

Evaluation report

## **”Center for Management Studies of the Building Process”**

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3 May 2010

### ***SUMMARY***

This evaluation of the CBS “Center for Management Studies of the Building Process” (*Center for ledelse i byggeriet*), part of Realdania Research, is based on a Center self-evaluation report, a selection of Center publications and findings during a two-day site visit. The core group of the Center has been some twenty researchers, most of which being Ph.D. candidates. There has been a fast accumulation of research experience within a specific empirical field, construction, and this can be seen as a “mobilization” process. International researchers have been activated, as well as researchers at other universities in Denmark, together with CBS researchers. Probably a couple of hundred researchers have been involved in Center activities. More than thirty projects have included interviews or discussions with representatives of the industry. This means that many of the publications reflect empirical situations and how they have been seen and approached by managers. At least five hundred managers and employees in other functions in the construction sector have been affected and engaged in the activities. Out of these, a group of about fifty “advanced users” has emerged.

Realdania allocated a grant of MDKK 25 to the Center for a five-year period, 2005-2010. Additional project finance has amounted to about MDKK 5. In a Nordic comparison, the total sum appears not to be so large and the time period relatively short. Nevertheless, the results as measured by number of Ph.D. degrees awarded and articles so far published are good. The most important research publications are probably still to come. Short books in Danish are also expected, summing up Center findings as a basis for e.g. continuing education courses. The combination of basic research ideas and the activities has resulted in a research center with a distinguished identity among at least a certain sector of the Danish construction sector as well as within a broader research community. There is a clear profile due to the empirical

content (being close to the construction day-to-day activities), the ethnographic content (understanding how the managers see the problems) and the analytical content (questioning these pictures with analytical tools).

If CBS and the construction sector wish to see strong effects in the 2010 to 2020 period, the researcher group and the advanced user group are the main resources to consider. CBS now has the opportunity to preserve and further develop a very advanced user group, but to keep the group together and activated, a counterpart on the CBS side is needed. In the same way, if the construction sector wishes the research group to stay as an interesting counterpart for industry, a way must be found to encourage and support the future of the group with its associated users.

We recommend that the involved parties initiate a process where the ambition is to take the next step, looking closely at what has been achieved and exploiting the potential. This we believe will be clearly favorable for CBS – and the larger research community – as well as for the construction sector in its endeavor to transform into a more dynamic, interesting and attractive element of society.

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## **1. The report**

We have been asked by the Center board to make an evaluation of the “Center for Management Studies of the Building Process” (*Center for ledelse i byggeriet*) at the Copenhagen Business School. During the process we have found that there are expectations regarding both

- (a) the degree to which the center has been successful from a research point of view
- (b) the degree to which the center has affected or been used by the construction sector in Denmark

This report builds on the following data:

- (a) An extensive self-evaluation report (dated 28 February 2010) produced by members of the center
- (b) A selection of the publications produced by the members of the center

(c) A two-day site visit at the Center, 13-14 April 2010, where we had the opportunity to interview and discuss with representatives of all involved (program, including interviewed persons, attached)

(d) Some extra material – list of conference participants, etc. – that we have asked for during the process

The quality of the information we have received is excellent and there has been a very open and free interaction in all the stages of the process.

The rest of the report is divided into four sections. In the first we present our picture of the center and its activities during the five years from 2005. After that we focus first on an evaluation of the research output before we make the corresponding evaluation of the importance of the center to the industry. Finally, we raise the issues that we see as crucial today by considering the center in a longer time perspective.

## **2. The “Center for Management Studies of the Building Process”**

Center for Management Studies of the Building Process is a virtual research center at the Copenhagen Business School and part of Realdania Research.

*Development process:* Established at CBS in 2005 based on a grant from Realdania. It has worked actually as both a physical and a virtual center and has been headed by two professors, Kristian Kreiner and Jan Mouritsen.

The ambition was that the Center should work as a 5 years project that according to Realdania should accomplish three goals:

- (1) establish an identifiable research group within the social science area, oriented toward the construction sector,
- (2) that this group should not have a too narrow approach to management,
- (3) that it should have close contacts with and influence the practice

Due to the time limit, the center has had to evolve quickly and it had to be based on the senior researchers and Ph.D. candidates available. The core group has consisted of some twenty researchers of which more than half have been Ph.D. candidates. The development has been characterized by a fast accumulation of research experience within

a specific empirical field by initially more inexperienced researchers. The process should therefore to a large extent be seen and evaluated in terms of a “mobilization” process.

In this mobilization the group has activated international researchers, researchers at other universities in Denmark, and researchers at CBS. In total including conferences there are probably a couple of hundred researchers who have in one way or another been involved in the activities initiated by the Center.

In the same way there has been a mobilization of users/managers in the construction sector. In total there are probably at least 500 managers who have been involved in various ways. Out of these there is a group of about 50 that has evolved and become what we can identify as “advanced users”.

*Used resources:*

(1) A special grant from Realdania to the Center – initially DKK 25 million. Additional project finance has amounted to about DKK 5 million. In order to put this total sum into perspective – the Norwegian Research Council invests NOK 160 million covering eight years for each center in their SFI program. The Swedish Foundation for Strategic Research, SSF, spent SEK 45 million during 1998-2006 on its Competitive Building (CB) Program that coordinated activities at four technical universities, including a research school with taught courses and a series of projects, many of which received additional funding from other sources. In the Swedish case, more than ten Ph.D. degrees have been awarded as a consequence of the CB program, but it was only in 2007 that the number of CB related articles published in international peer-reviewed journals really took off (nine articles), after an annual average of only about two articles during the program period itself.

The total amount of money allocated to the CBS Center and the time period are in other words rather small and short in relation to what is usually assumed to be necessary for creating major effects in the research field. However, the total resource input has also been greater as

(2) Two experienced researchers paid by CBS have been a complementary investment. These researchers have added competence, reputation and established networks making it

possible to mobilize Danish as well as international researchers (from Ph.D. candidates to full professors).

The process of monitoring resource use in Center projects over the years has experienced slight difficulties. We have noted that merging and consolidating accounting data from participating universities has posed a time-consuming administrative challenge for the Center. Similar experiences are known from other research centers that bring together people from more than one university.

*Performed activities:*

(1) Projects, more than 30 initiated projects of which 19 have been centre project, 8 have been Ph.D. projects and 6 have been minor ones. There has in this way been a cascade of projects successively covering more themes. More than half has now reached the publication phase.

(2) seminars (a) eleven seminars for managers with more than 400 participants, (b) informal research seminars within the centre, (c) participation by members in the center in external seminars in Denmark as well as abroad.

(3) organization of yearly research conferences with participation mainly from Denmark but including international researchers also coming from Sweden, Norway and the UK.

(4) information and communication activities – web site, news, etc.

*Major result:* The combination of some basic research ideas and the above activities has resulted in a research centre with a distinguished identity among at least a certain sector of the Danish construction sector as well as within a broader research community.

### **3. The research output**

*Researchers:*

(a) Six completed Ph.Ds, (and three in process and three who have left). This must be regarded as a good result in five years. The average Ph.D. time in Scandinavia is five to

six years. The drop out fraction here is nothing unusual, as all those starting Ph.D. studies do not complete them because of lacking capabilities or new opportunities appearing.

(b) At least twenty researchers with a much more thorough interest for, and quite extensive experience of, the construction sector and its problems. The increased interest and experience of these researchers will certainly affect them in the future. They will be more motivated to identify and study issues related to the construction sector. Some of these researchers will probably become focused on such issues while others will take their experience into other fields.

(c) These twenty researchers form the core of a much larger group which has been related to the center during these five years. The total size of the group could well be a couple of hundred researchers. These researchers have been influenced and they can be activated by the core group if needed and if there are special new opportunities that emerge.

*Publications:* The publication list now includes almost 100 publications of which approximately 10 percent have been in international scientific journals. This number is rather low but can be explained by that so many of the activated researchers were young and inexperienced at the start. It takes time to build research competence and this is needed for producing results that can be published internationally. For the same reasons, the publication rate has been quickly accelerating during the second half of the program and the publications can be expected to continue for several years ahead. Thus, the most important publications from a research point of view are probably still to come. It is also to be expected that there will be a few short book publications in Danish, summing up Center findings in a format that will be useful not least as a basis for continuing education courses aimed at sector practitioners.

*Research quality:* The research has a clear profile with a characteristic and rather unique way of approaching management problems, stressing the following three aspects:

- *the empirical content* (being close to the construction day-to-day activities)
- *the ethnographic content* (understanding how the managers see the problems)
- *the analytical content* (questioning these pictures with analytical tools)

This research approach, colored by actor-network theory and organizational and institutional theory, has been used in a highly consequent manner which also has been observed and appreciated by the practitioners in industry. We find that many Center

research projects have created new insights into the early stages of complex and innovative building projects, and that the fundamental idea of advancing leadership through breaking the traditional association between construction faults and human faults (= trying to exercise leadership through moral reproach) has been translated into methods and results of wide interest. This also holds a promise of Center results being able to influence mainstream thinking on leadership in project-based industries.

*Summing up:* The center has achieved to build a research platform both in volume and in profile. It has become a research node clearly visible from a domestic point of view but also in an international context.

#### **4. The interaction with the industry**

First we must state that according to our view it is in general difficult and requires considerable resources to have “advanced users” of social science research. The reason is that any user has to develop both own competence and a thorough knowledge about the research and the researchers in order to find an own way to use the research results. Thus, a user must have both competence, motivation and a personal network to be able to benefit from the research.

The Center’s basic research approach that we earlier described starts out from an empirical base. This means that all projects – in total more than 30 projects (see above) – have involved interviews or discussions with representatives of the industry. It also means that many of the publications can be seen as accounts of empirical situations and how they have been seen and approached by managers. As so often is the case, the ethnographic approach implies that a group of people studied in a particular research project might find little that they feel to be new among the published results, while at the same time these results function as an eye-opener for other actors in an industry.

This research has been the base for eleven seminars with more than 400 participants covering a number of different issues. Information about the research, the seminars and the publications have also been given through the Center web site that has included more than 120 larger information items such as news, interviews and articles.

The research has also been used as an input into teaching activities. The empirical material – case descriptions – has been used by the involved researchers in their teaching. This effect will probably increase over time when the material will be further diffused.

In total, we find that there has been extensive interaction with managers within the construction sector and that the Center has managed to establish a platform of more than 50 managers (advanced users) having a more regular contact with the researchers.

## **5. Important current issues**

In order to identify the most important current issues we will consider the Center in a longer time perspective – 2000 to 2020. This is a typical time period when discussing research and research planning. The Center can be seen as a consequence of the part-time MBA Byg program, finished in 2004, and which required a minimum of three years of practical experience for admission. The professor who subsequently became one of the two Center leaders thus met and interacted with a number of the managers who later become the core of the user group. This is also one explanation why the Center has managed to mobilize so many quite advanced users in a short time. It should be emphasized that the life cycle of the Center has operated in the reverse compared to a traditional and linear model, where a research center is set up based on a particular body of theory, then gathers empirical data, establishes industry contacts, publishes and ultimately designs an educational program based on prior research.

Since 2005, the Center has created a main platform consisting of one research group (with about 20 researchers) and one user group (with about 50 managers). These two groups are essential for the future development. If the involved organizations (CBS on one side and the construction sector on the other side) wish to see important effects in the long run – let us say in the 2010 to 2020 period – these two groups are the main resources to consider. CBS now has the opportunity to preserve and further develop a very advanced user group that can be valuable in many different situations – for different types of research, for links with society in general. But in order to keep the group together and activated they need a counterpart on the CBS side – and an interesting counterpart. In the same way if the construction sector wishes the research group to stay as an interesting



counterpart for the industry, they need to find a way to encourage and support the future of the group with its associated users.

As of 1 July 2010, the Center in its current form will be closed. This can be seen by these two groups, researchers and users, in two different ways. One is that it is the end of a process and that the two groups can disintegrate now and go on with new issues. The alternative is to see the present situation as a chance for renewing the process – it is probably a good time to decide to make something slightly different but still together or in close researcher/user interaction. Seen from the outside we strongly recommend that the involved parties take this second view and that a process is initiated where the ambition is to take the next step, looking closely at what has been achieved and exploiting the potential. This we believe will be clearly favorable for CBS – and the larger research community at least in a Nordic perspective – as well as for the construction sector in its endeavor to transform into a more dynamic, interesting and attractive element of society.