

Value creation in houses of culture

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Using Grounded Theory Methodology and Rich Picture Diagrams in analysing

Value Creation in Houses of Culture Projects in Sweden Laurell Stenlund, K.

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Abstract What kind of value does a public building for cultural activities

create for clients, construction professionals and users? One approach to

understand the complexity of ongoing processes over time is by identifying

value-adding activities in building processes.

However, value added activities are difficult to analyse especially when

related to resources that have an immaterial character, e. g. knowledge,

know how and social relations. Based on an in depth case study of

stakeholders' evaluation of a construction project, grounded theory

methodology (GTM) and rich picture diagrams (RPD) were used in analysing

stakeholder and end-user value. Data was collected by semi-structured

interviews with actors, public client, project manager, architect, contractor,

employee and visitors of the building and during a workshop with

representatives for different stakeholder groups.

The results from the analysis show that building a house of culture creates

stakeholders' and end-users' value that can be categorised into human,

organisational and social capital. The strength of combining GTM and RPD is

demonstrated in its ability to study complex organisational structures and

relations between different actors, and specific as shown in this case, when

analysing value creation in a construction project with many stakeholders

with different interests and value. Keywords: case study, grounded theory

method, intellectual capital, rich picture diagrams

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Introduction Discussions during the last few years (e. g. Egan 1998; Finch 2000; Spencer and Winch 2002; Saxon 2005) have shown that integrating design and construction potentially delivers better value for money as well as better buildings, particularly when attention is paid to the full costs of a building over its whole lifetime. Research on how buildings deliver better value for money during their lifetime involves complex data analysis of activities and processes. Value-adding activities consist of complex building processes performed over time.

A condition for activities to be value-added is that they are supported by resources that are utilised and developed in a positive way (Laurell Stenlund and Horte, 1999). According to the resource-based view, the resources that are difficult to imitate and replace create a competitive advantage to companies (e. g. Penrose, 1959; Grant, 1991; Hamel and Prahalad, 1994). The characteristics of these resources are described as dynamic organisational capabilities (Dosi et al. , 2008). However, value-added activities are more difficult to analyse. Resources that are immaterial, e. g. knowledge, know-how and social relations (e. g.

Sveiby, 1997; Edvinsson and Malone, 1997) are difficult to 17 The Built & Human Environment Review, Volume 3, Special Issue 1, 2010 describe and measure. Sutrisna and Barrett (2007) argue that rich picture diagrams are tools suitable for analysing complex building processes. The purpose with this paper is to describe how grounded theory method (GTM) and rich picture diagrams (RPD) were used in analysing stakeholder and end-user value when developing and constructing houses of culture. Empirical evidence is

developed from a single in-depth case study where data was collected by interviews, archives, documents and during a workshop.

In the next section GTM and RPD methods are discussed in relation to the case study. The results from the analyses are finally presented and concluded. Theories and General Conclusions from Case Studies A researcher's choice of methodology is not only a matter of strategy. Researchers argue that their "Weltanschauung" (ontology, i. e. our view on how the world is constructed) and opinion of how knowledge is developed (epistemology) are behind the planned or unplanned choice of methodology and research methods.

Management studies involves people's decisions and activities and are thus influenced by rules and structures built in society as well as in the specific organisation. The industry and the context of the studied processes are therefore important to consider (Chroner and Laurell-Stenlund, 2006). The specific structure of construction industry, mainly project oriented organisations must find other solutions and concepts for improving performance and efficiency according to Segerstedt and Olofsson (2010).

Inter-firm processes in construction industry could be identified by the supply chains and networks consisting of different supplying construction companies, e. g. architectural offices and contracting firms, engaged in the early phases of the construction project (Brochner and Kadefors, 2010; Segerstedt and Olofsson, 2010). In the early phases of a construction project, these inter-firm processes may create a creative chaos developing new ideas of buildings and constructions. According to Gray and Hughes (2001), the

collaboration between individuals is a part of the wider collaboration between firms in the construction sector.

Describing and developing a deeper understanding of these networks also requires new research methods. Case studies are commonly accepted in management studies. Yin (1994) argues that a case study with one or more cases and with different methods for data collection, both quantitative and qualitative, can be theorised and generalised. A single case study makes it possible to capture different angles and perspectives in depth based on an inductive research strategy open for analytical generalisation and implications from a theoretical perspective rather than comparison with other cases (Eisenhardt, 1989).

Selection of the Case The case presented in this study is selected by the uniqueness of the building itself according to its special functional design and conditions of combining different cultural activities in one building involving art professionals with different goals. The House of Culture in Lulea was selected due to the researcher's access to data as well as to the interest from the public client and the construction professionals. Previous studies (for example Short et al. 007) have discussed how arts clients require additional commitment from construction professionals. Building a house of culture is in this sense an interesting cultural construction project to study. Qualitative Research Based on GTM Qualitative data analyses with GTM are here applied to describe regularities and sequences (Glaser and Strauss, 1967) for certain building projects in a given situation creating common knowledge within a specific area. 18 The Built & Human Environment Review, Volume 3, Special Issue 1, 2010

Grounded theory was developed in the 60s by Glaser and Strauss in social medicine (Bryant and Charmaz, 2007). After a couple of years, Glaser and Strauss went in two different directions. Strauss revised the methods where data was interpreted by the researcher (Alvesson and Skoldberg, 2000). Glaser, on the other hand, continued to develop the ‘ classic’ grounded theory with analytical methods for qualitative data coding with an inductive approach but also including methods for deduction and abduction, i. e. methods for developing and testing theories (Glaser, 1992).

Grounded theory refers to the result of using grounded theory method according to Bryant and Charmaz (2007). The results should be traceable back to the empirical data and the studied phenomena (Sutrisna and Barrett, 2007). In this paper GTM is applied with an inductive approach (Miles and Huberman, 1994). The purpose of using GTM in this study was to investigate what kind of stakeholder value is created when building a house of culture. Stakeholder value is the key variable in this study with the purpose of visualising stakeholders’ different value in the building process.

Data collection and data analysis based GTM Both quantitative and qualitative data collection methods were used in the case study. The total data collection was broad and open based on several methods, i. e. integrative focus groups, participatory observations, archive data, documents, semi-structured interviews and a survey (Yin, 1994, p. 80). According to the Swedish principle of free access to public records all archive data from the construction project was available and could be analysed.

The analyses presented in this paper are mainly based on 17 semi-structured interviews with actors with different interest in the construction project,
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building documents and data from a workshop with internal and external stakeholders (Table 1, Appendix). The interviews were recorded and transcribed. After transcription, the interviews were analysed by coding the respondents' activities chronologically in building processes. The interviewed respondents were belonging to different stakeholder groups with different roles in the construction sector as well as in society.

Internal stakeholders, active in the construction sector may on the one hand act as clients, financiers and users, on the demand side, and on the other hand act as architects, engineers, contractors and materials suppliers, on the supply side, in the specific construction project (Winch, 2002, p. 67). External stakeholders also have a direct interest in the project and can be broken down into private actors (e. g. local residents) and public actors (e. g. local government) (ibid.). In Table 1 the respondents are presented together with their stakeholder classification and role in the project by their title.

Table 1: Data collection the House of Culture Semi-structured interviews, no 17 Internal stakeholder/Public client-Municipality: Municipal commissioner (Cmc080401) Municipal employee (Cme070905) Project manager (Chp080117) Participants, Workshop 20090331 Client: Municipal commissioner (Cmc) Client/End-user: Municipal Culture Chairman (CEcc) Secondary data Feasibility study A 2002-08-15 19 The Built & Human Environment Review, Volume 3, Special Issue 1, 2010 Project leader (Cpl080220)

Client/End-user: Cultural manager (CEcm) Client/End-user: - Municipal Technical chairman (CEtc) Client: Project manager (Chp) Designer: Architect (DA) Constructor: Manager construction company (Com) Constructor: Project

leader in construction company (Cop) Industry: The Swedish Construction Federation, Region North (BI) End-user: Concert Hall manager (Echm) End-user: Art Hall manager (Eam) Feasibility study B May 2003 Internal stakeholder/Municipal and cultural organisations: Cultural manager (CEcm070601, 080117, 080925) Library manager (Elm081006) Concert Hall manager (Echm081005) Art Hall manager (Eam081015) Planning document 2003-12-22

Project directive 2003-10-20 External stakeholder/Contractor: Manager construction company (Com071004) Project leader in construction company (Cop080930) Brief for architectural competition 2003-12-22 External stakeholder/Designer: Architect (DA081002) End-user: Tourist manager (Etm2) End-user: 2 Peoples Parks and Community Centres (Eppc) End-user: Orchestra member (Epo) External stakeholder/ End-user: 2 citizens (Eci) Commercial organisations : Tourist manager (Etm081022) Business manager (Ebm081023) End-user/Citizens, public and visitors: Orchestra member (Epo070905), Public (Eci, 2090330) Reference Group Meetings

The public client as well as the construction professionals participated in the process of evaluating the effects of the construction project and the use of the building. They participated in so called reference group meetings and focus group interviews. During the research project four reference group meetings were carried out with two representative from the public client; one initiating the project and one internal end-user of the building, one representative from the construction company, two representatives from construction industry and one representative from a non-profit cultural organisation together with three academic researchers.

During these meetings the first evaluation results were presented and discussed. The relevance of the results was discussed and new questions developed for further investigations. 20 The Built & Human Environment Review, Volume 3, Special Issue 1, 2010 Focus Group Interviews The empirical data was first coded and summarized and then confirmed and discussed by the practitioners. The focus group interviews were conducted more specific regarding a subject where the participants were asked a question that was answered individual in the group, by each of the respondents and then discussed within the group.

The five focus group interviews were performed in accordance with the reference group meetings and one at another time. Workshop A workshop was performed with respondents representing the stakeholders of the construction project as presented in Table 1. The workshop consisted of two parts. The first was to present the results from the descriptive analysis of the construction project to implement the results back to construction industry. The second part was to develop a story line of the construction project based on the stakeholders' successful factors describing the success of the building.

Open coding – First Level From the data analysis based on the interviews, a story of the building process emerged. This story was built by the respondents and confirmed by all respondents when summarized in a case study report (Laurell Stenlund, 2010). Within this story different activities were specifically mentioned by different actors due to their significant influence on the performance of the construction projects as well as on the effects of the final building according to the respondents. These activities

were confirmed by archive data and found in the construction projects documentation.

There are different views about how categories emerge from the analysis, e. g. let the data ‘ talk’ or if the researcher is shaping the categories (Bryant and Charmaz, 2007). In this study, no specific and objective theoretical frameworks were ready to pick. They were instead developed during analysis. Coding was in the first step based on a preliminary theoretical framework consisting of different phases of the building process. The activities were then categorised, based on their empirical characteristic, first in relation to the different stages in the construction project, e. . communication during design between architect and library manager and secondly in themes due to their organisational belonging, i. e. the content of the activity, for example, communication regarding specific functional solutions within the library between the architect and the library manager: strategic briefing during the design phase. The resulted value-adding activities are presented in Table 2 below. Table 2: Value-adding activities in building houses of culture

| Activities in the briefing process related to strategic briefing |
|---|
| The feasibility study 2002 and 2003 |
| a. the rejection of the first proposal consisting of private and public investors in the construction project |
| b. the development of the second proposal of combining different cultural activities in one building |
| The political decisions 2003 |
| a. political agreement on building a new house for the existing public library, the public art gallery and a new concert hall |
| 21 The Built & Human Environment Review, Volume 3, Special Issue 1, 2010 |
| b. political initiatives of starting the construction project |
| The development of the project directives with |

requirement regarding a. cost b. time c. responsibilities The development of the strategic brief a. overall vision and goals for the building and building performance b. end-users' functional requirements, needs and desires c. qualifying criteria for participating in the architectural competition d. order-winning criteria for the architect The client's procurement decision a. design-bid-build based on a architectural competition b. architect creating a design team with client c. contractor's relation to client during construction Open coding – Second Level

The second analysis was based on a preliminary theoretical framework (Values surrounding the House of Culture, developed from Boyd and Chinyio, 2006: 80) where the client's requirements were coded to different stakeholder groups, and stakeholders' value were coded in relation to project and product (Laurell Stenlund et al. , 2009). Coding into rich picture diagrams and general themes The third categorisation was an analysis of the value-adding activities performed by actors within the construction project as well as by end-users in the final building.

Here the general themes developed by Sutrisna and Barrett (2007) were applied when coding the data into the rich picture diagram for further analysis of developed intellectual capital. This analysis is presented in the following section. Intellectual capital in rich picture diagrams Sutrisna and Barrett (2007) found that the use of the multiple case study approach was in agreement with the principles of GTM, i. e. that it relies on multiple sources and constant comparison of empirical data for the purpose of theory building.

However, when using multiple case studies and GTM, the cross-case analysis can be found overwhelming and difficult to grasp all at once, according to Sutrisna and Barrett (2007). Therefore the rich picture diagram is suggested by Sutrisna and Barrett (2007) as an analytical tool in data analysis and here applied when analysing the development of intellectual capital in construction projects. 22 The Built & Human Environment Review, Volume 3, Special Issue 1, 2010 Rich picture diagrams Firstly, the value-adding activities of the ‘successful’ construction project, were used as a basis to develop a rich picture diagram.

The activities were coded in accordance with the general themes developed by Sutrisna and Barrett (2007). Secondly, the results from the workshop were included into the rich picture diagram. During the workshop, each stakeholder representative presented their three most important success factors, written on ‘post-it’-notes in four dimensions, namely strategic with external (market) perspective; strategic with internal (vision and financing) perspective; operational with external (customer) perspective and operational with internal (organisational and cost) perspective.

For the purpose of the workshop, the four dimensions were related to the general themes developed by Sutrisna and Barrett (2007). The notes were then transformed into the same rich picture diagram as the story line of the construction project. Intellectual Capital The intellectual capital model consists of identifying financial, human, social, customer and organisational value (Sveiby, 1997). Identifying and visualizing intellectual capital are problematic and discussed for many years. Research with focus on

intellectual capital started intensively during the 90s within the field of accounting.

The Balanced Scorecard, developed by Kaplan and Norton (1993), The Intangible Assets Monitor, developed by Sveiby (1997) and The Skandia IC model with the world's first public intellectual capital annual report, as a supplement to the financial report (Edvinsson and Malone, 1997), are examples of management models categorising, measuring and valuing companies' tangible and intangible resources and assets. Edvinsson and Malone (1997) describe the company's intangible assets as " those that have no physical existence but are still of value to the company.

Typically, they are long term and cannot accurately be valued until the company is sold. " Measurement of intellectual capital is thus difficult. According to Mouritsen (2009), it is not possible for an organisation to copy its intangible properties in a number; yet it is necessary because it allows intervention to happen since it develops a wholly new set of dimensions to manage. Measuring size, value and effects of intellectual capital does not yield definitive measures, yet the measures are comforting because they help develop the actions that can be made in the name of intellectual capital (Mouritsen, 2009).

Analysing Intellectual Capital in Rich Picture Diagrams In the rich picture diagram value-adding activities in the building process together with stakeholders' value of the construction project and building in use are pictured in a story line of building a house of culture as presented in Figure 1. In Figure 1, number 1 describes activities creating human capital in the

municipality. Here the municipal commissioner played an important, entrepreneurial client role. This is seen as a distinctive feature in the case.

Human capital was developed in a creative process of finding a new solution to an old demand, the need of a concert hall, and also driving the political process to a building decision of building a house of culture by combining the library, the hall of arts and the concert hall. The decision was a result of a more than 60-year-long discussion in the municipality, where special interest organisations argued for and against a new concert hall in the city. Human capital is measured in the individual's knowledge and experiences creating a capability within the organisation (Sveiby, 1997; Laurell Stenlund, 2004).

The development of construction industry, with advanced technol- 23 The Built & Human Environment Review, Volume 3, Special Issue 1, 2010 ogy put a pressure on actors' capabilities to adapt to these new technologies. However, construction industry also relays on actors' capabilities to create new ideas, new technologies and new types of buildings, as shown in this case where the public client was using his competence, based on political experience as well as on his skills from construction industry.

Figure 1: The story line of a successful construction project visualising created intellectual capital Number 2 in the figure describes the activities related to the development of the brief for architectural competition, based on the vision of the building together with the transformation of the public client's requirements into building programmes, e. g. functional and technical specifications. The public client's role during the development of the building programme was important.

Different employees in the client's organisation were involved in the development of the feasibility studies taking political decisions and developing the project directives with requirements regarding cost, time and responsibilities. In the brief for architectural competition, the public client formulated the overall vision and goals for the building and the end-users' functional requirements. People from the artistic organisations were partly involved in this strategic briefing process.

The process, in the figure illustrated with dotted arrows, illustrates how the client's representatives, foremost the project manager together with the architect, worked together with actors responsible for art and library activities. This work should also be seen as a strategic briefing process performed in the project during the design phase. The public client's procurement decisions regarding the architectural competition made it possible for the architect to create a "dream-team" of consultants working together with designing the building.

The bid-to-build procurement decision engaged a contractor, with the ambition to develop new knowledge within their own construction organisation concerning technical solutions in the building of concert halls. Here the municipality created organisational capital in measures of communication, trust and business relations (Sveiby, 1997) between actors in the local construction industry. The organisational capital belonging to the public client has created new construction projects in the community, even during recession, when normally no construction projects should have stated.

Finally number 3 in the figure describes how the public client's decisions had an impact on creating social capital in the community. This is closely related to the client's ambitions to create a building with symbolic value and also to the distinctive feature of having created future beliefs in the city. Social capital is described in terms 24 The Built & Human Environment Review, Volume 3, Special Issue 1, 2010 of change in attitudes, but also in terms of economic value regarding new job opportunities, development of organisational and business activities.

End-users participating at the workshop expressed their view of the building in use in terms of social value. They valued the multitude of cultural activities in the building as well as the building is easy accessibility, aesthetics, comfort, safe with a central location in the city. The social capital developed by building a house of culture in the community is described by the public client as valuable for the cities development in the future, not only because of its cultural activities, but also because of the buildings architecture and location. Discussion

From the results of analysing value-added activities and stakeholders' value in a story line, the distinctive features for this specific construction project illustrates three key competencies generating human, organisational and social capital; firstly the human capital based on the public clients political and construction knowledge and skills in the pre-phase of the construction project; secondly the organisational capital based on the actors competencies of interacting when developing the strategic brief involving internal and external stakeholders goals and visions, during the onstruction project; and finally the social capital based on the building's multifunctional

activities, its architectural design and its central location in the city, when building in use. From the results, one could determine certain success factors and key competencies that should be maximized. These success factors and key competencies could in turn be grouped into a number of distinct areas of focus such as financial, human, customer, process, renewal and development. Within each of these areas of focus, one could identify numerous key indicators to measure performance.

Previous research studies have shown that companies and organisations have to identify their own relevant key indicators and success factors and relate them to their specific activities and resources when making the tools usable in management decisions (Laurell Stenlund, 2004; Anumba et al. , 2005; Roos et al. , 2005). Measuring size, value and effects of intellectual capital does not yield definitive measures, yet the measures are comforting because they help develop the actions that can be made in the name of intellectual capital (Mouritsen, 2009).

Conclusions Stakeholder value is the key variable in this study with the purpose of visualising stakeholders' different value in the building process. From the results of the study, intellectual capital developed during the construction project has been visualised in terms of human, organisational and social capital. Houses of culture, public buildings for cultural activities, enable meeting places for citizens as well as they provide places for cultural events and spaces for creativity as well as they contribute to the development of new cultural activities.

The outcomes were found useful when implementing the results back to the studied client organisation and the actors in the project team as well as they

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can be used to better understand the situation, formulating improvement as well as a platform for future research. The strength of combining GTM and RPD is demonstrated in the ability of the methodology in studying complex organisational structures and relations between different actors, and specific as shown in this case, when analysing value creation in a construction project with many stakeholders with different interests and value.

5 The Built & Human Environment Review, Volume 3, Special Issue 1, 2010

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