

AN OBJECTIVE-DRIVEN APPROACH TO WORKPLACE DESIGN, MANAGEMENT AND USE - a case study

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ABSTRACT

During the last decades, in literature, theory, and practice in workplace design and management, it has been argued that the workplace may be seen as a strategic tool that may impact on the user organization in order to support value creation and fulfillment of organizational objectives. The office building is often seen as a means to add value to the user organization. At the same time, there has been a focus on measurement of performance and workplace evaluation. In this project, we have aimed at combining these two perspectives, setting goals and defining targets during briefing and design, and later evaluating the results according to the same measures after completion.

We describe a Norwegian case study: the construction of a new HQ for one of the major Norwegian banks. The case study follows the process from initiation, through evaluation of alternative locations and concepts, briefing, design, construction, and finally: use. The research is performed as action research. During an objective-driven process, goals and targets were developed for 5 different ambitions, SMART: Samhandling (cooperation), Miljø (environment), Attraktiv (attractive), Rasjonell (rational), and Teknologi (technology). The target values for benefits were defined in monetary terms, and monitored during and after the move.

The results show that the strategic focus and objectives have been important in order to guide and focus the process. The added value will be possible to measure, by a systematic quarterly review of KPIs related to the different objectives. This has proven to be important in order to achieve change and development within the user organization.

Keywords

Workplace Management, Strategic Briefing, Workplace Design, Scorecards

1 INTRODUCTION

This project started in 2005, when the Bank started to address the possibilities for a new HQ in Trondheim Norway. During the initial stages, the Bank started cooperating with SINTEF research institute and the Norwegian University of Science and Technology, addressing strategic issues: What was the main objective and how would one approach the project? This was the beginning of a cooperation that lasted all the way through the project. While the bank developed the project, the researchers provided methods, tools and knowledge to advise the bank in topics as strategic briefing, indoor environment, energy efficiency and workplace development.

The Bank moved into their new premises in November 2010. This paper looks at how strategic briefing was used to focus and develop the project and promote alignment with organizational objectives, and at the use of scorecards to define and follow up on performance. The research and development project was conducted as action research, bringing together the development of the project with development and testing of new solutions and processes, in cooperation between researchers and practitioners. The development of the project, though, was carried out by the Bank, arranged as two project teams: One at the demand side (the organizational development project and the process of setting requirements) and one at the supply side (construction and project management).

1.1 Adding value through Strategic Briefing?

Much of the literature on workplace design and management highlights the importance of adding value for the user organization. The workplace may be used as a tool to develop the organization, and add value through increased value creation, interaction, collaboration and so on (e.g. Becker 2004, Vischer 2005, Gjersvik and Blakstad 2004a, Gjersvik and Blakstad 2004b, Nenonen 2005, Nenonen et al 2009). Many also stresses that the objectives for the building project should be aligned with organizational objectives and describe how use of balanced scorecard approaches, and strategy maps may be used to link strategic issues in the user organization to the development of new workplaces (Kampschroer and Heerwagen 2005, Harrison 2004, Rothe et al 2009). Joroff et al. (1993) describes real estate as the fifth resource for production. Workplace development is pictured as a tool for the occupying organization (Becker and Steele 1995, Horgen et al. 1999, Grantham 2000). In line with this, the real value of a workplace project must be evaluated based on its impact on organizational performance (e.g. Blakstad et al. 2010). Even though these ideas has been around for several decades, most building projects are neither developed based on a strategic brief nor evaluated based on the fulfillment of organizational objectives.

In our work, we look at strategic briefing as a management process which integrates the development of work environments with the mission and objectives of the organization, in order to define future spatial needs. Blyth and Worthington (2010) defines a strategic brief as “*a document that sets out the aims of the project. It is written in the language of the client and its business with clear statements of intent against which later results can be measured*” (page 17). They also highlight the importance of describing “ends” and not “means” in the strategic brief. Nutt (1993) on the other hand, describes the strategic brief as the strategic process from pre-design, design, construction and commissioning, and to post occupancy processes (FM briefs).

The strategic brief is the starting point both for the more detailed briefs that will define the content of the building project, but also the business case for the new workplace. Kupritz (2002) describe how views of workplaces as organizational context have been replaced by a more strategic view of facilities as crucial corporate assets. The BOSTI study associated monetary values with design improvements and calculated cost / benefits of workplace innovations (Brill et al 1984, Brill et al 1985)

According to Samset (2001), value must be seen in relation to different goals: Societies' goals, effectiveness goals (the users' value from the project) and result goals (projects' ability to deliver results on time and target). Kaplan and Norton (e.g. 1992 and 1996) describe the balanced scorecard as a measure to drive performance in organizations. They identify 4 perspectives: The financial perspective, the customers' perspective, the internal business perspective, and an innovation and learning perspective.

In line with this argument, the user organization must define what should be achieved (set objectives and targets). The objectives must be aligned with the vision on the organizations strategic direction, challenges and opportunities. This is what we may label Strategic Workplace design, and its main focus is on how workplaces may be used to add value for the user organization. This requires a strategic focus within the user organization (the core business) on setting objectives, and developing measures for workplace design and use in order to support these objectives. Although logical and obvious in theory, there is still a lack of examples of projects that apply these practices, and of research on benefits, tools and methods for practice.

1.2 Objectives and research methods

To develop better workplaces by using strategic briefing and workplace design, we need to know more about the kind of processes and tools that may be utilized. This research reports on a case study where scorecards were used as a way to measure performance and give directions to the strategic brief and the development process.

Through a cooperative process, the project was developed and evaluated by researchers and practitioners in co-learning processes. Together, we aimed at answering the following research questions:

- *How can an objective-driven process be conducted?*
- *What are the objectives that should govern the development of the new building?*
- *How can objectives serve as parameters to determine added value throughout the process?*
- *Is it possible to quantify the added value of the project for the Bank?*

In this paper, we will try to answer these questions, and at the same time document the development project. We believe that the methodology that was developed will serve as a good example for other projects. We have also started an evaluation scheme, aiming at measuring how well we fulfill the set objectives. In the years to come, we will be able to measure if the targets are met. The first parts of these evaluations for one of the ambitions (realize benefits in cooperation) are also discussed in this paper, and serve as a baseline for further measurements.

The project is developed as action research, bringing together the real development project with scientific tests and evaluations. The chosen methodology is an explorative case study (Yin 1994). Researchers also acted as consultants in the briefing process, but the scope and focus of the study was always twofold: both to develop the project, and to gain more knowledge which later might be tested and used to develop generic knowledge about strategic briefing and workplace performance. The cogeneration of knowledge is the main aim in action research, highlighting the importance of learning and reflection both for the practitioners and for the researchers (Greenwood and Levin 1998).

So far, the project's occupancy and use have been evaluated twice: Once before moving out of the old building, and then a second time at the temporary location, where some of the new solutions were being piloted before the move to the new building. For evaluation, the following methods have been used:

- Occupancy data. The presence and use of different types of space were logged during a period of 2 weeks. This was done both in the old building and in the temporary location.
- User survey. A web-based survey was sent to all users, based on the KUNNE questionnaire (Blakstad et al 2009). For every statement or question, the respondents could choose from 2 positive alternatives (e.g. Better / Much Better, or Agree / Strongly Agree) and 2 negative alternatives (e.g. Worse / Much Worse, or Disagree / Strongly Disagree).
- To monitor the results in relation to the scorecard, the different scores will be reported to the Bank's board of directors four times a year. So far we are not able to report on the results, but report on the identified potential for added value. The results will be monitored based on document studies and analysis of financial information and documented through the Bank's financial results and quality system.
- In order to research potential benefits before the first official reports and evaluations, interviews with two of the different user organizations have been conducted for the purpose of this paper. The interviews were semi-structured, and were carried out 2 months after moving into the new building.

2 CASE STUDY, NEW HEADQUARTERS FOR "THE BANK"

The Bank is its region's largest financial corporation, employing 1100 people on 56 different locations. When this project was initiated in 2005, the Bank's HQ was located within 2 different, adjunct office buildings in Søndre gate in Trondheim. Søndre gate is seen as the "financial district" in the city centre. The smaller building and historical landmark in the city centre dates back to 1882, while the larger, main building was erected in 1978. The functional and technical condition of the 70's building was rapidly deteriorating, and the bank was faced with an opportunity as the lease period was coming to an end in 2010. The building did not have the needed volume to contain the expanding business, and an analysis showed that it did not have enough capacity and adaptability to meet the future needs of the bank in the demanding market. The indoor environment was bad, as were the qualities of the workplaces in the building.

This was the reason for the bank to initiate a project in 2005 in order to plan for new facilities. In an extensive feasibility study, several locations were analyzed, and finally the board of directors decided for a new building at the old site. This process was the first part of the development of a strategic approach to the project, as alternative locations were evaluated based not only on quantitative parameters (cost, time, location), but also on issues such as adaptability and potential, image and visibility, accessibility, and construction project execution. All parameters were valued, and the decisions based on a balanced scorecard analysis of the different parameters. One decided to demolish the 1978 building, but to incorporate the old bank, which was listed, in the new design. The old bank was seen as a symbol of the history of the bank and its regional roots.

2. 1. Strategic brief and architectural competition

To kick off the project, one started to explore what benefits one expected the project to add to the organization. The Bank decided to focus on five topics, which were regarded as the issues with the highest potential for improvements and development:

Samhandling (cooperation)

- between the divisions and the departments in the Bank, but also between the different companies at group level, in order to both share and create new knowledge to benefit customers

Miljø (environment)

- excellent indoor environment for employees, and a sustainable use of resources and energy to benefit the external environment

Attraktiv (attractive)

- attract and retain highly qualified personnel and the most interesting customers

Rasjonell (rational)

- higher productivity (working more effectively and efficiently), flexibility for changes in organization, lower energy and maintenance cost, lower costs from internal relocations, improved area efficiency

Teknologi (technology)

- Technology that supports cooperation, flexibility and effective work processes

In Norwegian this was developed into an acronym: SMART, which itself was important to highlight the goals; working SMARTer together.

This served as the main ideas behind the strategic brief. The goals and objectives for the organization have later been developed into requirements as input to the design process, a program for the architectural competition. The main requirements in the program were related to workplace design and management and to the public relations with the city.

Workplace design and management:

- Flexible solutions to support our need for future development and change in organization, ways of working and technology

- Quality and image – a trustworthy, reliable bank, with the ability to adjust to customers need for competence and service in the future
- Cost control – sustainable concerning both investment and running costs
- Energy efficient solutions and indoor environment that supports employee performance

Relations with the city:

The bank was very attentive to its relation to the local community, and focused quite early on the possibility of “giving something back” to the city. There was close communication with the local authorities, and the chosen new buildings should give a positive impact on the inner city development. Open public spaces were introduced, public and commercial activities were planned at the ground floor, and a commercial meeting centre was introduced in relation to the old bank. The site for the new building was on the historical remains of the medieval city. Located in the basement were the ruins of a famous church, Olavskirken, which archeologists assume is built on the spot where the body of St. Olav was buried. The bank wanted to make the remains from the church and its own substantial art collection accessible to the public.



Figure 1. The winner concept by Agraff, and workspaces in the HQ after completion

2. 2. Process

5 different architectural firms were invited to compete, and a local office, Agraff, won the competition in March 2007. From the beginning, the process was seen as a strategic process for the Bank. Both the process and the final product (the office building) should be a tool to achieve the vision: To be the “recommended bank”. An internal development process was launched in order to define objectives, needs and requirements. Much effort was put into understanding how people worked, and how existing facilities was used. Based on this, an idea about how one should work in the future was developed, and several other projects were studied.

The involvement of different levels in the organization has varied throughout the process. The management group has been the steering committee. In the first stages of the process, when objectives and main concepts were defined, all managers in the different units were involved. In the later stages of the process, different user groups were defined, where employees were engaged in developing the new principles, and new ways of working. More employees were

involved in the processes as the move back into the new building approached, in order to prepare the organization for the move and the new practices.

Before moving back into the new building in the city centre, one person in each unit was appointed “SMART ambassador”. The role of the ambassadors is to facilitate the process, and to keep the interest alive even after moving back to the building. They are also expected to be guides through the new principles, the new technology, and to know more about the environmental benefits of the new building. But most of all, the ambassadors are expected to follow up the objectives and ambitions, and use the new environment to facilitate and harvest the benefits. All SMART ambassadors received training before moving into the new building.

2. 3. User surveys

An analysis of occupancy rate in the different spaces was performed (cellular offices, landscapes and different meeting rooms) in the existing building before demolition. Most of the employees were located in open plan offices, except for some of the managers. The analysis showed us that the managers’ cellular offices were empty 65% of the time. Despite the fact that they were equipped for and supposed to be used for discussions and small meetings, this was only the case 6% of the time. The open plan landscapes were also underutilized. Even though the users experienced a lack of meeting rooms, the analysis showed that they were unoccupied a lot of the time. The study was later repeated while the Bank was in a temporary location, during construction of the new building. This was used to calculate the right “dynamic factor” for the different departments and functions in the new building.

In addition to the analysis of occupancy rates, a survey was performed focusing on use and fulfillment of requirements. The survey covered the following topics:

- How well the office supports different needs (e.g., collaboration, concentration, knowledge sharing)
- Satisfaction and work environment
- Use of space and rooms
- Physical work environment

Based on the results, one decided to apply new workplace principles. To test the different concepts, 2 pilots were defined in the temporary location. These were also evaluated and served as input to the design of the workplace layouts in the new building.

2. 4. Workplace design

In the new layout, all employees are located in open plan offices. The offices are non-territorial, with a dynamic factor between 1 and 1,3. The different groups are located together with other departments and groups, in order to interact and learn from each other.

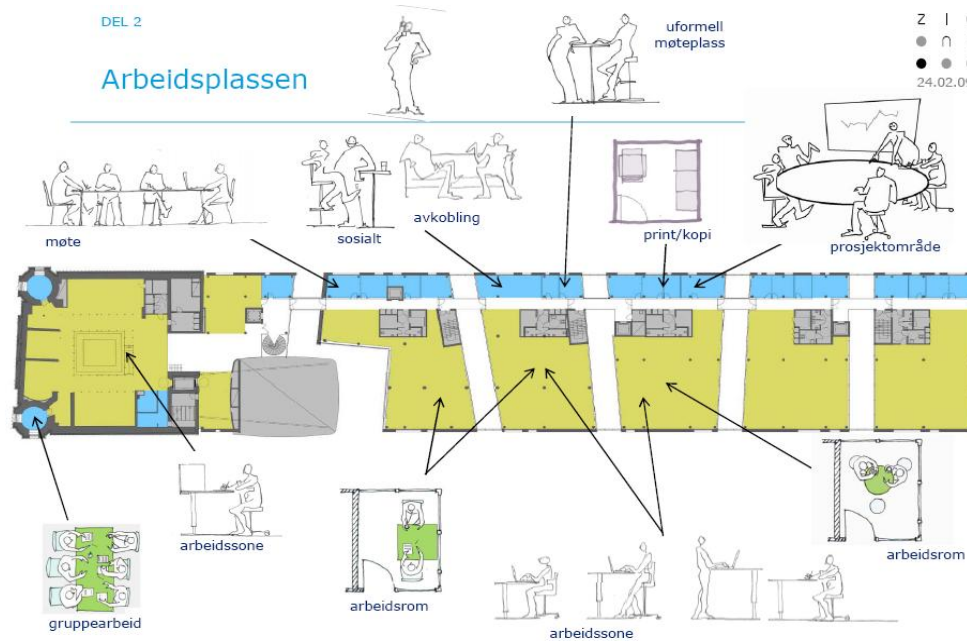


Figure 2. Layout, from Zinc Interior architects

2. 5. Adding value

In the case study, a process to define goals was initiated by the management team and the Board of Directors of the Bank. From the very first stages of the project, they were concerned about identifying and realizing added values from the project. A “scorecard” was developed which highlighted the following ambitions:

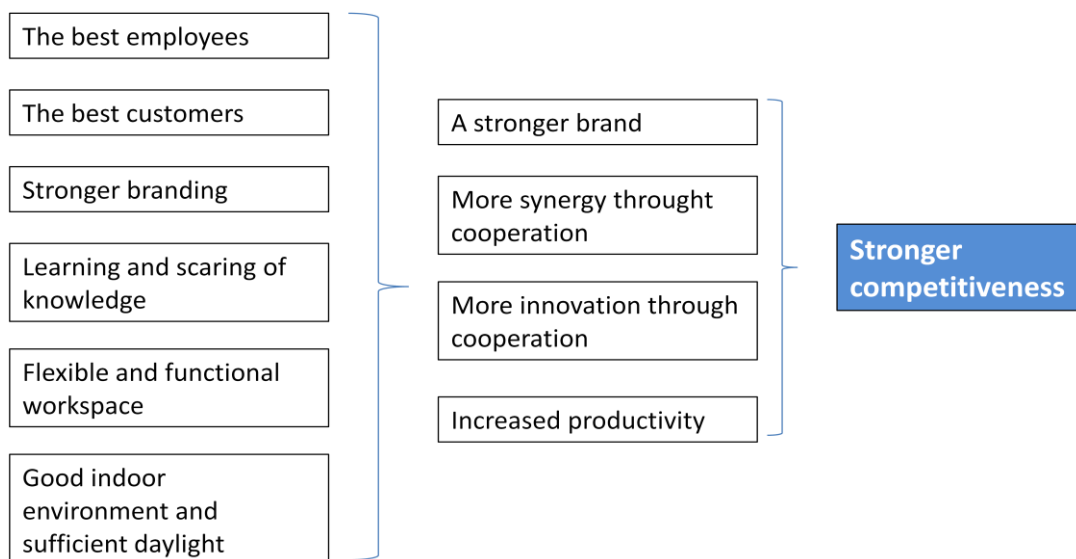


Figure 3. The main ambitions in the scorecard

At the same time different KPIs were defined. For all objectives, a target for added value was set, expressing the expected results in monetary terms. In this way, a potential benefit of 36 million NOK (approx 4.5 million euro) was expressed. This was approved by the Board of Directors as part of the decision to invest in the project. During the entire project, the Board received report about the development in the different sores and KPIs. The results will in the future be reported to the Board four times a year.

Ambitions	Objectives	Approach / measures
A stronger brand	<ul style="list-style-type: none"> •Performance •Preference •Attractive employer 	<ul style="list-style-type: none"> •Indexes and market surveys •Customer preference index •Survey, employees, perceived value of the workplace
Realise befits in cooperation	<ul style="list-style-type: none"> •Increased income, 24 million NOK 	<ul style="list-style-type: none"> •For all units: Quantified plans for increased interaction and benefits •Financial results •Benefit from location units together
Increased productivity	<ul style="list-style-type: none"> •Efficiency, 12 million NOK 	<ul style="list-style-type: none"> •Efficiency, survey •Measurements, temperature, CO2, daylight •Occupancy survey – compare with the results before the move
Increased innovation	<ul style="list-style-type: none"> •Increased innovation 	<ul style="list-style-type: none"> •Innovation audit •Track innovations and ideas

Figure 4. Ambitions, objectives and measures

2. 6. Realize benefits in cooperation

For one of the ambitions (realize benefits in cooperation), a thorough process was conducted in order to express benefits in monetary terms. All units and department were expected to define benefits from working more closely together. The goal was by the time of decision, in June 2008, 24 million NOK. In our further process, further synergies were identified and estimated to about 34 million NOK in benefits for cooperation every year. The estimation of benefits is based on an analysis in all business units, in which possible cooperative synergies from working with other units was identified. This was done both before the move to the preliminary building and before moving back to the new HQ. An analysis of who would benefit from working together in the same workspace was conducted. All departments were asked to identify their most important partners. When moving to the preliminary building, one decided to continue the traditional organization. However, when the issue was addressed again when deciding on location of units in the new HQ, the bank was ready with a new model. Benefits for customers were focused, as well as sharing of knowledge between the employees.

One example is the real estate brokers, who identified a substantial potential in being located together with the people who grant loans to the customers. In the interviews, both the bank and the brokers highlighted the fact that the work to create synergies was part of a long-term strategy, and that the new building was a catalyst for the process. The users report high organizational focus and a structured work to enhance synergy, through weekly targets and follow-up meetings, individual and organizational bonuses, as well as a structured system to keep track of the customers that are directed to other departments. They also focus on how they learn from observing each other in the same workspace; they learn how to deal and communicate with customers, and the nature of the other units' business in order to market each other to the customers. They reflect on how the different "cultures" transmit to the other units.

"The personal relation is affected by working in the same workspace". Manager, bank

Both sides agree that they have learned a lot from each other: the social and outgoing way of working among the brokers, and the more structured way of approaching the business in the bank. Both the bank and the brokers also feel that they are more connected to other units in the bank.

"The openness of the building increases accessibility. It is easy to solve problems and get input from other units. I just go to the other department and things are easily solved at the spot. There are no boundaries. Thresholds between units are low". Manager, bank

3. DISCUSSION AND CONCLUSIONS

It is in cooperation the Bank has indications of positive benefits so far. This might partly be a result of the new building, but also be related to the processes that have been conducted during the relocation. There has been a strong focus on developing the organization, locating people with potential benefits of working together in the same workspace. All departments were asked to analyze and work for better cooperation with the other units. The process of appointing people with a special responsibility for facilitation cooperation and new work processes (the SMART ambassadors) is also expected to be important for good results.

In this paper, we have described a case study and explained how the objective-driven development process was conducted. We have seen that the main benefits and objectives relevant for the bank were related to realizing benefits in cooperation, image/branding and increased efficiency and innovation.

We have also seen that it is possible to quantify even "soft issues" like cooperation, and use them as parameters to determine value. The effects may be quantified. The next years will show how the results for the different ambitions and objectives fulfill the Banks ambitions. All parameters will be monitored and reported to the Board of Directors quarterly. This is expected to serve as a valuable source of information of effects of the new building in the long run.

4. ACKNOWLEDGEMENT

The authors would like to thank all participants in the case project for their innovative and professional approach to the project.

REFERENCES

- Becker F (2004) *Offices at Work*, USA, Jossey-Bass.
- Becker F and Steele F (1995) *Workplace by Design: Mapping the high performance workscape*. San Francisco, CA: Jossey-Bass
- Becker F, Quinn K L, Rappaport A J, Sims W R (1994) *Implementing Innovative Workplaces: Organizational Implications of Different Strategies*. Summary report. Cornell University. International Workplace Studies Program. Ithaca, NY
- Blakstad S H, Hatling M and Bygdås, A (2009) *The knowledge workplace – searching for data on use of open plan offices*. Paper for EFMC 2009 Amsterdam
- Blakstad S H, Olsson N, Hansen G K and Knudsen W (2010). *Usability Mapping Tool*. CIB Publication 330, CIB W111:Usability of Workplaces - Phase 3, pp 17-29
- Blyth A and Worthington J (2010) *Managing the Brief for Better Design, 2nd edition*. London and New York. Routledge.
- Brill M, Margulis S, Konar E, BOSTI Associates (1984) *Using Office design to increase productivity (Vol 1.)* Buffalo, NY. Workplace design and Productivity, Westinghouse Furniture Systems.
- Brill M, Margulis S, Konar E, BOSTI Associates (1985) *Using Office design to increase productivity (Vol 2.)* Buffalo, NY. Workplace design and Productivity, Westinghouse Furniture Systems.
- Duffy F (1997) *The new office*. Conran octopus, London.
- Gjersvik R and Blakstad S H (2004a) ‘*Towards typologies of knowledge work and workplaces.*’ In Facilities Management. Innovation and Performance, ed. Alexander et al, London, Spon Press.
- Gjersvik R and Blakstad S H (2004b) ‘*Designing knowledge work space: Archetypes of professional service work as a tool for change.*’ In Living Knowledge: The Dynamics of Professional Service Work, ed. Carlsen A, Klev R. and van Krogh G, Basingstoke, Palgrave Macmillan: 140-163.
- Grantham C (2000). *The future of work. The promise of the new digital work society*. New York, NY:McGraw-Hill, Commerce Net Press
- Greenwood D J and Levin M (1998) *Introduction to Action Research: Social Research for Social Change*, Thousand Oaks, CA, Sage.
- Harrison A, Wheeler P, Whitehead C (2004) *The Distributed Workplace*. Spon Press UK.
- Horgen T, Joroff M, Porter W, Schon D (1999). *Excellence by design*. New York, NY:Wiley
- Joroff M, Louargand M, Lambert S and Becker F (1993), “*Strategic management of the fifth resource: corporate real estate*”, IDRC, Report No. 49. IDRC, Atlanta, GA.
- Kampschroer K, Heerwagen J (2005) *The strategic workplace: development and evaluation*. In Building Research & Information 33 (4). Pages 326 – 337.

Kaplan R S and Norton D P (1992) *The balanced scorecard – Measures that Drive Performance*. Harvard Business Review. January – February 1992

Kaplan R S and Norton D P (1996). *The Balanced Scorecard: Translating Strategy into Action Boston*: Harvard Business School Press

Kupritz V W (2002) *The Relative Impact of Workplace design on Training Transfer*. Human Resource Development Quarterly; Winter 2002, 13, 4, page 427 – 447. Wiley Periodicals

Nenonen S (2005), *The nature of the workplace for knowledge creation*. Turku Polytechnic Research Reports 19, Turku.

Nenonen S et al (2009) *Managing Workplace Resources for Knowledge Work*. Final report from the Prowork project. Downloaded from: www.proworkproject.com, January 10th, 2010.

Nutt B (1993) *The Strategic Brief*. Facilities Vol 11, Issus 9. Page 28-32

Rothe O, Nenonen S, Airo K, Gersberg N (2009) *Process guide for creating and utilizing the workplace resource management. Strategy Map*. Downloaded from: www.proworkproject.com, January 10th, 2010.

Samset K (2001). *Prosjektvurdering i tidligfasen. Fokus på konseptet*. Tapir akademisk forlag

Visher J C (2005) *Space meets status. Designing workplace performance*. Routledge, Oxon.

Yin R K (1994) *Case Study Research: Design and Methods*, 2nd ed., Thousand Oaks, California, Sage.