

Strategy and change management in Delft University of Technology Library

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Abstract

In 2003 the authors published an article “e-quality in the library”[1] where they outlined a possible future direction for the Delft University of Technology Library.

It was based on the notion that at this moment in time the library stands on the brink of the termination of this hybrid era, shaking off the hybrid element of its past and presenting a strategic focus on its digital future.

The same breakthrough technologies, ICT and the internet, that were responsible for emergence of the hybrid library led to a diversification in the activities that were deployed by the libraries. Libraries became publisher and, mutata mutandis, publishers began offering their services directly to the end-users thus entering the library game. Where does this lead? Should we keep our current diversification strategy or do we need a new focus, a (redefined) definition of our core business?

The year is now 2005 and we are in the middle of the implementation of our new organisation which is based on the strategic analysis that was rooted in above mentioned observations. In this paper the authors will elaborate on the choices that were made based on the above mentioned analyses. Because of the awareness that the change process would be influenced by many unpredictable events it was decided not to adopt the so called blueprint approach. Instead an adaptive change strategy was used that provided us with an optimal flexibility to achieve our defined goals. We will discuss the problems we encountered within our own organisation and the reluctance of our stakeholders. We will show our successes and lessons learned.

Important design criteria for our new organization are:

- Teamwork
- Disentanglement of processes, which resulted in disentanglement of tasks of our employees
- Decreasing the number of management layers

We will conclude by presenting the current state of our library.

Keywords

Change management, Strategy.

Introduction

In this paper we describe the process of change in Delft University of technology Library and the rationale behind the process. We describe the applied method, the reception by stakeholders and library staff and the finalization of the process, which resulted in a new library organization.

Strategic goals and core competences

The current strategic goals of the Delft University of Technology digital library are to provide outstanding solutions for e-publishing, e-learning and e-archiving. To achieve these goals new systems are designed and developed (e.g. Virtual Knowledge Centres, digital repositories) and integrated with existing library systems.

The raw material of the library is information; within the scientific environment the library operates in, information can be perceived as digital content, a collection of digital objects (text, data, programs, pictures, sound etc.) that has to be managed and made available to its customers. Seen from a data-services perspective the library manages the data (the digital objects) and provides value added services based on this content to its customers. The strategic goals of the library materialise in four specific fields; services that support searching and finding, publishing, delivery and archiving. We call these services functional entities. There is a fifth functional entity that takes care of the management of the content itself. Here the management of the digital object is taken care of. Seen from a data-services perspective is this the data layer.

The five functional entities together form the model below.

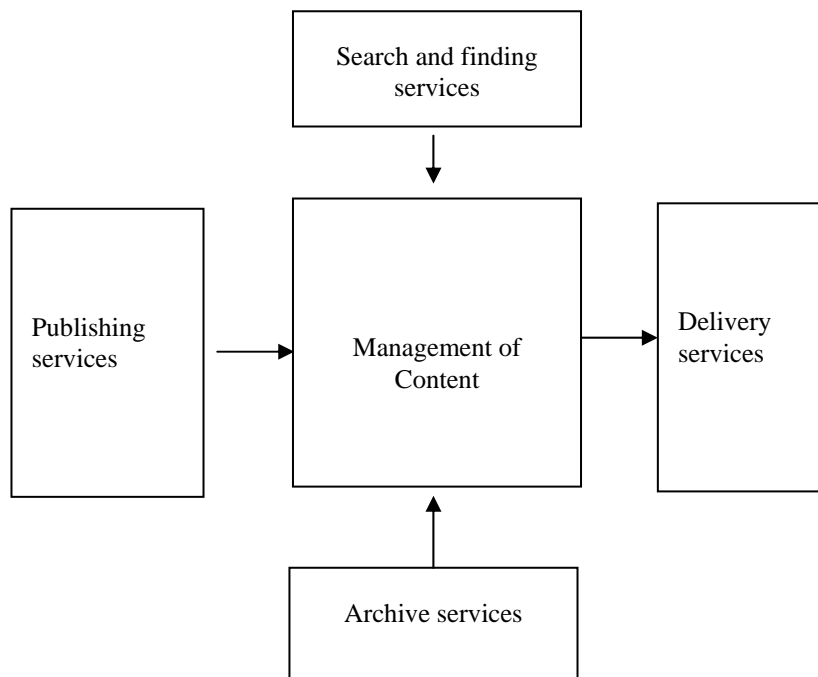


Figure 1: the five functional entities of a Library

The relation between the libraries strategic goals its core competences and the above depicted functional entities is as follows:

<u>strategic goals</u>	<u>core competences</u>	<u>functional entities</u>
publishing	quality selection	Publishing services
learning	mediation	Search and finding
archiving	logistics	Archiving services
general	logistics	Delivery
general	logistics	Content management

From this scheme it becomes clear that both Delivery and Content management do not originate directly from the formulated strategic goals but can be seen as a generic infrastructure supporting them.

We propose the use of a matrix to position the core competences of a library in relation to the before mentioned functional entities (see Figure 2). The co-ordinates along the axes are a measure for specialisation. In the centre of the matrix there is almost no specialisation. Moving along the axes from the centre, an increasing amount of specialisation is needed to accomplish the goals set. And, of course, the specialisation for publishing is differing from the specialisation needed for archiving. This means that in this matrix, for instance, a publishing system is positioned at the outer left site of the publication matrix. A dedicated document delivery system is positioned at the outer right site of the delivery matrix.

A traditional hybrid library could be positioned in the centre of the matrix:

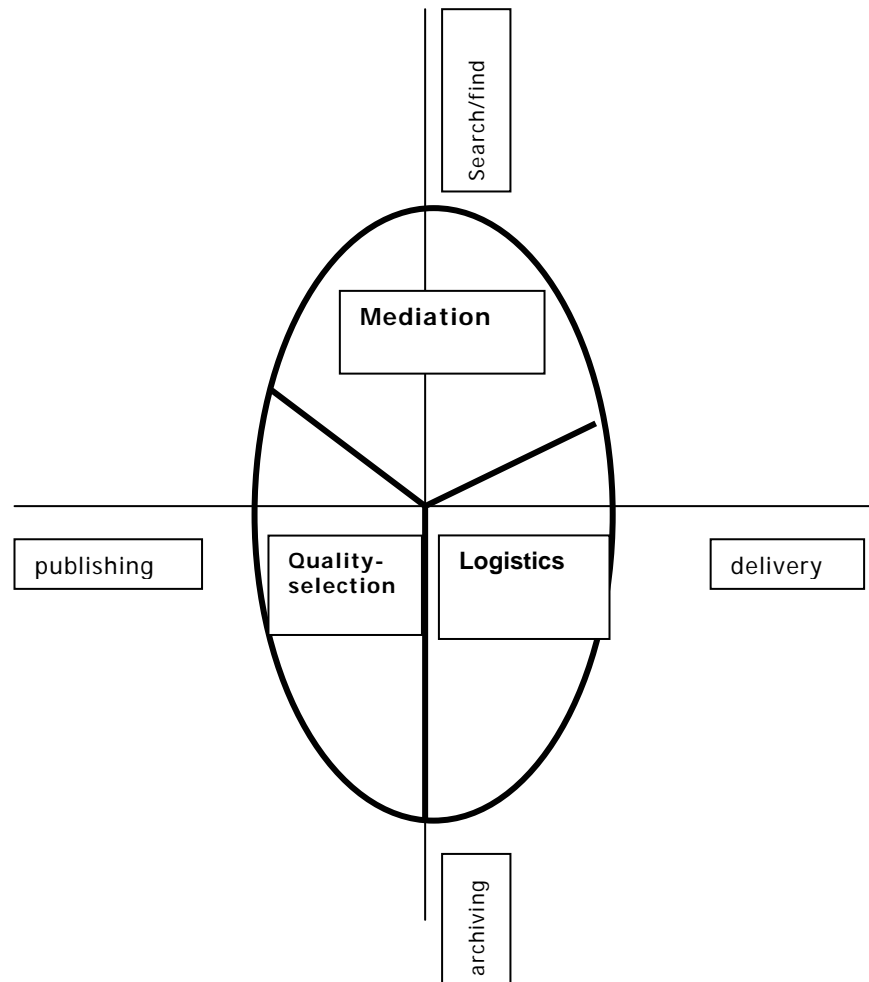


Figure 2: Competences in the traditional library organization

During the past 5-7 years the before mentioned combinations of strategic goals and core competences resulted in good quality of products and services. Required specialisation to aim the required goals was not too difficult to reach.

The shift to e-services

The changes in libraries environment can be characterised by the following developments:

- The increase of ICT in research and education.
- STM publishers focus on the end users, sustainable depositories and access to information. Those are our traditional services!
- Decrease of budgets and funding
- Forced collaboration between the technical universities in the Netherlands

This awareness led to the conclusion that we needed to move from a hybrid library organization to a completely digital library organisation, because it was no longer affordable, either financial nor with respect to required competences, to survive as a hybrid library.

The increasing importance of e-services and e-products taught us that to fulfil the ambitions described in the strategic goals, the specialisation in knowledge and skills we needed to create high quality products was increasing. No longer could we rely on the core competences as shown in Figure 2, where they were situated nicely in the centre of the matrix. The increased amount of specialisation led to the stretching to the extremes of the axes of the matrix, so deforming the oval of Figure 2 into the shamrock shaped figure in Figure 3.

From Figure 3 it becomes clear that the strategic goals we set out led to an increased dedication of a core competence to a specific functional entity. The natural synergy that existed in the traditional library as described in Figure 1 seems to disappear under the influence of the increasing specialisation that we need to create quality products in each of the functional fields [1].

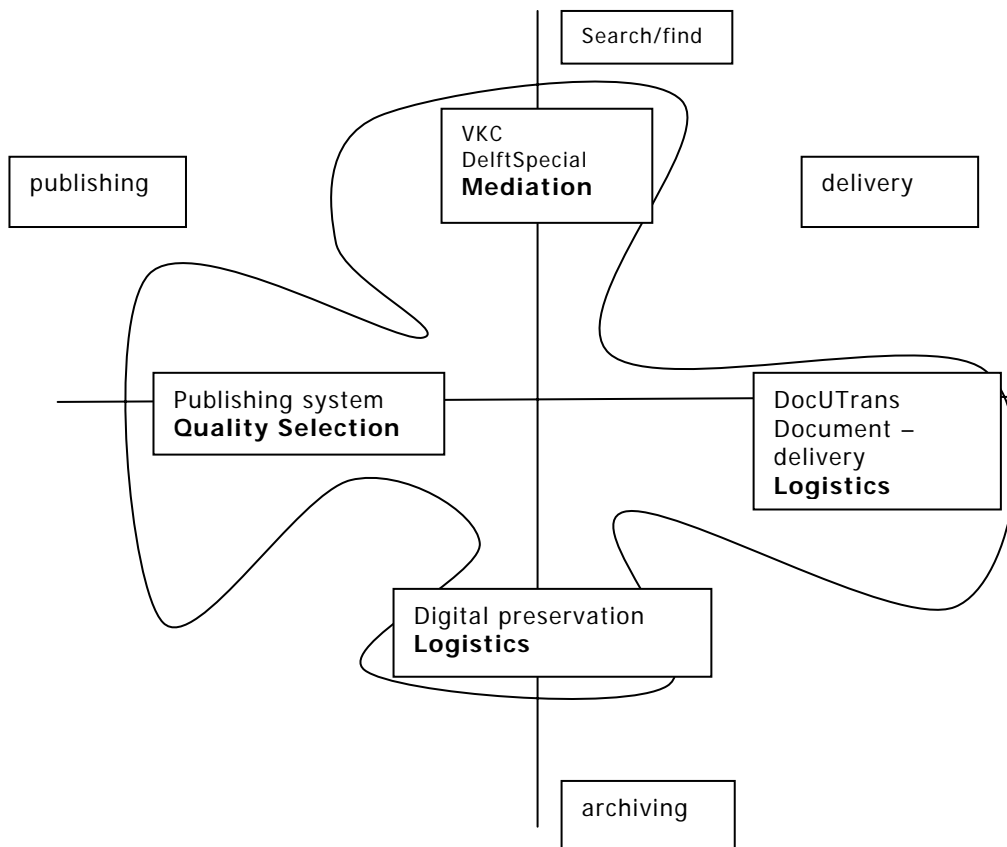


Figure 3: Shamrock

To be able to anticipate on the before mentioned developments it is necessary to make fundamental decisions: we need to focus on and to specialise in a limited number of activities. The essence of the new strategy is specialisation on three activities and (inter)national cooperation. We expect that cooperation gives better results than the development of all products and services by ourselves. Those conclusions resulted in the following choices and consequences:

Choice	Consequences
100% digital products and services	<ul style="list-style-type: none"> • Digital services 24*7 • Discontinuance reference desk services in branch libraries
Specialisation on 3 areas	<ul style="list-style-type: none"> • Development of a virtual front office • Back office activities in cooperation with the Dutch technical universities • Publishing house in cooperation with (European) universities and/or other publishing houses
Strategic relevance of the library for research and education	<ul style="list-style-type: none"> • Digital information is fully determined by the end users' requirements
Cooperation is the starting point	<ul style="list-style-type: none"> • Strategic cooperation with third parties • Use of shared library storage facilities
Development of organizational competences	<ul style="list-style-type: none"> • Opportunity for the development of personal competences • New possibilities by the development of new competences

A new reference model

So the goal we set for ourselves is clear now. But what is needed to accomplish it? It became clear that the increased amount of specialisation in skills and knowledge was a condition sine qua non to build quality information products. The natural synergy between the core competences of a library seemed to disappear. Can we rely on the “shamrock model” in Figure 3 to be a persistent evolutionary model for the library of the future? Or do we have to take more drastic measures. In Delft we strongly feel the latter will be the case. The level of specialisation needed to create quality solutions in each of the functional areas, searching and finding, publishing, delivery and archiving, will lead to a new organizational structure that will have to accommodate each of these aspects. So no longer we perceive the “shamrock” as a final phase. We foresee the necessity to divide the traditional library into separate organizations each specializing along one of the axes of our matrix.

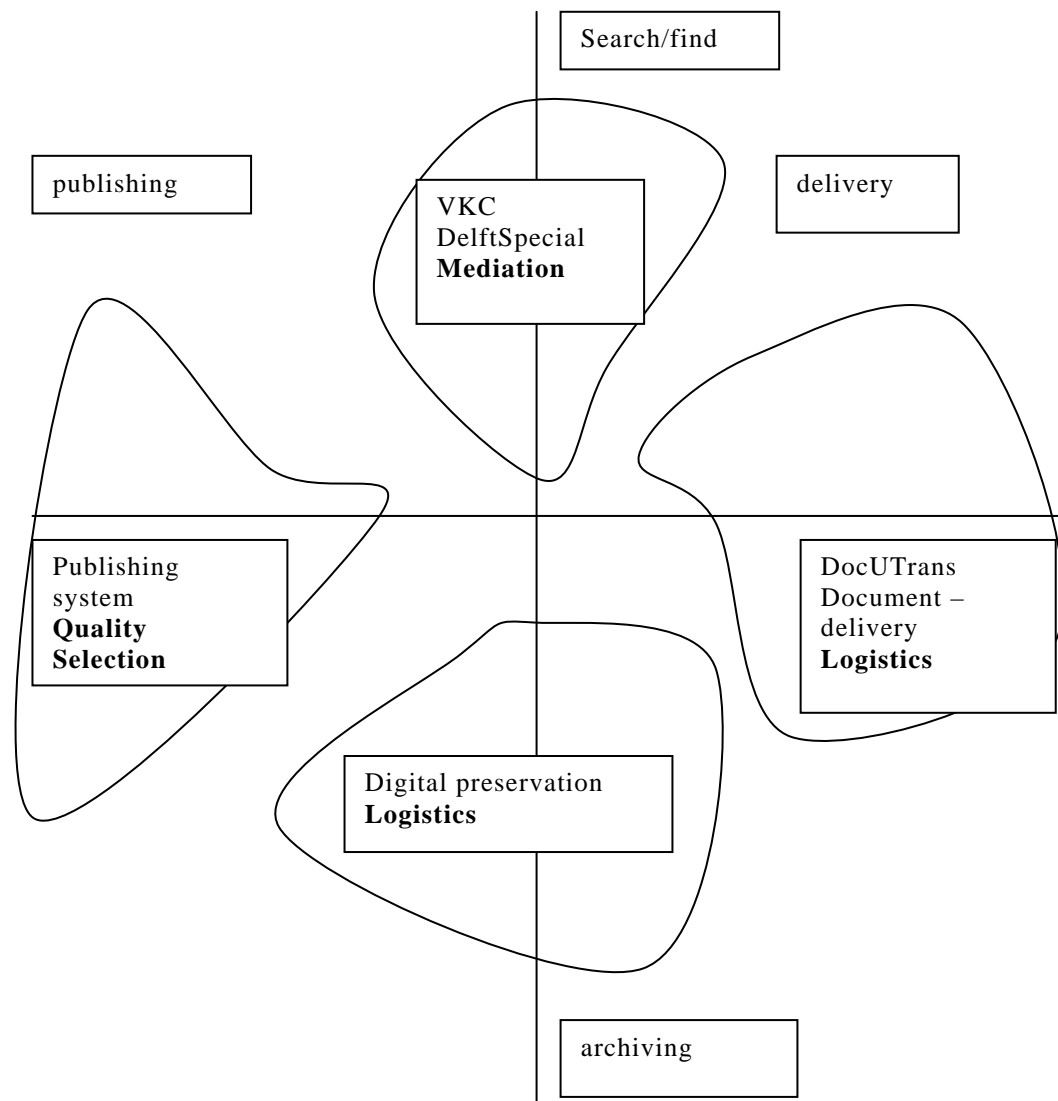


Figure 4: Competences in the new library organization

Consequences for the core business

As a consequence of the decision to discontinue the synergy models of Figure 2 and 3 with respect to the core competences, we had to reconsider our organization model. We decided to move in the direction of independent business units (at least in the theoretical model). That's why we planned to define separate business units for the respective core businesses:

The Virtual front office (core competence is mediation), which is responsible for the development, offering and maintenance of digital services and products (consumer goods and tailor made products and services). We prefer to develop new products and services in cooperation with end users (researchers and teachers). Contact with end users will only take place via the virtual front office. Assistance at the traditional reference desks will not be available any more.

The Technical University Academic Repository (core competence is logistics), which is responsible for sustainable storage of (physical and digital) information sources, preservation and conservation of information sources, maintenance, acquisition, purchase. The aim is the building of one national collection for the three technical universities in the Netherlands. This business unit acts under order of the Virtual Front Office with respect to services for end users.

The publishing house (core competence is information selection) is an acknowledged and highly specialised business unit. It publishes digital publications which are refereed by peers.

The business units will operate independently (although the processes in the separate units need to be adjusted). [2]

Implementation and reception

We presented our strategy to the library staff, customer panels and the board of the university. Also the plans were presented to the Ministry of Education and Science which is an important funding agency for the library.

An important step in the process was the approval of our plans by the board of the university. They are convinced of the feasibility of our plans in terms of services and products to be developed. They agreed that the proposed measures are inevitable because of the financial constraints we will have to cope with in the near future.

Also the Ministry of Education and Science accepted our plans.

The customer panels, which represented the departments of the university, on the other hand were very reluctant in accepting our plans. This is because of the fact that the customer panels felt responsibility for the branch libraries more as owner of that library, than as patron of the university library. Moreover most members of the customer panels are focused on paper collections and traditional services. However during discussions with individual research groups and students we experienced much more enthusiasm and acceptance for our plans. So, we concluded that in the future we have to look for alternatives for the investigation of the wishes of the end users.

Presentation of the plans to other technical universities in The Netherlands (our future partners) was not very encouraging. Our partner university libraries kindly agreed on our plans, but announced that they would wait for the steps their boards would make.

Discussions with our stakeholders resulted in adaptation of our plans in terms of timing and cooperation:

- Until 2007 the reference desks with limited service level stay open in combination with the preferred virtual reference desk
- The set up of the cooperation between the technical universities takes more time than expected, so for the next years the academic repository only works for the Delft University of Technology.
- A feasibility study to cost effectiveness of our publishing activities

The short term effects of our strategic goals are:

- Decrease of staff with 20% in the years 2005-2007
- Closing the reference desks of the branch libraries; decrease to service level in the branch libraries to an absolute minimum (only issue desk services and maintenance of the local physical collections)
- Move towards a fully digital library (if the publishers market makes this possible):
 - e-reference desk
 - e-collection
 - e-delivery
 - e-training
 - e-science collaboration

The process of change (freeze – unfreeze – freeze vs process of permanent change)

Because of the awareness that the change process would be influenced by many unpredictable events it was decided not to adopt the so called blueprint approach. Instead an adaptive change strategy was used that provided us with an optimal flexibility to achieve our defined goals.

Important design criteria for our new organization are:

- Teamwork; which means involvement of staff of different departments in one team
- Disentanglement of processes, which resulted in disentanglement of tasks of our employees
- Decreasing the number of management layers

At the start of the process a change team was put in place. Members of the management team and of the library staff formed the change team. The individuals were invited to take part of the change team because of their competences to manage the change process. The team operated independently from the existing management team. The change team was in charge with regard to the coaching of project teams, the choice of the subjects to be investigated, the communication to library staff and the reporting to the management team. Library staff was stimulated to submit project proposals. This resulted in a variety of projects: feasibility studies, implementation projects, strategy investigations. Examples of these are:

- Position of the publishing house in the new organization
- Image and visibility of the library
- Availability of printed information in a digital environment
- The position of special collections (rare and valuable works) in the new organization
- The organization of product development
- Implementation of a virtual reference desk
- Integration of help desks

- Implementation of e-books

At the start of each project a short summary of the project was published (goal, lead time, required experience of the project members) and library staff was asked to apply. Approval of the line management was not obliged for attending a project. Managers were asked to give priority to the change process. We preferred to work in small teams (4 – 6 people) which existed of staff of different departments of the library. The progress of the project was reported in weekly meetings with two members of the change team. The main role of the change team existed of the coaching of the process within the project teams. It was explicitly not the aim to monitor the results with respect to the content of the project. The project team reported final results and conclusions to the management team. In a separate session which could be attended by every staff member of the library the results were presented to the whole organization. The management team of the library decided on the implementation of the conclusions of the project. Almost all staff members who participated in the teams were enthusiastic with respect to collaboration with people from other departments, to experience the unexpected competences of colleagues, to focus on a well defined subject and to the way they could influence the strategic decision process.

Apart from the focus on the change process, the communication about the process was carefully monitored by organizing information sessions, visiting the staff meetings and design and maintenance of the “strategy website” (approved documents, minutes of meetings, slides of presentations, FAQ lists).

The management team learned that the idea that most staff members have the skills to elaborate on subjects which do not belong to their day to day professional experience worked out quite well.

In most cases people are perfectly equipped to envisage a problem on a more abstract or tactic level. The management needs to take care for a number of pitfalls:

- Do not ask people to advice on their own jobs or positions in the organization
- Be extremely clear about constraints and conditions
- Stimulate to look at situations outside the library organization.

Consultation of faculty

As mentioned before the user panels which represented the departments of the university were not able to articulate the user needs. Therefore teams of subject librarians and heads of the branch libraries were asked to investigate the user requirements with respect to the new organization (which products and services must be continued, which products and services can be cancelled, which new products and services do you need in the new situation). The answers of this inquiry were disappointing: a rather traditional list of requirements.

Results

During the change process we came to insights, which influenced the end results of the process:

- As mentioned before the realization of cooperation between the Dutch technical universities took more time than expected; that is why for the time being only a local content organization will be implemented,
- The results of a feasibility study showed us, that cost effectiveness of the publishing house was highly uncertain; so it was decided to discontinue the publishing activities,
- An investigation to methods for product development learned us that dedicated functions for account management, product development and product ownership are needed to be successful.

The new organization: disentanglement, specialization and focus

The change process resulted in an organization without departments in the old meaning of the word. We tried to group activities and tasks which require similar competences. People with similar competences cooperate in teams (as well for going concern activities as for projects). We will stimulate that people regularly change teams. The activities of the new organization are grouped in three areas:

The service organization

The content organization

The product development organization

So we applied two classification criteria for the new organization: one based on specialization (content and services) and one based on production and product development (on the one side service and content organization and on the other side the product development organization).

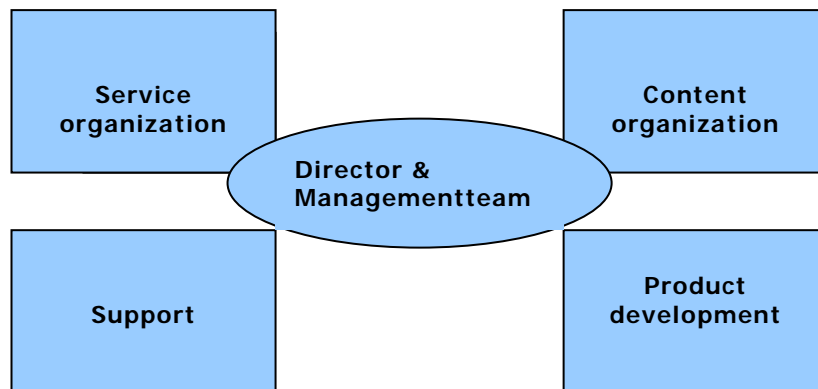


Figure 5: Scheme of the new organization

The service organization is responsible for the contacts with the end users. In the service organization the account managers are in charge for user and usage studies and for the definition of new products and services which are desired by the academic community.

We defined product ownership as a dedicated activity: the product owners are responsible for the maintenance of existing products and services. The information specialists and the staff of the (virtual) reference desk are responsible for the delivery of services and products. The information specialists – in their role as subject librarians – are responsible of the selection of information sources.

The content organization is responsible for the acquisition, sustainable storage and indexing of the information sources. The information sources include publications and data offered by commercial publishers, learned societies and research institutions but also the production of the Delft University (in the Netherlands all the universities are responsible for the implementation of an academic repository). The content organization has the service organization as its client. It is imaginable that the content organization acquires customers others than Delft University of Technology. Most likely are the other technical universities in the Netherlands but also other research institutions would be possible.

The product development organization is responsible for product innovation and product development. The service organization and the content organization are the clients of the product organization. The process of product development takes place in teams of account managers, product owners and product developers. Within this team the account manager monitors the fulfillment of the user requirements, the product owner checks the feasibility of the maintainability of the product under development and the product developers brings in competences regarding product innovation and product development.

Management philosophy: decrease of management layers, increase of responsibility, self organizing, more influence of library staff, flexible attitude

In the new organization the number of management layers has decreased: actually there are only two layers left. The middle management layer does not exist any longer. Self organizing teams are responsible for all the activities (going concern as well as projects as well as product development). The teams are responsible for quality maintenance of systems, services and products. Any staff member is stimulated to articulate ideas for new products or new working methods. Every new plan needs to be grounded on a business case (required capacity, required skills, lead time, aim, type of project, financial consequences). New plans are prioritized by the management team. The teams report to one of the members of the management team. In this way library staff is much more involved in innovation processes, product development and adaptation of processes and systems and the contact between management team and library staff is intensified. Because of the fact that library staff is working in different teams that report to different management team members, the interaction and cooperation between staff is increasing.

Capacity management is missing in the above mentioned management system. That is the reason for appointment of capacity managers who work in close collaboration with the management team members. The capacity managers are qualified for human resource management and for the (quantitative and qualitative) planning of the activities within the library.

Capacity members are (amongst other things) responsible for professional development of staff, the monitoring of agreed results (management by objectives) and the organization of training in new working methods.

Conclusions

Consequences for the management team

At the start of the new organization the management team existed of four persons (the management team in the old organization had nine members. Only three persons from the old team returned in the new team. Main reason is that the staff departments are no longer represented permanently in the management team. People also changed place because of new competences that were required in the new situation.

Blueprint vs. adaptive change strategy; did it work?

We are convinced of the benefits of applying adaptive change strategy. Staff feels much more involved in the change process. Moreover people experience this way of working as empowerment: they can really influence the decisions which are made. Of course there are disadvantages: people stay in a situation of uncertainty during a longer period of time concerning the situation at the end of the day.

Process of permanent change for the new organization

The end of our change process not only marks the start of our new organization but will also the notion that change, e.g. adapting to our customer environment and technological developments will be with us all the time. So in the traditional “freeze, unfreeze, freeze” sequence that is often used as a metaphor in a change process, the actual new “freeze” will not set in. We will keep our organization in a state of change where of course not everything will be “liquid” all the time but in stead of freezing the organization we will be working in time with a relatively higher or lower viscosity.

References

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