Recent advances in Corporate Real Estate Management: ‘Entrepreneurial Cooperation’ in restructuring, maintenance and control: an answer to the ‘explosive’ technological growth in building Industry?

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Abstract
The Credit Crunch brings to light a renewed interest in the operational tasks of Corporate Real Estate Management (CREM): a so called ‘Entrepreneurial Cooperation’ (‘Ondernemend Samenwerken) in restructuring, maintenance and control.

This so called ‘Entrepreneurial Cooperation’ implies a renewed approach of the internal customer and also a renewed cooperation with the building contractors for restructuring, maintenance and control. It leads to supply chain optimization and also to new roles for the contractors with more responsibility to the end-users.

‘On route’ to a Demand Management Organization, ‘Entrepreneurial Cooperation’ could be characterized as a total re-definition of the mutual cooperation role patterns of staff maintenance and control and it’s building contractors for restructuring, maintenance and control. ‘Entrepreneurial Cooperation’ anticipates on the dire necessity and urgency of budget cuts in CREM staff. It is also a highly needed reaction on the recent wide spread diversification of new building methods, new building products and new building materials and of new related ICT-technologies used in operational management and technical design. For most of the CREM organizations it is hard to keep up with these new technologies, especially no there is a necessity to down size their staff.

‘Entrepreneurial Cooperation’ works with cross functional teams from Board, CREM staff and building contractors.

The CREM organization will focus itself on the interpretation and direction of the growing diversity in internal customer preferences inside the company and on the process management of this. The CREM organization will also address their contractors on their growing specialist knowledge and experiences with new methods, products, materials and ICT-technologies and will ask them to invest in sustainable options on their insights in real energy saving measurements.

The business case ‘Entrepreneurial Cooperation’ discussed in this paper, takes place inside the Eindhoven University of Technology – the host University of this year’s ERES 2011 Conference – where one of the authors is manager of the CREM staff maintenance and control.

The business case is monitored by one of the well known Dutch business consultancies, which recent produced a first formal evaluation, with key results:

- a shift in task responsibilities
- a smaller staff
- use of smaller budgets

The paper could be an initial guide for modernization for CREM organizations. But could also provide ‘lessons to learn’ for the whole building industry sector, especially for restructuring, maintenance and control:

- anticipation on innovative technological developments
- anticipation on new market opportunities, trough a broader marketing of new specialist knowledge application

Key words: CREM, operational management, strategic management, building industry sector innovation
1. Introduction: the backgrounds to the creation of an Innovative, Demand Driven CREM model

Theoretical reflections about the - relatively short – history of Corporate Real Estate Management (CREM) show the last 25 years an increasing role of CREM inside the entire Corporate Real Estate Management. Because of this CREM is the last 25 years also better and better represented in the direction of the top management of the company, sometimes even inside the Company Board itself, and even sometimes represented through the CEO himself.

Theoretical models, as that of Joroff, let it appear as this ‘race to the top’ would be a kind of natural growing process. Most of these models are shaped as a hierarchic pyramid. CREM started as pure operational maintenance of buildings, services installations and terrains. Most models see this as the basics of CREM: Operational CREM as the basis of the hierarchic pyramid. The next (sub) layer of the hierarchic pyramid is financial control to strengthen the financial efficiency (in some models regarded as a sub layer of the operational basis of CREM).

In most models the next layer in the hierarchic pyramid is a tactical Layer. It can also be divided in several sub layers. One of these sub layers can be standardization in service level packages. Another can be the creation of - a quasi – internal CREM market inside the company itself.

The ‘top of the pyramid’ is the strategic layer. It is a completely mixture of Real Estate interests and Key Business interests: the so called strategic role of Corporate Real Estate and its Corporate Board representatives. When the economy was booming and Real Estate prices were going up, Corporate Real Estate could be regarded as one of the high valued assets of the company.

Characteristic for this development seems to be that the distance to the Management Top is decreasing but simultaneous the distance to the corporate production and services processes seems to increase.

The 2001 nine-eleven Twin Tower Incident marks a turning point in the economic growth of the nineties of the twentieth century - and simultaneous with that – also a turning point in the strategic role of Corporate Real Estate inside the Company.

Also as a result of the worldwide Financial Crisis - with its progressive manifesto since 2007 – the strategic importance of Corporate Real Estate decreases even more. Simultaneous the Corporate Key business products processes and services processes came under more and more pressure and could even stagnate.

The basic management reaction to this all is: higher efficiency through budget cuts and outsourcing. So the mainstream new trend in CREM became higher efficiency through CREM budget cuts and the (total) outsourcing of CREM.

The CREM theory ‘answer’ for higher efficiency through budget cuts and outsourcing starts with the conversion of the present CREM organization to a so called Directive Organization model and ends finally, with its ultimate consequence a so called Demand Organization model: a total outsourcing to just one external party: a contractor with an Integrated Facility Management Contract. This mainstream outsourcing trend is in several studies also modeled as a natural growth process: the total outsourcing as a natural result of a growing professionalization (FMN).

The Authors of this paper state that the Directive and the Demand Organization model lead – only – to shifting and stacking of risks inside the whole CREM process. Both parties: the CREM organization and the external contractor, will react - ‘naturally’- trough very well know – thus traditional, inflexible and non-innovative – concepts.

Also for the CREM organization of this University, the vast declining strategic role of Corporate Real Estate is of importance. The Asset value of Corporate Real Estate declines when in the Netherlands the volume of hired out offices and industrial property declines and more and more office blocks and industrial property remain empty. The plans to develop new Real Estate on parts of the Campus and to hire these out to market parties are substantial slowed down. The Credit Crunch - with its progressive manifesto since 2007 leads to a further shift to the future. The construction costs also decrease, but in a much slower tempo and financing of the new to build Real Estate remains the greatest bottle neck.
Now the prospect of a prompt reconstruction or renewal expires, the necessity for maintenance becomes urgent again.

For the CREM organization of the Eindhoven University of Technology the question arises: ‘how to organize this maintenance?’:

- Going back to the ‘old’ operational oriented CREM goals and management?
- Following the new outsourcing trends of a ‘Directive Organization’ and finally to a ‘demand organization’ with only one contractor as partner?
- Or develop a new inspiring, surplus value added third way??

At the end of the first decennium of 2000, new, evolving innovative and demand driven user needs appear for the CREM organization of the Eindhoven University of Technology:

- Some of the buildings need only a temporary extension of the economic live span. It is necessary to search for a so effective but also as efficient as possible way of optimizing ‘production and services’ in Education and Research.
- The Eindhoven University of Technology profiles itself especially as an innovative University, situated in a utmost innovative European top Region: the so called Brainport Region. The Division Maintenance and Control especially wants to integrate innovation in its activities.
- The Eindhoven University of Technology also needs to have a quite differentiated infilling of CREM services and service levels, because of its quite differentiated Key Businesses: the quite different ‘hardware’ and quite different main cultures of its various Departments.

For the Section Maintenance and Control of the CREM organization the new, evolving innovative and demand driven user needs influenced the answer to the arose question: ‘how to organize this maintenance?’

The outcome was: an out of the Division Maintenance and Control of the CREM organization initialized innovative surplus value produced third way: optimizing ‘production and services’ in Education and Research trough differentiated - demand driven and eventual specific per Department – offer of buildings, Service installations and terrains, trough restructuring, maintenance and control of Corporate Real Estate. This with full agreement of the Corporate Board.

Beside these focus on effectiveness, also a focus on efficiency (budget cuts) remained necessary.

The backgrounds and details of the Innovative Demand Driven CREM model ‘Entrepreneurial Cooperation’ (‘Ondernemend Samenwerken) are elaborated in the next sections of this paper:

Section two: ‘Risks and the Limited scope of the Directive Organization model and Demand Organization model for CREM’ describes that Directive Organization models lead – only – to shifting and stacking of risks inside the whole CREM process. In these – ‘mega’ - outsourcing contracts, risks shift from one party to the other and risks are stacked up. So Risks only enlarge and both parties: the CREM organization and the external contractor, will react - ‘naturally’- trough very well know – thus traditional and inflexible – concepts.

So, the main stream new trend in CREM for higher efficiency trough CREM budget cuts and the (total) outsourcing of CREM starting with the Directive Organization model and finally ending with the Demand Organization model, could not be the right answer to a really Innovative and really Demand Driven new CREM model, as desired by the Division Maintenance and Control of the Eindhoven University of Technology.

Section three: ‘A paradigm shift in CREM thinking..’ describes the crucial and essential differences between the main stream new trends of Directive and Demand Organization models and the by the Division Maintenance and Control developed model Entrepreneurial Cooperation.

The paradigm shift Entrepreneurial Cooperation has two dimensions:

- Effectiveness: Innovative Demand Driven ‘curved bend thinking’ from fixed horizontal time maintenance thinking to flexible vertical corporate process organization thinking.
- Efficiency: From fixed and risks shifting and stacking ‘Mega-outsource-contract’ thinking to flexible and risks sharing ‘Entrepreneurial Cooperation’ thinking
Entrepreneurial cooperation as paradigm shift in CREM thinking is best illustrated in figures 3.1 to 3.6.

Section four: ‘Implementing Entrepreneurial Cooperation as an innovative and demand driven CREM model’, fills in the organization of the ‘Entrepreneurial Cooperation. It can be characterized by five CREM re-inventing aspects.

Section five: ‘Entrepreneurial Cooperation: Development and Evaluation’ tells about the thorough preparation of the model and about the evaluation results. Entrepreneurial Cooperation is developed by the Division Maintenance and Control. Next step was the development as business case. This was done by the Division Maintenance and Control with help of the well known Dutch Business Consultancy Berenschot. The Business Case has had an in between time evaluation with as the final conclusion: on the right track to promising results

Finally, in section six: ‘Discussion: ‘Lessons to learn’ ??’ the claimed results ‘Entrepreneurial Cooperation’ as innovative and demand driven CREM model are summarized and opportunities are underlined: For real entrepreneurs in CREM activities and in the whole building industry sector chain, entrepreneurial cooperation will give them excellent business opportunities!


The nine-eleven Twin Tower Incident and the Financial Crisis lead to declining strategic role of Corporate Real Estate inside the Company. Simultaneous the Corporate Key business products processes and services processes came under more and more pressure and could even stagnate.

The basic management reaction to this all is: higher efficiency trough budget cuts and outsourcing. So the main stream new trend in CREM became higher efficiency trough CREM budget cuts and the (total) outsourcing of CREM.

The CREM theory ‘answer’ for higher efficiency trough budget cuts and outsourcing starts with the conversion of the present CREM organization to a so called Directive Organization model and ends finally, with its ultimate consequence a so called Demand Organization model: a total outsourcing to just one external party: a contractor with an Integrated Facility Management Contract. This main stream outsourcing trend is in several studies also modeled as a natural growth process: the total outsourcing as a natural result of a growing professionalization (FMN).

The Directive and the Demand Organization model lead – only – to shifting and stacking of risks inside the whole CREM process (see also: Smit, 2000). In these – ‘mega’ - outsourcing contracts, risks shift from one party to the other and risks are stacked up. So Risks only enlarge and both parties: the CREM organization and the external contractor, will react - ‘naturally’- trough very well know – thus traditional, inflexible and non-innovative – concepts.

In the - nowadays very popular- Directive Organization model, the contract and the moment of contracting plays a decisive, crucial role. The Directive Organization model leads to shifting of risks inside the whole CREM process. Also there is a growing stacking up of risks, both on the side of the CREM organization as on the side of the external contractor as well(see also: Smit, 2000):

In traditional contracts: the ‘Hours Contracts’, contractors are paid for every professional hour on the job. In these ‘Hours Contracts’ there are – on both sides - annul risks when the contract is canceled, there are financial risks regarding the costs and ‘efforts’ of one hour of work. There are also exploit risks regarding the used materials. In most cases the responsibility for the materials is divided depending of the type of materials.

In traditional ‘Efforts Contracts’, the principal asks for the realization of certain described efforts. In these ‘Efforts Contracts’ are efficiency risks involved for both parties. But the risks for the actual organization of the work and
the use of materials is shifted to the contractor. But there are also ‘counterpart risks’: when the principal uses almost only ‘Efforts Contracts’, he loses the key knowledge about the work planning and material use and about the involved prices.

In ‘Results Contracts’ also effectiveness and technical risks are involved. The contractor has to deliver the described results. The principal has to describe the certain desired results and in most cases also the desired technical specifications. In the ‘Results Contracts’ more risks shift to the contractor. But the ‘counterpart risks’ for the principal are also stacking up: the lack of professional knowledge of work organization, materials, efficiency and technical aspects.

In ‘Performance Contracts’ there will be also commercial risks and reputation risks involved, almost all for the contractor. But for the principal, the ‘counterpart risks’ are also stacking up higher and higher: the lack of professional knowledge of work organization, materials, efficiency, technical aspects, commercial aspects and also reputation risks- especially when Corporate Key processes are involved!

The total number of contracts decreases, through the increasing volume of each contract and also through the decreasing number of external contractors. This again will increase the stacking up of risks, until ‘the one and only moment’ for contracting. Moments for in between time steering and small corrective steering are almost impossible due to the stacked up risks and the restriction of moments of actual contracting.

The enlarged risks endanger the efficiency of the CREM process. Because for the CREM organization it will be more and more difficult to formulate the contract conditions on the demand site of the contracting process and also to forecast the actual market prices for the contract moment. Another effect of the increased stacking up of risks is the increasing difficulty to forecast quality aspects. This could lead to disappointing quality aspects in the future, and as a result of this - earlier than foreseen – re-investments due to poorer quality than expected or due to more restricted lifespan expectancy.

The Authors of this paper state that the renewing and innovative impact of the Directive Organization models will be very small because both parties will restrict themselves to the most traditional concepts. With this, all other claimed advantages of the Directive Organization model seem to disappear. This is certainly true for the Demand Organization model: especially because its ideal form is the total Integrated contract with only one external contractor.

The Directive Organization Model claims to offer some possibilities to develop from a trough the CREM organization dictated offering of service and quality levels to a more mixed offering with growing influence of the internal Corporate clients: a more internal client oriented steering of the CREM process. It also claims the possibility to go from a product oriented steering to a more process oriented steering. But these claimed possibilities are only realistic if they are strictly limited to the outmost traditional concepts. While - due to the growing stacking up of risks – new concepts bring great and totally unforeseen risks. Real innovations are very risky in the ‘traditional’ Directive Organization model.

Inside the Demand Organization model these problems will occur more heavy: especially because its ideal form is the total Integrated contract with only one external contractor.

So, the main stream new trend in CREM for higher efficiency trough CREM budget cuts and the (total) outsourcing of CREM starting with the conversion of the present CREM organization to a so called Directive Organization model and finally ending with the Demand Organization model, could not be the right answer to a really Innovative and really Demand Driven new CREM model, as desired by the Division Maintenance and Control of the CREM organization. The authors of this paper have strong doubts about the efficiency of Directive Organization models and Demand Organization models. They also observe a lack of impulses for effectiveness, innovation and user demand driven services.
3. ‘A paradigm shift in CREM thinking’: from the Static Traditional Directive and Demand Organization models to Innovative Demand Driven ‘Entrepreneurial Cooperation’

The theoretical presentation of CREM models as a natural – successive - growth process leading to the total outsourcing as a natural result of a growing professionalization, suggests growing benefits with each successive CREM model. The Authors of this paper stated in section two that the risks in so called Directive Organization models only will increase and that the renewing and innovative importance of so called Directive Organization models will be outmost modest: both parties will restrict themselves to the most traditional concepts. The increasing risks endanger the pursued efficiency. With this, all further claimed advantages of the so called Directive Organization model also seem to disappear to.

The new, by the Division Maintenance and Control of the Eindhoven University of Technology developed model Entrepreneurial Cooperation is especially focused on effectiveness and delivers in addition also efficiency improvement. Entrepreneurial Cooperation can be seen as a paradigm shift in this efficiency focused CREM thinking:

- Cooperation in a broad zone of activities’ instead of a shift in the direction of ‘mega-outsourcing contracts’
- Risks declining trough cooperation instead of risks inclining trough shifting and stacking up in ‘mega-outsourcing contracts’.
- Innovation and demand driven concepts trough declined risks instead of traditional concepts trough inclined risks
- Focused on effectiveness with in addition also efficiency instead of focused on efficiency

Efficiency trough a form of risks sharing

To encounter the ‘risks stacking dilemma’, the Division Maintenance and Control has developed the model ‘Entrepreneurial cooperation’, in which – consciously and during several phases of the CREM processes – along several organizational lines on several organizational levels, cooperation takes place between the CREM organization and external contractors. In Entrepreneurial cooperation both parties (CREM organization and external contractors) work together in surveying customer needs, in technical surveying of buildings and service installations, the development of maintenance and control year plans and also in further future monitoring of buildings, service installations and terrains after maintenance and renewal interventions.

Inside ‘Entrepreneurial cooperation’ trough cooperation, risks are INTENTIONAL NOT stacked up and possibilities for steering and small corrective steering are INTENTIONAL EXTENDED. For the CREM organization as for the external contractors this brings about an experimental zone for innovative use and developments.

This all in contradiction to the in section 3 formulated disadvantages of the ‘traditional’ CREM Directive Organization model, in which there is increasing stacking of risks and decreasing opportunities for steering and adjusted steering.

Figures 3.1 to 3.3 illustrate Efficiency trough a form of risks sharing with the shift from traditional CREM contracting to the new, by the Division Maintenance and Control of the Eindhoven University of Technology developed model Entrepreneurial Cooperation what can be seen as a paradigm shift in the efficiency focused CREM thinking.

Figure 3.1 (below) symbolizes traditional CREM contracting, in which the external contractors deliver fixed tasks. The in between fixed full line symbolizes the fixed contract and the fixed contract moment inside the CREM processes.
Figure 3.2 (below) symbolizes possible new fixed contracts. The fixed full lower line can be seen as a contract in a ‘CREM Directive Organization model’. Regarding to figure 3.1, it symbolizes that there is only a shift in lines, so only a shift in risks. Also: the total surface area of the contract increases substantial: the trend to ‘mega-outsource-contracting’ in Directive Organization models and especially in Demand Organization models.

Figure 3.3 (below) symbolizes the paradigm shift to the new, by the Division Maintenance and Control developed model Entrepreneurial Cooperation. In between the two lines is an area / zone where continuous cooperation
between the CREM organization and Contractors takes place. In Entrepreneurial Cooperation both parties (CREM organization and external contractors) work together in surveying customer needs, in technical surveying of buildings and service installations, the development of maintenance and control year plans and also in further future monitoring of buildings, service installations and terrains after maintenance and renewal interventions. Possibilities for steering are enlarged and risks are decreased.

**Effectiveness through innovative and demand driven thinking**
The Entrepreneurial Cooperation model is directed on innovation of the CREM processes as well as the innovation of the ‘hardware’ as well: the buildings, services installations and terrains. Entrepreneurial cooperation has an innovative focus on the Corporate Key business processes and services processes. The interests of the – broad diversity – on internal clients in the Eindhoven University of Technology have to be assessed regarding the focus of Corporate Key business processes, products and services on innovation.

Figures 3.4 to 3.6 illustrate **Effectiveness through innovative and demand driven thinking** with the shift from traditional building maintenance thinking to corporate key process organization thinking. It can be symbolized with a ‘curved bend’ in figure 3.6.

**Figure 3.4** (below) symbolizes the traditional CREM maintenance thinking: try to keep the maintenance of buildings, service installations and terrains over time in a constant minimum quality condition. The constant minimum quality condition over time is symbolized through a horizontal time/quality line. All traditional CREM methods and instruments were dedicated to the constant minimum quality condition over time: fixed qualities, fixed financial systems, fixed year budgets, fixed year maintenance plans, and so on.
Figure 3.5 (below) symbolizes the ‘vertical’ Corporate Board management organization thinking: all means of ‘production’ have to be arranged in hierarchical processes to realize the end goals: ‘products’; ‘services’ or other kinds of results. The vertical line symbolizes the vertical hierarchy in Corporate Organization but also the continuous volatile change over time: there is no ‘horizontal time component’ in this – abstracted – vertical figure.
Figure 3.6 (below) symbolizes the paradigm shift from traditional building maintenance thinking to corporate key process organization thinking with ‘curved bend thinking’. Innovative Entrepreneurial Cooperation thinking for innovative and really demand driven maintenance and operation of Buildings, service installations and terrains – also in temporary extension of economic live span - demands a constant ‘curved bend thinking’ from ‘horizontal time-oriented maintenance’ to the volatile ‘vertical hierarchic-process thinking’ of Corporate Board management organization.

So the paradigm shift in CREM thinking has two dimensions:

- **Effectiveness**: Innovative Demand Driven ‘curved bend thinking’ from fixed horizontal time maintenance thinking to flexible vertical corporate process organization thinking.
- **Efficiency**: From fixed and risks shifting and stacking ‘Mega-outsource-contract’ thinking to flexible and risks sharing ‘Entrepreneurial Cooperation’ thinking

4. Implementing Entrepreneurial Cooperation as an innovative and demand driven CREM model

Original first ‘On route’ to a Directive Organization model and finally to a Demand Management Organization model, for the Division Maintenance and Control it became clear that the Directive Organization model and the Demand Management Organization model don’t facilitate such quite diverse and innovative (= not standard) options and solutions as needed on the Eindhoven University of Technology. (for the historic line, see other paper: Nattem, van, & Proveniers 2011 a).

Diametrically opposed to this trend of complete outsourcing the Division Maintenance and Control comes with a completely renewed approach for CREM maintenance and control of Corporate Real Estate Management, as mentioned in sections two and three: ‘Entrepreneurial Cooperation’ as an Innovative and – really - Demand Driven CREM model. The implementation of ‘Entrepreneurial Cooperation’ can be characterized by five CREM reinventing aspects:

- ‘Curved Bend Thinking’
- New means of communication
The essence of ‘Curved Bend thinking’ was already showed by the figures 3.4 to 3.6 what illustrate Effectiveness through innovative and demand driven thinking. ‘Curved bend thinking’ symbolizes a radical change in the way of thinking – especially - for the Division Maintenance and Control inside the CREM organizations: from fixed horizontal time maintenance thinking to flexible vertical corporate process organization thinking.

The traditional CREM maintenance thinking is try to keep the maintenance of buildings, service installations and terrains over time in a constant minimum quality condition. The constant minimum quality condition over time can be symbolized with a horizontal time/quality line. All traditional CREM methods and instruments were dedicated to the constant minimum quality condition over time: fixed qualities, fixed financial systems, fixed year budgets, fixed year maintenance plans, and so on.

The ‘vertical’ Corporate Board management organization thinking is to arrange all means of ‘production’ in hierarchical processes to realize the end goals: ‘products’; ‘services’ or other kinds of results. The vertical line symbolizes the vertical hierarchy in Corporate Organization but also the perpetual volatile change over time: there is no ‘horizontal time component’ in this – abstracted – vertical figure line.

‘Curved bend thinking’ symbolizes the paradigm shift from traditional building maintenance thinking to corporate key process organization thinking. Innovative and really demand driven maintenance and operation of Buildings, service installations and terrains – also in temporary extension of economic live span - demands a constant ‘curved bend thinking’ from ‘horizontal time-oriented maintenance’ to the volatile ‘vertical hierarchic-process thinking’.

**New means of communication**

Inside the technical domain there is already the turn around from ‘building specifications oriented contract communication’ to a more ‘performance oriented contract communication’, but both of these operate in a – relative – small circle of professionals.

Architects, interior design architects and related consultancies use user oriented communication with principals and users to make the so called ‘design brief’ for further architectural design for new buildings. But common used means of communication for assessment and adjustment of already adjusted rooms, halls, service installations, et cetera of already used buildings are still rare.

The Division Maintenance and Control of the CREM organization of the Eindhoven University of Technology hired different external consultancies with different methods to make a reconnaissance of different possibilities for getting some grip on this communication level of ‘user valuation survey methods’. (for an extended view, see other paper: Nattem, van & Proveniers 2011 a).

Essential is to realize that starting this kind of ‘Use Valuation survey methods’ means: starting a continuous communication process with the end users of the Corporate Building facilities. These ‘Use Valuation survey methods’ lead to expectations about adaptation and improvement of end user Corporate Building facilities and to a continuous monitoring of the end user satisfaction. If there is no intention to do this then these ‘Use Valuation survey methods’ could have a negative impulse on the Corporate key processes.

**Innovation oriented CREM model**

The backgrounds and essentials of the Innovation and Demand Driven CREM model ‘Entrepreneurial Cooperation’ are already described in the previous sections.
• **New decision making structure**
CREM organizations – and especially the Division Maintenance and Control were – from origin – communicative closed organizations. The new, innovative and really demand driven CREM model needs not only new communication structures, but as ultimate consequence of these, also a new decision making structure. The Section Maintenance reshuffles consciously a number of – partly in time obtained – responsibilities ‘to above in hierarchy’ to the demanding site (to the Corporate Board plus to the Department top management) and to below in hierarchy’ to operational level (to the external Contractor top management plus to the external Contractor professional specialists).

Inside the model Entrepreneurial Cooperation, reducing of risks and increasing of steering opportunities are achieved trough the establishment of three hierarchic organizational levels. The Division Maintenance and Control reshuffles consciously a number of – partly in time obtained – responsibilities ‘to above in hierarchy’ to the demanding site (to the Corporate Board plus to the Department top management) and ‘to below in hierarchy’ to the offering site (to the external Contractor top management plus to the external Contractor professional specialists):

### Steering Group
With the establishment of the Steering Group, the Corporate Key Business processes orientation and steering as well as the internal client orientation and steering is guaranteed and also the necessary cohesion between those two demand side aspects.
The Steering Group is exclusively composed out of Corporate (top) managers: The CEO of the Company Board who is responsible for CREM, The top managers of the departments, who are responsible for the department buildings, service installations and terrain, the top manager of the CREM organization and the manager of the Division Maintenance and Control of the CREM organization.
The Steering Group gives the final advice to the Corporate Board, concerning:
- The CREM year planning and CREM year Budgeting
- The Contracts with the external contractors
- The review of the Service Level Agreements for the different Departments. These Service Level Agreements are the basis for CREM activities and trough this: the basis for contracts with external contractors.

The Division Maintenance and Control reshuffles consciously a number of – partly in time obtained – responsibilities ‘to above in hierarchy’ to the demanding site (to the Corporate Board plus to the Department top management).

### Partnership Board
The Partnership Board has as goal the initialization and guarantee of the cooperation with the various external contractors on the highest level.
The Partnership Board exists especially out (top) managers of the external contractor companies (one member per company) and the manager of the Division Maintenance and Control of the CREM organization.
The main task of the Partnership Board is to stimulate the corporation between the CREM organization and all the external contractors:
- They steer and advise in the CREM year planning and the CREM year budgeting
- They initiate object oriented cross functional expert teams

The Division Maintenance and Control reshuffles consciously a number of – partly in time obtained – responsibilities ‘to below in hierarchy’ to the offering site (to the external Contractor top management).

### Cross Functional Expert Teams
Depending on the specific object of cooperation Cross Functional Expert Teams will be established for the time term of the specific object.
The Cross Functional Teams are – simultaneous – the final goal as well the final means of the Entrepreneurial Cooperation: sharing and creation for CREM related innovation. Cross Functional Expert Teams consists of – specific object of cooperation related - professional experts from the participating external contractors and – specific object of cooperation related - professional experts from the CREM organization as well.

The Division Maintenance and Control reshuffles consciously a number of – partly in time obtained – responsibilities ‘to below in hierarchy’ to the offering site (to the external Contractor professional specialists):

- **Reorganization of the CREM organization**
  These new forms of activity organization lead automatic to a shift of activities. The continuous communication process with the end users of the Corporate Building facilities with help of ‘User Oriented Survey methods’ and the new decision making structure leads to a shift from more operational to more tactical and some strategic kind of activities. Also the intensive cooperation with external contractors (the model ‘Entrepreneurial cooperation’) leads to another use of the professional expert knowledge. But also the new CREM model was not only directed on effectiveness but also on efficiency. Beside goals as more efficient use of space and reduction of energy costs, the organization of the Division Maintenance and Control also has to be reduced in employees. This could be done by outsourcing of tasks which in the old setting still were part of the Division Maintenance and Control activities.

**Time path and essential preconditions**
It is obvious that Entrepreneurial Cooperation takes time to develop and grow. At the Eindhoven University of Technology it all started with initiative of the Division Maintenance and Control of the CREM organization in 2009 and with the business case development Entrepreneurial Cooperation in July 2009. As important milestone: now - mid 2011 – the CREM year planning for 2012 is developed in Entrepreneurial Cooperation inside Cross Functional Expert Teams.

It is also obvious that Entrepreneurial Cooperation has to be functional for the Corporate Key Business. It could be a nice – temporary - gadget for CEO’s. But best changes for development and growth lay in its added surplus value for Corporate Key Business. At the Eindhoven University of Technology this is definitely the case. Eindhoven University of Technology is one of the main centers of the so called Brainport Region, what is stretched out in between Eindhoven (the Netherlands), Leuven (Belgium) and Aachen (Germany). Eindhoven University of Technology gives – in all its external business relations – a real filling in of its statement: ‘Where Innovation Starts’.

The Eindhoven University of Technology also needs to have a quite differentiated infilling van CREM services and service levels, because of its quite differentiated Key Businesses: the quite different ‘hardware’ and quite different main cultures of its various Departments. The Department of Physics and the Department of Chemistry especially need top level laboratories, where – one could say – top level scientists live their entire live between their apparatus. On the other hand is inside the Department of Economic Science a continuous contact with external business entrepreneurs, what requires a higher quality level of work places and meeting facilities and restaurant facilities. The Department of Industrial Design and the Department of Architecture Building and Planning have to show an ever going creative production.

In addition, it has to be mentioned that also the Entrepreneurial Cooperation model of Division Maintenance and Control of the Eindhoven University of Technology pursues – besides the effectiveness goals also clear financial efficiency targets, which also seem to be gained.
5. Entrepreneurial cooperation: Development and Evaluation

Entrepreneurial Cooperation is developed by the Division Maintenance and Control. Next step was the development as business case. This was done by the Division Maintenance and Control with help of the well known Dutch Business Consultancy Berenschot.

The Business Case has had an in between time evaluation with as the final conclusion: the Entrepreneurial Cooperation initiative of the Division Maintenance and Control is on right track towards promising results:

Customer satisfaction:
- Customer Satisfaction: an enlarged customer satisfaction survey will follow soon.
- Quality improvement trough the engagement of the suppliers by the goals and objectives of Eindhoven University of technology

Costs efficiency:
- Reduction of costs trough innovative activities on the right spots on the decisive moments thanks to cross functional teams.
- The total year costs on CREM Maintenance and Control of 2010 is less to almost even then the total year costs of 2009. (There is a – deliberated – costs margin because of unexpected margins in lifespan and possibilities of molestation).
- The Total Costs of Ownership (TCO) are reduced.

Processes of CREM Maintenance and Control:
- More efficient risks management trough division of risks between the contractors and suppliers and the university.
- Introduction of ‘Results contracts’ and monitoring.
- The cooperation between external contractors and CREM Maintenance and Control leads to a ‘smoother’ systematic planning with less preventive replacement of service installations. Trouble shooting service will decrease but is tackled with excellent mutual cooperation. (See also the financial buffer margin for lifespan risks).
- The CREM year planning for 2012 is developed in Entrepreneurial Cooperation inside Cross Functional Expert Teams.

CREM Organization:
- Staff complement is reduced with two full time equivalence employees.
- The lease of external advice consultant personnel is also reduced with 2.

6. Discussion: ‘Lessons to learn’??

Entrepreneurial cooperation was developed as business case as initiative of the Division Maintenance and Control of the CREM organization of the Eindhoven University of Technology in the Netherlands. Entrepreneurial Cooperation as model for CREM organization is developed for an innovation oriented Corporate environment. Goal is to awake and use all the innovative potentials of external contractors without increasing of the matching risks to a unacceptable risks level. Simultaneous, the pursued clear financial efficiency targets are also met.

Theorizing the Entrepreneurial Cooperation model for CREM organization business case, the ‘traditional’ Directive Organization model for CREM could be seen as a CREM organization model what particularly leads – only – to shifting of risks and stacking up of risks inside the whole CREM process. The risks avoiding behavior of both
parties has as consequence that exclusively the traditional CREM concepts will be used and innovative CREM concepts will be avoided.

The approach of the Entrepreneurial Cooperation model is diametrically opposed: cooperation ‘in a broad zone of common aspects in the CREM processes’ instead of a shift of the moment of contracting inside the CREM process. That is why the results of Entrepreneurial Cooperation are diametrically to those of the Directive Organization: Entrepreneurial Cooperation reduces on both sides the risks of the contract partners, those of the CREM organization and those of the external contractors as well. Through this, innovations can be started up, also supported through the consciously handing over of responsibilities to three hierarchic organizational levels. The Business Case has had an in between time evaluation with as the final conclusion: on the right track to promising results. The evaluation of the Entrepreneurial Cooperation model proves that the goals really are reached.

The new, by the Division Maintenance and Control developed model Entrepreneurial Cooperation could be seen as a paradigm shift in nowadays efficiency focused CREM thinking. Entrepreneurial Cooperation is especially directed to effectiveness and produces in addition also some efficiency improvement. Entrepreneurial cooperation has an innovative focus on the Corporate Key business products processes and services processes. It is directed to innovation of the CREM processes as to the innovation of the ‘hardware’ as well: buildings services installations and terrains.

The Entrepreneurial Cooperation model could be an initial guide for modernization for CREM organizations. An important issue is a need for Corporate Key Businesses for innovative CREM concepts, or can support traditional concepts the Corporate Key Businesses in an adequate way? In the latter case the ‘traditional’ Directive Organization model will be sufficient and also the next stage of that: the demand organization model with as ideal form the integrated contract with only one external contractor.

But it is obvious that Corporations that do not have such quite differentiation in Key Businesses and don’t have such a drive to innovation, don’t need such differentiated and innovation driven infilling of CREM services and service levels.

The Entrepreneurial Cooperation model could also provide ‘lessons to learn’ for the whole building industry sector, especially for restructuring, maintenance and control:

- It could provide anticipation on innovative technological developments
- It could provide anticipation on new market opportunities, through a broader marketing of new specialist knowledge application

Corporate Real Estate Management – as restructuring, maintenance and control of buildings, service installations - could be an excellent platform for innovation inside the large existing building stocks, where – to reach the sustainability goals - most of the worldwide sustainable building activities shall have to take place.

As stated in this paper, the ‘traditional’ CREM Directive Organization model will lead to more traditional maintenance concepts for buildings, service installations and terrains. This will be also the case for the next stage of CREM organization: the Demand Organization model with as ideal form the Integrated contract with only one external contractor.

But technical development will always take place and will – initially – always lead to diversity in organization processes, services and products. For real entrepreneurs – and the Eindhoven University of Technology regards itself as one – technical development is always a business opportunity. In this case an opportunity for so called ‘Entrepreneurial Cooperation’ with new business partners and business clients, who all share innovation and sustainability as common goals!
References


