



BK City, Delft University of Technology
Photo: TU Delft (RtH)

APPENDIX VI

Project BK city – background, facts & figures

Project profile



Delft

location

2008

year

TU campus (north)

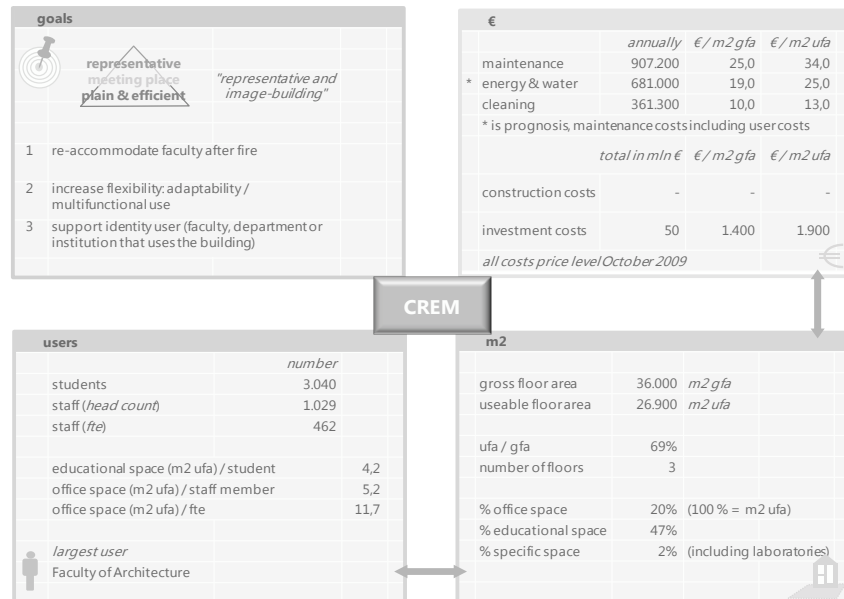
campus

Faculty of Architecture

renovation

project type

TUD-4



This appendix contains background information about the project BK city, focussing on the new concepts for the campus of the future that were implemented and tested in the more than two years of use. An introduction of this project can be found in a multi-page text box in chapter 7. The epilogue also contains some reflections on both process and project as lessons for campus management in the future. More information and articles about this project can be found using the following link www.bk.tudelft.nl/bkcity.

The text below is written by the author of this book, Alexandra den Heijer, on personal title and in her role of member of the project organisation (chair brief team). Part of the text was previously published in the book "The Making of BK City, Bouwkunde, een jaar na de brand", in a Dutch and edited version. This appendix ends with evaluations of the project, two years after use (November 2010).

Never miss the opportunity of a crisis: reinvent the whole faculty

After a fire that completely destroyed TU Delft's Faculty of Architecture building on May 13, 2008, a team of academics and architects worked with impossible deadlines to refurbish a huge cultural heritage building (> 300,000 sqft) – that was selected from five alternatives to become BK City – within 6 months for 3300 students and more than 800 employees. The brief for this project had to be ready within two weeks after the start of the project June 2, 2008. But the homework was done: the faculty had two recent documents that described the vision on the faculty accommodation: how many square meters of which function, specified in goals and required quality.

Never miss the opportunity of a crisis. Indeed, we thought: "Now that we have lost everything, we have everything to gain: let us change everything that did not work in the old building and implement trends in international campus design." This was quite a challenge, but everyone got so much energy from the idea of an extraordinary group process and the collective mission.

From old to new in gross surface – a reduction of 15%

No faculty attaches more value to the quality of accommodation than an Architecture faculty. The building as a showcase for the organization is nowhere as relevant. How to combine faculty demands for a high quality with 'the inconvenient truth' of limited resources? By reducing the floor area in favour of quality. Fewer meters with more quality is a trend in international campus strategies. Similarly, at BK city: the burned Berlageweg building contained 42.000 m2 gross floor area and the 'new' building at Julianalaan offered 32.000 m2.

We were facing a space reduction of 25%, while the old building at Berlageweg was already too small for the growing population. Two glasshouses of about 4000 m2 of gross floor area (gfa) in total were added to the 32,000 m2 of the existing Julianalaan building. The total of 36,000 m2 was still 15% less than the 42,000 of the Berlageweg building. How did we manage to solve that?

Much more usable area than before – enlarging spaces and use of corridors

Firstly, the team tried to create as much usable area as possible, including making functional use of circulation space. The large scale of the rooms also helped, but the wide corridors appeared to be a problem. As a solution the corridors were used to accommodate informal meetings - something that did fit into the policy to encourage social interaction. This solution added to the usable area of the building, allowing more programme in the building. On the second floor the studio space also showed that accommodating students in larger spaces also contributed to more usable floor area – because the circulation space is perceived as part of the functional area. New concepts with more flexible use of space ensure improved occupancy and frequency rates. Less territory for individual users and specific users groups provided much more flexibility and facilitates more users in the building. It is also very flexible for the rapid changes in the student population and flexible labour force with many visitors and guest professors. This is evident in the new office concept: all activities of employees are supported in different parts of the working environment, with matching facilities and high-quality furniture. The layout of the building enables different zones with different characteristics and designs. The existing building structure was respected, also for planning reasons – leaving the layout like it has been for decades and avoiding discussions about the size of offices.

BK City in ten functions

More than 50% of BK City Julianalaan consists of either studio space or office space for employees. But there is much more. Lecture halls, educational facilities, library, faculty laboratories, conference rooms, restaurants and other public spaces, and room for storage. Each of these functions was reconsidered – what can we improve compared to the old Berlageweg building, which new concepts can be applied and how many m2 can we share on campus, even with increasing numbers of students?.

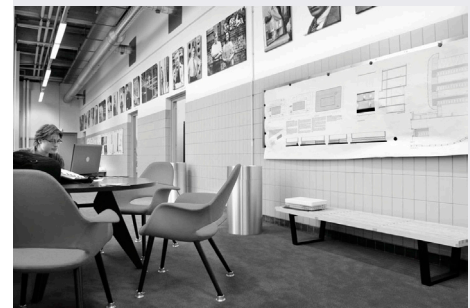


table VI.1: transition in floor area from Berlageweg in 2008 – just before the fire - to BK City Julianalaan 2008, two months after use

2008/09	functions	Berlageweg 2008	Julianalaan 2008	Julianalaan 2008 / Berlageweg 2008
2 months in use, space use according to brief	1. studio space	5680	7840	+38% student back at the faculty
	2. office space	6300	6340	+1% but more flexible concept
	3. lecture halls	1090	1110	+2% and same capacity
	4. library	650	870	+34% with more places to study
	5. educ. facilities	3580	3250	-9% more sharing, better use
	6. laboratories	860	660	-23% more sharing at TU level
	7. conference	1100	770	-30% more sharing at TU level
	8. restaurants	380	690	+82% multi-functional use
	9. public functions	1220	2050	+68% more places to meet
	10. storage	3300	1240	-62% (start with) less after fire
total (usable)		24160	24820	+3% more usable space (flexible use)

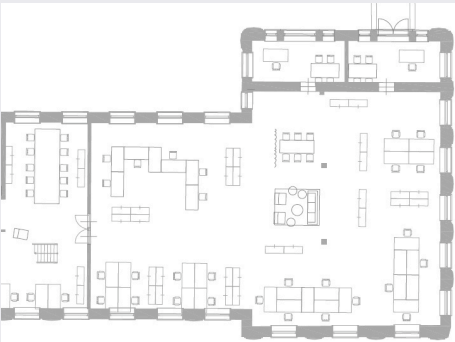


figure VI.1: example of a new office concept - no individual territory, but supporting every activity (floor plan, BK city, Delft University of Technology, 2008)

function (1) studio space

“The student must return to the faculty. We must rebuild a community”. With that statement Dean Wytze Patijn already started a culture change long before the fire. Studies in the old building had already to pilot projects of improved studio concepts, on the sixth and eighth floors for Bachelor students and on the thirteenth floor for Master students. Early evaluations showed more satisfied students. Before the fire the faculty was about to introduce that studio concept on a larger scale. How large that scale would be after the fire, no-one would have expected.

The studio concept consists of tables for 8 to 10 people with storage space and basic modelling facilities. There are separate rooms for presentations that can be booked centrally. Programmatic basis for this studio space was 5,6 m2 usable floor area per workplace. The increasing numbers of students during the design process reduced this footprint to 4 m2, substantially lower than in the brief and adding to very efficient use of space.

function (2) office

If one subject was high on the dean’s agenda before the fire, it was rethinking the academic office. Architecture was not unique in that matter. Universities all over the world reconsider the academic workplace. A sensitive subject that involves a cultural transformation from the traditional university with cellular offices into the more collaborative network university, with an activity-related working environment that enables group work, (informal) meetings and individual work that does not allow interruption.

Workplaces in traditional single or double offices are representatives of a university that values individual performance and specialization. But as in teaching and research universities are increasingly searching for solutions that connect instead of isolate. Nonetheless, the demand for a workplace to concentrate was accommodated – not on individual territory but to share. More cooperation and community building were important goals in the brief. At an Architecture faculty - and many other faculties – there are the many part-timers. Low occupancy of workplaces and the lack of space for concentration and consultation were reasons to change the old way of working to change. On top of that, the building did simply not allow individual territory – cellular offices – for more than 800 employees.

The new workplace concept does no longer assign territory to individuals, but to groups. This meets the need for a home base, but prevents employees to claim their own workplaces that are vacant for most of the time (research at several universities shows office occupancy rates of 20% or less). Simultaneously, the improved academic workplace was designed to better support the various activities: meetings, concentration, phone calls, informal consultations with students. The collaboration with furniture supplier Vitra emphasizes the focus on quality of the working environment. The office concept includes fully functional workplaces - according to health and safety standards - plus meeting rooms, 'silent rooms', space for informal consultations, living rooms and more territorial areas for support staff (see figure VI.1) – distinguishing front and back offices.

Programmatic basis for the office concepts was 12 m² of usable floor space per workplace. Compared to other universities, this was relatively high (see chapter 7). The number of workplaces matched the number of full time equivalents (fte) in June 2008: one workplace per fte. The layout of the building contributed to a higher footprint per workplace, about 14 m² per workplace, but this included the corridors, meeting rooms and the 'living rooms' of each department.

function (3) and teaching rooms (7) conference

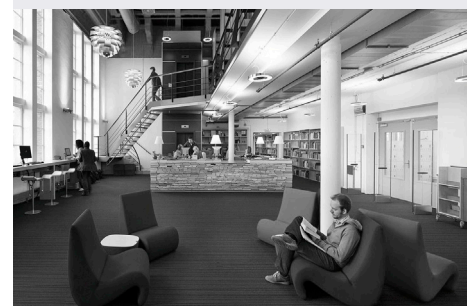
At the Berlageweg building the number of lecture halls was already reduced to a minimum, using more lecture halls in other campus buildings. Smaller lecture halls were added, to accommodate the large number of student presentations and meetings. The same program was projected Julianalaan, where - coincidentally - lecture rooms of comparable size were available. In memory of the burned building, the letters (A-B-C-D-F) of the lecture halls were kept the same. Lecture room A is still the largest with a capacity of 360, similar to the old lecture hall A at Berlageweg.

Furthermore, it was decided that all lecture hall of the TU Delft could be used to schedule education of the Faculty of Architecture, also because in some periods the occupancy rates of lecture halls are very low. That space could be better used at Julianalaan. Many smaller lecture rooms were equipped as flexible spaces for multifunctional use. Attention was also paid to more quality for the increasing amount of external parties and visitors. In the old building final presentations and graduation ceremonies were accommodated in rooms that did not support the image of the faculty. The team wanted to solve that problem at the Julianalaan. Given the large number of positive responses from the many visitors so far – and the huge number of requests to accommodate conferences and seminars – the quality is now supporting the faculty's design identity.

The most representative and image supporting conference rooms are Berlage 1 and 2, decorated with Delft Blue to highlight the relation with the city of Delft. The occupancy and frequency rates of Berlage 1 and 2 are very high. Since 2008 many groups – also from other faculties – have used these conference rooms. This illustrates the university-wide demand for rooms that support the identity and core values of the university.

function (4) library

The first days after the fire there was serious doubt whether the books were saved. Luckily, we can now confidently state the library – again – has a prominent place in the building, functioning as a knowledge centre and giving access to





more than 35,000 books that were saved from the fire. At the most central locations in the building - both horizontally and vertically - not only the books can be found, but also many magazines and maps.

Increasingly the library has a function as a silent place to work and study for exams. The extra m2 of the new library give room to nearly 100 study spaces that are well used. More and more access to electronic sources, changes the character of the library. On top of that, they have digitalized many physical books. On campus all students and staff members can use the wireless network to access many digital resources.

function (5) education and practical (6) laboratories

Workshops like hand sketching and making models and ICT education require rooms with special facilities. This also applies to some faculty laboratories. Large-scale spaces, demanding technology and efficient logistics were planned in one of the glasshouses, because they did not fit in the existing building. With the assistance of faculty experts and in consultation with lecturers and professors, various layouts were discussed.

Policy at university level was to share expensive facilities and laboratories between faculties. The question was how important some of these facilities were for the faculty, and how much it was worth in terms of resources. The idea of a central hall for modelling facilities - as the heart of the building - was already at the table in the second week after the fire, at the end of May 2008. Eventually Glasshouse South shows the result.

function (8) and restaurants - other - (9) public spaces

Students and staff considered the old restaurant in the faculty building one of the least pleasant stay spaces. Besides, new restaurant concepts promoted more multifunctional use of space: eating, working in groups and social encounters. The restaurant Ketelhuis was designed according to that principle, with several meeting rooms that are flexible to use during lunch hours.

One of the biggest successes in the old Berlageweg building was espresso bar "Sterk". This was the meeting place for students and staff. Luxurious coffee facilities, whether or not organized as a lounge or place to study, are a success at campuses around the world. The espresso bar has replaced the social function of 'smoking areas'. At Julianalaan the design of the espresso bar is supporting the sustainability vision of the faculty: Cradle to cradle or 'Super use' (re-using parts of a demolished housing complex in The Hague - Carel Weeber's Zwarte Madonna).

The espresso bar (again) is a successful concept, encouraging social interaction between employees of different departments and between students and staff. It also functions as a meeting point for guests. The visibility of the academic staff improved.

more attention to public spaces after the fire

BK-city was designed as a 'city with much public space'. Walking from the 150-meters long main street and squares (glass houses) of BK city, visitors gradually move from public to more private space. More transparency, more

community building and better cooperation in the faculty: these were important principles for the design of public areas. On an average day, walking through the corridors shows a range of the faculty's research and education activities and facilitates many unplanned encounters. The 'shopping street' has many public functions like the Bookshop, an ATM, printing services, ICT support and central entrance hall.

function (10) storage

Demand follows supply when it involves storage space. Many m2 of the old building were used as storage space, in all individual offices and in the basement. When all paper archives were burned during the fire, it was both a tragedy and an opportunity for the future.

At Julianalaan a huge basement is available for storage. But the faculty wanted to prevent that this would be filled up very soon. A physical archive is partly inevitable and partly unnecessary given the ICT possibilities. And the interest in digitizing was greater than ever. Nonetheless, reality shows that whatever a university offers as storage space will be filled.

Digitizing was also a critical prerequisite for the new workplace concept. A workplace concept without individual territory - but with group territory, like in a house - must be "clean desk" to keep it workable. Working together and sharing facilities requires strict rules. This was also applicable to storage options, both physical and digital. Many scientists admit that their offices were miniature libraries (partly) with the same books, articles and journals as the neighbours. Much of this material is not often used and much easier to retrieve, when stored digitally. But a cultural change in information management and archiving was even harder than implementing a new office concept.

Again, the faculty wanted a culture change, given the unique situation of accommodating a paperless population. Other universities (in the Netherlands and abroad) are very interested in the evaluations: better use of Blackboard, public folders on the servers, scan & mail functions on all copiers, collective archives of magazines and books. The transition to a more paperless office was also a major challenge for facility management and ICT, but even a greater challenge for the employees themselves.

BK City after 2 years – 'reversed briefing'¹

In November 2010, BK city has been in use for two years. While a project team is working on making the building more sustainable (project link to BK City Slim), it is interesting to assess the current situation in terms of space use. In two years user demands have changed, new concepts have turned out to be more or less successful – with satisfied or dissatisfied users – and occupancy rates have illustrated either the popularity of spaces or problems in functionality.

Functional assessment 2010/2011 – even more students and less office space

The new space use table (table VI.2) shows the status quo in November 2010. Remarkable changes compared to space use in 2008 are the reduction of office space, lecture halls and public functions and the expansion of studio space and the enormous growth of storage space. Potentially usable m2 are quickly 'occupied' with archives that may never be removed. It is clear that even a faculty



¹ the process of 'reversed briefing' was brought up by John Worthington, when he visited BK city at the end of 2008 ; at that time the academic staff had just moved in and the building was about to be customized to more specific user demands

table VI.2: space use from Berlageweg (2008, just before the fire) to BK City / Julianalaan 2010, two years in use (data FMVG-bk, November / December 2010)

2010/11	functions	Julianalaan 2008	Julianalaan 2010	Julianalaan 2010 / Julianalaan 2008
2 years in use, space use adjusted according to users demands and based on occupancy rates	1. studio space	7840	9610	+23% more student places (about 1900 to 2264)
	2. office space	6340	5055	-20% less workplaces (470 to 400)
	3. lecture halls	1110	450	-59% more sharing at TU level
	4. library	870	750	-14% actual library did not change in size
	5. educ. facilities	3250	3430	+6% more specific educational facilities
	6. laboratories	660	550	-17% more sharing at TU level
	7. conference	770	310	-60% more sharing at TU level
	8. restaurants	690	720	+4% some meeting rooms became restaurant
	9. public functions	2050	850	-59% other functions became more public
	10. storage	1240	5180	+318% assigning the large basement for storage
	total (usable)	24820	26910	+8% more usable space (making use of circulation space)



that restarted without an archive can rapidly fill volumes of cellar space. In the case of BK city the huge cellar basement with its relatively low functionality for other functions encouraged the use as storage space. This might be reverted in the future – probably when the faculty needs these spaces for primary processes.

The footprint of the academic workplace has been reduced compared to the m2 of the brief.. Confronted with low occupancy rates of particular zones in the building, the heads of department allowed the faculty to transform office area into studio space (just by changing the furniture), to deal with hundreds of extra students that enrolled in the academic years after the fire and to keep most activities in one building. However, new post-occupancy evaluations should assess the employee satisfaction with the working environment, also compared to the study that was conducted in February 2009, three months after use. Nonetheless, the budget cuts and reduction of the labour force in the past two years also changed the perception of the working environment. The awareness that resources spent on the workplace are directly linked to the limited resources for education and research – and personnel costs - the state-of-mind of many academics and support staff.

After a year of use, in September 2009, a second assessment of occupancy rates showed an average 22% use of the 470 workplaces. This was the result of ten measurements on five regular working days, in the morning and in the morning. Afternoons showed higher percentages than mornings. Tuesday showed the highest percentages, Wednesday the lowest. In September 2010 this assessment was repeated, with less workplaces and a higher average percentage: 27% of the available workplaces was used at the time of the measurements (Van Herpen and Hermus 2010). In November 2010 another functional transformation replaced some workplaces with studio desks for students

At the beginning of 2011 there are 396 workplaces available for staff. The average size of the workplace is 11,2 m2 usable floor area – excluding meeting space. These workplaces are available for a flexible workforce of more than a thousand employees, equal to 462 fte (data January 2011). This means that anno 2011 there is 0,86 workplace available per fte.

For the much higher number of employees (in head count) sharing the same working environment, this is an efficient and flexible solution. Practice shows that many employees with a full-time job sit at the same desk or in the same room most of the time. The non-territorial concept pays off in terms of paperless desks in the evening, leaving the rooms ready for other users the next day.

The smaller studio desks for students have gone through a different transition, with occupancy rates of more than 40%, also after adding more than 300 seats for the academic year 2010/2011. The student population has grown in the past years and the studio concept is considered a success. With eight chairs at a studio table, but a more efficient floor plan, the faculty has 2264 seats for students at 283 studio tables at BK city. The average size of each student workplace is 4,25 m2 usable floor area. Every semester these tables are assigned to different groups of Bachelor and Master students. Some tables are assigned for flexible use. In the academic year 2010/2011 these 2264 seats are available for 1860 Bachelor students and 1180 Master students, an average of 0,75 workplace per enrolled student.

Financial assessment of the project - relatively low investment costs per m2

This project has an investment level of 1400 euros per m2 gross floor area – 50 million euro for about 36.000 m2 gross floor area. Comparing this to the investment levels of similar university projects – see chapter 7 and appendix II – shows that this is relatively low for the relatively high quality of place, the type of project, the type of building and the extensions that were built according to new construction standards. Nonetheless, it is the perception of many people that this was an expensive project. The top-end furniture in the building adds to that perception. But ironically, that furniture was part of a sponsor contract with Vitra – with low unit prices. Apparently and understandingly, adding quality to the working environment in a time of budget cuts will be criticized, independent of the (relatively low) costs of adding quality. That is a lesson for campus management in general and it emphasizes the value of informing the stakeholders about campus investments and decisions.

The next project will be making the building more sustainable, to reduce the relatively high energy costs per m2 and to make a showcase for innovative, sustainable solutions that are developed at Delft University of Technology.

Personal reflections on (the making of) BK city

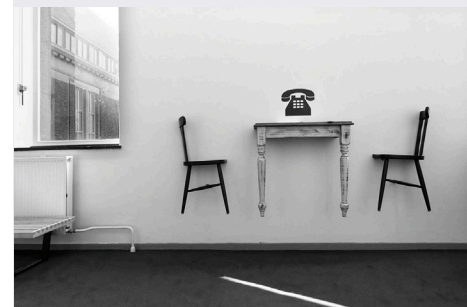
It is mainly up to others to judge how successful the process and project of BK city have been. Nonetheless, I will summarise my lessons in some conclusions and recommendations – to specify what I think campus managers could learn from this project.

(1) the user acceptance of supply shaping demand

First, my view on real estate management as a match between supply and demand was challenged. Mainly because I used to believe that supply would ideally follow demand – ideally if infinite resources were available. However, in practice, financial resources are hardly ever infinite and physical resources take many resources to change. As quite a revelation to me, the BK city project shows that users are more likely to accept and appreciate their working environment when the current physical setting strongly influences – or even dictates – the floor plan and the functional possibilities, not open for much discussion or change.

(2) re-use of meaningful buildings

Secondly, this project convinced me that re-use of existing university buildings – especially cultural heritage that emphasises the history of the university – is an





important strategy for many universities in global competition. While adversaries often state that talented researchers would work at a workplace without any identity at the top-ranked universities in the world, that leaves thousands of universities below the top that do not differ much on quality of research and education and can compete on quality of life, both on campus and off-campus. With BK city being closer to the historical inner city of Delft, the project can illustrate both.

(3) matching the benefits with the costs per m2 – with more users per m2

Thirdly, the strategy above can only be paid for if the benefits per m2 match the costs. With rising replacement costs for university buildings, the productivity per m2 should be increased accordingly. Apart from encouraging employees to generate more output or income, this can also be done by reducing the footprint of students, professors and other staff members, making better use of space in time and allowing external users to share space with the university.

(4) 'quality for quantity' helps for acceptance – having something to gain

BK city shows that campus users are more willing to accept a reduction in quantity if they get quality in return. In general, the sense of urgency of any crisis will help in the acceptance process of any unpopular intervention in the working or learning environment. During the making of BK city the economic crisis led to tighter budgets that encouraged the awareness of 'the glass being half full' instead of 'half empty' in the perception of employees. Choosing between 'all or half' feels like loss, choosing between 'half or none' feels like something to gain.

(5) having stakeholders with mandates at the table

The project organisation of BK city involved representatives from strategic (board of executives, dean, management staff), financial (controllers on university and faculty level), functional (representatives of students and employees) and physical perspectives (technical manager, project leaders), covering all relevant stakeholders. Due to the strict deadlines these persons hardly had any time or opportunity to discuss alternatives with the parties they represented, which also introduced the risk of decisions without commitment or support, which could reveal risks in the phases that followed. This was the case for introducing the non-territorial academic office concept.

(6) the importance of references for stakeholders

During the whole process of the making of BK city, the importance of references was illustrated in discussions and negotiations with many stakeholders. References of used space standards – m2 per student of comparable architecture faculties and schools, investment levels of similar projects and evidence-based best practices for every new concept that we introduced were supplied to satisfy the need to compare projects, to be transparent about the considerations and to gain trust of the community by demonstrating our expertise and experience. The latter is linked to the concept of 'bounded rationality': the community was very much aware of the fact that the result of the decision-making process would also be shaped by our personal preferences and ideas about the profession. Considering that a situation they could not change, the thought of being dependent on a team of academics (professors) and professionals whose reputations were at stake, did help them to accept that.

(7) 'bounded rationality' in decision-making

This project under severe time pressure also illustrated the concept of 'bounded rationality', with limited time to collect management information and allowing intuition and emotion in the decision-making process. Yet, the fact that most of the project members had been involved in campus projects or faculty policy-making for years did not make it as applicable as one would think based on the characteristics of the project. On the contrary, it was often stated that the project organisation collaborated so well (...), because of the implicitly and explicitly available background knowledge, experience in similar projects and the incentives to think beyond satisfying their own needs. This is also ascribed to the leading role of the president of the university and the faculty's dean – aiming at an optimal solution more than a satisfactory solution for all parties – valuing the organisational goals above the individual's goals. This did not happen without consequences for the satisfaction of these individuals, who resisted against some of these decisions affecting their own working environment.

The irony of being part of this BK city project – as an interruption from this research project – is still striking: this happened to the faculty that was most likely to have the internal and external network solve the problem and to take the opportunity to show what they were worth. It was the ultimate challenge to practice what we had preached for years, 'we' as researchers in real estate management and 'we' as the project team that advised the stakeholders in practice.

(8) the need and search for reliable data

From the beginning to the end the availability of reliable data was critical. In the first phase the search for dependable data on number of employees – both head count and full time equivalents – showed that different sources provide different figures. Human resource management gave me other figures than the departments themselves. The same problem arose for student numbers, also distinguishing 'enrolled students' and 'active students'. Chairing the brief team I was responsible for the programmatic requirements and the floor area that would be assigned to the departments. During that process I had to be aware of the value of a righteous division of space – for the collective acceptance of new concepts – and the risk of strategic misinterpretations or calculating behaviour, when I would ask representatives of certain functions or departments about their demands. It did help that we needed to reduce space use with more than 15% and that most members of the team – including the facility manager – were aware of the situation in the former building. The process only emphasized the value of structurally collecting dependable figures of student population and number of employees, also for post-occupancy evaluations of implemented concepts. In appendix IV the BK city project is described in numbers.

(9) a faculty of architecture as an ideal laboratory

A building for a faculty of architecture appeared to be an ideal laboratory to test new concepts. With education and research on planning, designing, realising and using the physical environment, students and employees are – in theory – most likely to be open for experiments in their own working and learning environment. At the same time, this type of community is most likely to be critical about decisions – also because they can relate to the subject in theory or practice. This become clear in the discussion about the top-quality furniture, that was appreciated but also criticized as too expensive for a faculty that needs to cut budgets, even though the furniture was part of a sponsor contract and financed with insurance money that could not have been spend on human





References and further reading

Publications in Dutch:
see www.bk.tudelft.nl/bkcity for books, Dutch articles, photos and movies

Publication in English:
Den Heijer, A. (2009). The Making of BK City; the ultimate laboratory for a faculty of architecture. The Architecture Annual 2007/2008. Rotterdam, 010 Publishers: 20-25.

resources. We concluded that if this discussion starts at a faculty of architecture, it will probably start anywhere else.

(10) creative faculties are important for a lively campus

Since BK city is in use, many visitors have commented on the vibrant and creative atmosphere that the faculty community brings, even after working hours. The value of the creative class for the quality of life in a city has been subject of many publications (Florida 2002; Florida 2008). The creative class of a university – students and academic staff of design faculties or schools for other creative professions – might very well have a similar positive effect on quality of life on campus. Many students do not follow the 9-to-5 working hours and they often work in groups and on physical products that are visible and inspiring to others. These types of faculties also enrol many international students that form a social community that considers the campus their home. Because of their working hours and their type of work they are more likely to demand retail and leisure functions on campus, like espresso bars, restaurants, supermarkets and shops for materials and printing.

(11) the relativity and territorial aspects of paper - the changing academic workplace

When I started studying at Delft University of Technology in 1988 – ironically at the Julianalaan building that is now used as BK city – paper was all we had. Computers were used to program, not (yet) to make documents. Only in my last two years, we used Wordperfect 5.1 as a revolutionary text-processing tool. In the decades that followed the way students learn and the way researchers (can) work has completely changed. Nonetheless, the university still has the same buildings. After the fire I even returned to the same building in which I started my academic career. Given the revolutionary changes in the way we (can) work, the academic workplace did not change dramatically. Practice shows that this is changing now, but mostly influenced by external factors like budget cuts and goals to reduce the footprint.

One of the most provocative concepts that we implemented after the fire was the transition of a traditional territorial cellular office to an activity-related concept without individual territory. The starting point was unique: without paper archives. Almost all academic staff members lost their physical archives in the fire. As members of the project group we knew that the former building was stacked with paper and that whatever space we would offer as archive would be filled with paper. So we decided on very limited personal archives, to encourage the paperless office and sharing of books, magazines and other collective resources and – most importantly – to stimulate the use of digital sources, archives and networks.

We knew that paper archives do not only use much (usable) floor area in buildings, it also makes people more territorial: they want to be close to their archives. With the goals of making better use of existing space, of reducing the footprint and of stimulating shared use of space, reducing the paper archives seemed to have many benefits. As a researcher I would like to add that digital sources are easier to share, to find and to search on key words, which also contributes to better collaboration in education and research. Nonetheless, the culture change was and still is huge, especially for the group of staff members that have worked with a large physical archive for most of their working life.

Two years after implementing the office concept at BK city, the workplace is hardly paperless. However, the personal paper archives are much smaller and people have become much more conscious of the relativity of paper. And indeed, this book is also published on paper.