of the activities of the centre. As it became possible to obtain some regional developments funds, the Board of the centre asked the architects, who designed the centre originally, to submit a project proposal for the guesthouses to be situated next to the exhibition and conference facilities. The project should follow the architecture of the existing buildings and design the guesthouses similar to the existing centre.

Further it was decided to ask the architects to bring forward some suggestions as to what the guesthouses should contain. In order to get some input for this the architects invited the Board and some local key stakeholders to a workshop. At this workshop the architects presented a draft and initial ideas, on which the stakeholders could comment and provide further input to the concept. During the workshop it was agreed to form a project group consisting of the centre manager, a project manager from the centre, the chairman of the Board together with the architects: a design director, a project manager and a project architect. The architects were also asked to find a construction and an energy engineering company to join the project group, as it was intended to develop environmentally friendly and energy efficient guesthouses.

It was then put into the hands of the architects and the consultants to propose an energy efficient and environmentally friendly concept, design and layout for the buildings. When some ideas had been developed, the architects and the consultants presented the project to the manager and the project manager at the centre and the chairman of the Board. During this presentation it was pointed out that the project was still being developed, although it might appear to be completed and ready for construction because of the professional layout and quality of the drawings.

In the meantime, because the client felt uncertain about the whole idea of the concept, the chairman of the Board suggested involving the users in the project development. The reason for this was that the chairman had an opportunity to get the guesthouse project connected to a research project in which it was made possible to make a facilitated process with future users. This was agreed upon and three workshops were held between users and professionals. Simultaneously the professionals further developed the project.

During this process, the users and the professionals worked with various idea generation methods, and they were asked to include different issues and value clarification in relation to the guesthouses. The workshop discussions led to some doubts for the manager of the conference centre as to whether it was beneficial at all to add the guesthouses. The manager also realised that maybe there were too many unresolved issues such as how to run the accommodations, hotel management, services, maintenance, user requests, the relation of the guesthouse complex to other activities and other local accommodation projects. Furthermore, other local stakeholder objections might not have been sufficiently investigated and clarified. It was therefore decided to postpone the process and further evaluate the guesthouses before continuing the project.

In this case the architects had a central role as facilitator of the project. The architects had been involved in the project from the very beginning. They had been involved in the programming and idea generating of the future expansion of the centre and because of the portfolio possibilities for more environmental projects they had various personal interests in the project.

This project had a number of very challenging aspects for the facilitator. From the very start the aim of the project was not clear. At this point of time it was a main issue to gain ideas for the content and value of the project. It turned out that the project had many stakeholders such as political interests, local interests and user interests because of the increased focus on using new climate enhanced technology. Later on the focus turned to developing a project with an economic foundation which could be run as a guesthouse at a profit or at least without loosing money. It turned out that the project would therefore have profited from including partners that could take care of running the accommodations after the completion of the construction. In this way it became evident during the development process that number of questions remained unsolved and partners had to be taken into consideration to be able to answer some questions. Therefore the project was put on hold to become more matured before developing further.

The office-building complex

The third case describes a commercial building that has evolved as a developer project. The building is scheduled to be complete in the late months of 2013 and the complex will then host a variety of companies that are interested in a community and diversity in collaborations. The companies in the building will share various facilities such as canteen/restaurant, large meeting rooms, gym and locker room etc. Although it is an office building, it is also intended that it will accommodate activities 24 hours a day. In this way it will be possible for local residents to use the commercial building facilities after working hours. This may for example apply for the fitness room, meeting rooms and the restaurant, but the facilities may also be used for lectures, exhibitions and celebrations. In this way the building will offer activities to the surrounding community in what is a new development area.

Small companies may benefit from sharing domicile at a very lucrative location and with a great number of facilities that they would otherwise not be able to afford. Similarly, the businesses may expand or limit themselves without having the need to move to another location (Jensen, 2012).

Even though the companies expected to become users of the building were not all known from the very start of the project, some of them actually were already named. For example the architect hired to develop the project is expected to be one of the future tenants. Some of the companies that had already decided to become a part of this project saw it as a possibility to brand their business through the concept. However, they also joined the project because of the new and innovative ideas for opportunities created by sharing certain types of facilities within the building. By sharing facilities they would become more flexible and be able to optimize many processes and to develop projects across companies (Jensen, 2012). Since all companies that were to be future users all related to the building industry, such as architects, engineers, consultants and housing agents, they found this to be an opportunity for the companies to work closer together to create more business. Furthermore these companies had the chance to put their own personal mark on the development because they were invited to participate in the development process.

To achieve the stakeholder participation various meetings and workshops were held to involve the future tenants in the development of the project. However, because of this involvement it also took

extra time to complete the drawings for the project, compared to usual construction projects (Jensen, 2012).

The architects played a central role as the facilitator of the project. As a matter of fact they had several roles - as architect, concept developer, project manager and facilitator - while at the same time also the role of being one of the future users of the building. In addition they were also involved in identifying the various potentials of the building and to conduct the feasibility studies required for the project. Therefore the architects played a key role in the programming, the design and the construction phase. This means that they had to remain open for new input from other users and to control and manage some of the processes, although at the same time they were users themselves and had personal interests in the project. Aligning interests from different user groups, some known and some not known, was a special challenge for the facilitator. One user group would be firms using the building for business activities during daytime, another user group would be using the building for more recreational purposes during night-time. The facilitator would need to align these user groups with the financial aspects and at the same time to develop a new concept for use of a building.

Discussion of the three cases

Based on the various ways in which the facilitator role changes due to the change of activities in the construction process, the process has been broken down into stages, and the stages have been divided as illustrated below:

- What are the characteristics of the stages?
- What is the overall role of the facilitator at each stage?
- Which competences does the facilitator role require at each stage?
- What are the activities of the facilitator at each stage?

The stages, the roles, the competences and the relation of activities to the different stages in the construction process are illustrated in table 1

Stages	Feasibility Study	Programming	Design	Construction	Commissioning
Characteristics of stage	It is decided whether to build or not.	Formulation of requirements and idea generation	Decision on what to build	The realization of the construction project	Handover and use of the building
The role of the facilitator	Investigative and exploratory	Mediator in a value-based dialogue	Restraining	Leading	Create security
The competences of the facilitator	Uncovering and thorough. Ensuring that everyone is listened to	An open, curious and value-based approach	Motivating and energetic	Controlling, closing and concluding	A visionary who can see opportunities
Activities of the facilitator	Stakeholder and network activities	The creative and idea generating phase	Sweeping unnecessary obstacles from the path	Implementation in the organization	Handover to the future users

Table 1: The role of the facilitator, competences and activities at the different stages of construction.

The findings from our three cases gave some interesting insights into how facilitation takes place under various contingencies, over time, based on different competences and by influencing other stakeholders (Sense, 2004; Bygballe et al. 2010).

First, it became clear that the contingencies are pivotal for understanding how the actual construction project develops. Each stakeholder has a particular role based on his competences and the purpose for which he was involved in the construction project. These competences and aims of each stakeholder will provide both possibilities and limitations for solving the problem at hand (Håkansson & Snehota, 1998). As the three construction projects revealed, understanding the single stakeholder's contribution and what burdens are at stake in the particular network is a central part of taking the role as facilitator. In the case of the family house it was evident that the client's interests could not alone be taken into account because other interests were at stake such as personal interests, building regulation requirements that needed to be negotiated with the neighbours as well as challenges or burdens created by the authorities for the facilitator, causing him to extend and leave the process more open than at the start. In the guesthouse project the facilitator was burdened not only by the personal interests of the different stakeholders, but also the facilitator's own interests in creating a novel portfolio project made it difficult to align the process. Finally, in the office project it was difficult for the facilitator to play and balance several roles at the same time - the role of negotiating with already known stakeholders and of determining what the not known interests and values of the future building could be. From this conflict a number of issues that are central for understanding the facilitator role become evident.

First, user problems are individual and complex and have to be understood in each particular case (Håkansson & Ingemarson, 2011). Hence, the solution is likely to require a complex offering that can only be defined or developed interactively with the stakeholder (Ritter & Ford, 2004). As we have seen, conflicts have occurred in more than one case. In the family client case conflicts occurred with the first architect and later between neighbours of different interests. We have also seen conflicts in the case of the guesthouses as the architects and other professionals were reluctant to take in users' perspectives. On the other hand we have also experienced that these conflicts can help to find better solutions. This is in line with Wilkinson and Young (1994) who found that a certain level of confrontation (and thus conflict) is needed in relationships to allow them to develop further.

At the same time it should be remembered that problems and conflicts can be interpreted in a number of ways and gabs between the client's or user's and the engineer's or architect's perceptions of a problem are common (Corsaro & Snehota, 2011) and may be a hurdle for the facilitator to overcome. Framing a problem situation is the basis of the problem solving process (Schön, 1983). Schön describes the role of frames in the construction of problems and solutions for the effectiveness of the client-consultant relationship as a means to allow the decision-maker to evaluate the desirability of consequences. In other words it is important to establish some degree of problem frame alignment to facilitate the cooperation and collective action with various partners (Gray, 2004 in Corsaro & Snehota, 2011).

Secondly, the issue is the stage in which the construction project is. At each stage different issues are at stake and the facilitator will have to focus on the particular issue. Not only will the facilitator

have to involve the stakeholders needed to solve the task, but he will also need to understanding what is going on at the different stages. In other words it is important to understand what has to be done in the particular situation when a feasibility study or programming has to be made. At the feasibility stage competences for communicating with the stakeholders will be needed, as both professional and non-professionals participants will be involved. In the extension of an existing family house it was necessary to identify the needs of the users. In the case of the guesthouse understanding and evaluating the very idea of the project was important. The office-building project had a clearer task – to evaluate whether an officebuilding complex could be used with a double purpose. Stakeholders were involved accordingly to make the evaluation possible.

Thirdly, competences are needed to get into a dialogue with the stakeholders concerning the particulars of the project. One thing is framing the stage of the project. Another thing is entering into a dialogue about solving particular issues at the current stage of the project. Different competences are at need here. Needs of users have to be understood or further developed. Client interests have to be taken care of. Engineers and craftsmen have to be included in the discussions to identify possible solutions. The background and purpose of the three projects were very different and therefore competences needed in the projects were different. One project required knowledge in private housing, knowledge in guesthouses was needed in the second case and knowledge in office buildings with multiple purposes was needed in the third case.

Next, at the different stages and through solving particular problems the facilitator needs to beware of what is possible and what is not. The facilitator must assist and enable solutions to be found. One way of doing this is by influencing the different stakeholders and seeking some degree of alignment be achieved together with a promise that the stakeholders will work together afterwards. Influencing will be done by confronting or giving in or through re-defining what may be at stake (Ritter & Ford, 2004, Schön, 1983).

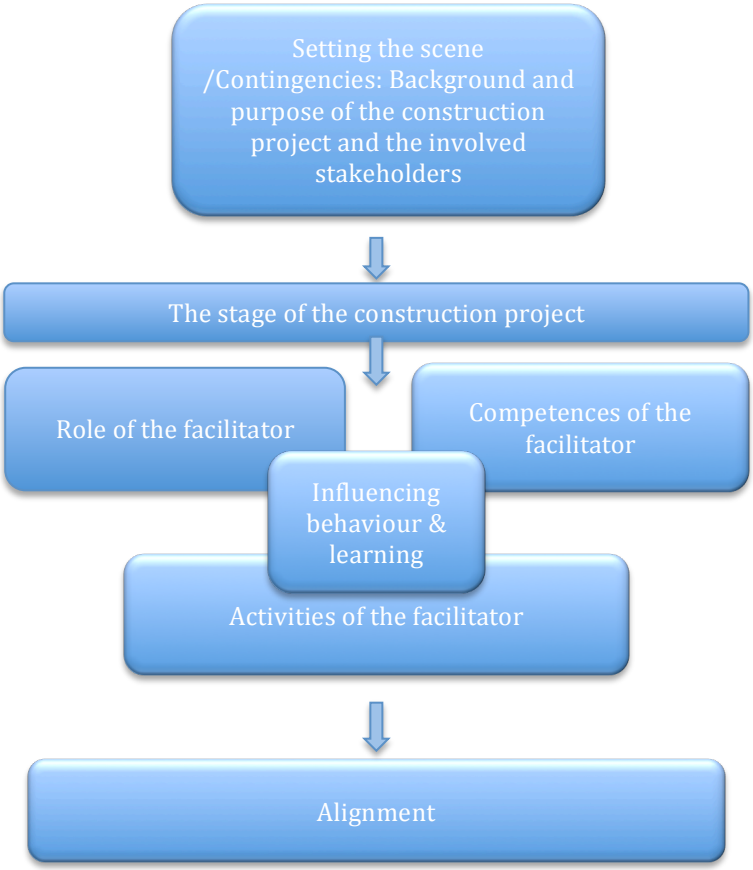
Finally, when the facilitator takes on his role he should be aware of the possibilities for influencing others inherent in the role. The limits and possibilities of the role as facilitator have to be learned along with the construction process (Holmqvist, 2004). Every construction project is different which makes the role as facilitator even more challenging. The facilitator role is only to some degree defined in advance and must therefore be developed and learned over time by the role taker (Biddle, 1986)

In all three cases the architect played a central role as the facilitator. In the client family case the architect has been managing and coordinating the development because the client did not want to get too much involved in the details. In the case of the guesthouses the architect had to leave the role of facilitation for a short period of time to an outside person. Because of this new light was shed on the project through many user perspectives. Consequently the management of the centre had doubts as to whether the project was a good idea and whether they had the necessary resources to carry out the guesthouse project. In the third case, although the architects had a central role as facilitators, the developer group played a key role and influenced the process, controlled the economy, managed the decisions of the purpose and staged the process branding the project externally.

Overall it is interesting to see how different the three cases are and yet at the same time similar. The cases can be analysed in a similar manner by applying a framework of contingency, stage, influence and alignment (see Figure 1). The framework has allowed us to gain increased understanding of the

role as facilitator in a number of aspects. However, at the same the framework admits that each construction project may have its own logics.

Figure 1: Facilitating innovation framework: Contingencies, stage, process & outcome (degree of alignment)



The above framework enables an understanding of how the stages of innovation in the construction industry can be analysed. Actors bring resources and they hold competences for making use of. Each construction project is different, yet the generic elements are the same. Fundamentally facilitation is about making recombination of resources possible under specific contingencies over time, and the facilitator needs to position himself in the emerging project network.

Understanding this, the facilitator often plays three roles making the alignment process challenging because of the congruence in the role of facilitation. This is illustrated in figure 2. As we have discussed earlier, the facilitator assists and enables but also has the same role as the other stakeholders. It may be difficult to separate the roles and this may hamper the possibilities to align in the process. It may, however, lower the frustrations of the other participants, when the facilitator is aware how this role should be played and demonstrates this in the relationship with the other stakeholders.

	Confront	Negotiate	Give in
Stakeholder	Pursuing own interest by confrontation	Expression of own views matched in relation to others	Pursuing own interest by giving in
Facilitator	Enabling the process to go on by confrontation	Mediation and negotiation between all interests	Enabling the process to go on by giving in

Table 2: Role congruence in facilitation

As seen in the case of the guesthouse, it was not always obvious when the facilitator acted as facilitator or as a stakeholder with particular interests. This was also evident in the office building case in which the facilitator also had personal interests as a user. At the same time both cases illustrated that the facilitator or the stakeholder decided to go by confrontation to ensure certain issues to be incorporated. In the guesthouse case the architect had specific portfolio interests and in the case of the family house one of the neighbours had an interest in giving in and negotiating a solution. In this case the neighbour asked the client family be contacted only through a solicitor. Especially in the client family house and also in the case of the offices the facilitator decided to give in for certain issues either on request from the building authorities or because of the developers interests. In the client family case especially the neighbour from whom an old building dispute was inherited decided to give in to most of the restriction and demands.

In all three cases the architect had the role of negotiating between various perspectives, and in these relations the facilitator had the role of mediating between different interests. This matching of different views led to a learning process and created a better solution for the matter at hand. Finally we will argue that it may still be claimed by the actors that the facilitator takes advantage of the role in order to pursue own interests and eventually this will lead to a breakdown of the network. This was seen in the case of the guesthouses in which it was decided to put the project on hold until more details had been investigated and the network had been extended by more stakeholders and other relevant interests.

In the following we will conclude on our analysis of the three cases and highlight some of the findings on the facilitator role.

Conclusion

The paper contributes to the understanding of the facilitator role, the role's change over time and its importance for innovation projects in the construction industry under different contingencies. In particular the paper highlights the dynamic nature of facilitators' roles over time in industrial networks.

Activity patterns or stages will emerge in the different projects due to purpose and actor competences. Actors will influence and be influenced based on aims and interpretations of the situation. The different aims and interests of the various actors will be seen as building on converging or diverging understandings of the contingencies and the role the stakeholders must play at the individual stage. The role of the facilitator is to assist and enable a process during which

alignment can be reached and the tasks of the construction can be completed. Yet, the facilitator also holds interests of his own which may not be associated with the role as facilitator. In some situations the facilitator is an architect challenging the role as facilitator. When does the facilitator act as an enabler of the project and when are his own interests put into play? On the other hand, the architect may also be able to understand and solve some of the challenges that the facilitation creates, among these to understand when relevant perspectives are put forward and need to be included in the complexity of making a building. When intentions behind actions may be revealed, a way to achieving alignment is opened, but it still leaves room for different stakeholder interpretation to be negotiated in the process as a learning between the different stakeholder perspectives. At the same it is not always obvious in which direction a project should be developed due to the innovative nature of the project. Facilitation is about understanding and learning how contingency, stage, influence and alignment differ from project to project. The developed facilitation innovation framework (figure 1) offers an understanding and starting point analysing the process of innovation in the building industry and role that a facilitator can play in it.

As we have argued, the facilitator must be able to play several roles to enable alignment in the process of developing a building. Sometimes the facilitator will negotiate various perspectives between different interests. On other occasions the facilitator will give in to enable the process to continue, and at times the facilitator will have to confront the stakeholders to enable the process to develop to create alignment in the project. Another important finding is that the role is changing over time as the project develops. This will influence the role of the facilitator as well as the competences that the facilitator needs to complete the activities in aligning the complexity of a building project.

To the innovation literature the paper contributes by giving overview of the roles and the importance a facilitator can have in construction of new buildings. A next step could be to investigate to what extend the facilitator roles is generic across industries.

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