

# Report: Internship TU Delft Library (April 2013)

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## Introduction

The decision to apply for an internship at the TU Delft library was influenced by a number of aspects. Being trained at the Staatsbibliothek zu Berlin with its special focus on social sciences and humanities, and having a humanities background myself, a general point of departure for me was to look for a contrast of sorts. The most pronouncedly different institution I could imagine in terms of the subjects covered and the target group served was the library of a technical university - I acknowledge that this comparison is based on a stereotype. Also, I assumed that researchers and students within the realm of technical subjects, perhaps especially from information technology (again, a stereotype), would voice certain demands about making as much information as possible available electronically. In that and many other respects, the Library of the TU Delft caught my eye, although I must not forget to mention the spectacular architecture of the Library Learning Centre, which has literally caught my eye during a private visit to Delft early in 2012. I am very happy and grateful that the colleagues in Delft let me pay a visit, and I would like to thank them very much for the warm welcome and the pleasant stay I had at the TU Delft Library<sup>1</sup>. Last but not least, the internship was supported by a travel grant from BI-International, who deserve a great thank you for promoting international exchange in such an uncomplicated way.

## Libraries in the Netherlands

In general, the Dutch library sector is separated along the lines of the library's primary target groups and organisational affiliations: public libraries which are usually funded by a regional or local governing body like a city or community are open to the general public and serve 'everyday' literature needs for (usually non-academic) education and personal entertainment. The academic library sector largely consists of 13 university libraries serving students and researchers with academic information, as well as a number of smaller special academic libraries as part of museums or research institutes. An intermediate position is held by so-called "Plusbibliotheken", formerly called "WSF-bibliotheken" (wetenschappelijke steunfunctie; 'scholarly support function'): 15 of the largest public libraries work together in a network to provide information for higher education purposes. Several libraries of university colleges ('hogeschool') also work together in a loose cooperation called SHB ("Samenwerkingsverband Hogeschool Bibliotheken"). A central intermediary between different parts of the library sector is the Dutch national library, the Koninklijke Bibliotheek (KB; 'royal library') in the Hague. Within and across the different fields (public, academic, WSF), libraries work together in consortia, associations, foundations and other forms of joint ventures.

For instance, virtually all public libraries in the Netherlands as well as the so-called provincial service organisations (provincieleserviceorganisatie, PSO) are members of the association of public libraries (vereniging van openbare bibliotheken, VOB). The VOB has been set up in 2010 as a lobbying organisation for public libraries. It was created as a successor to the 'old' VOB, which covered a much broader set of functions for the public library sector. In 2010 the old organisation was split up into the Netherlands institute for public libraries (sectorinsti-

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<sup>1</sup> Space restrictions do not allow me to name all colleagues who shared their time to show and tell me about their work, but Trudie Houweling deserves special mention for the time and effort she spent to organise my stay and make the internship a great experience.

tuutopenbarebibliotheken, SIOB), the Stichting Bibliotheek.nl (providing portal and cataloguing services), and a 'new' VOB, which is acting as a lobby group only, or provides marketing and communication services like a common corporate identity.

The group of academic libraries in the Netherlands largely consists of the thirteen university libraries and the KB, as well as a number of special academic libraries. Together they are members of the UKB which acts as a lobbying organisation and provides a platform for cooperation. Several working groups<sup>2</sup> deal with topics such as the coordination of collection management and development, common standards and innovations for education support, or open access policy. In cooperation with the licensing services of the Dutch research infrastructure organisation SURF<sup>3</sup>, the UKB has also been negotiating consortial licenses for electronic media.

## TU Delft Library

TU Delft library sees itself as a service institution which is involved at all stages of research, from the access to information via the services for data processing to archiving services for research data, results, publications and additional material. For students and researchers, the library intends to create a productive atmosphere that stimulates cooperation.

The library's management has developed a business strategy as guiding lines for their work and for the development of the organisation. The current strategy paper covers the period from 2011-2015<sup>4</sup>. Under the heading "TU Delft library alsonmisbareschakel" ('TU Delft library as an indispensable link') the library summarises their strategic goals: to improve collaboration with internal and external partners, to improve the quality of products and services and to create innovation, and to improve the quality of staff and organisation as a whole.<sup>5</sup> What becomes clear from the strategy guidelines is that the orientation towards the needs of the customers is central. The self-image of a service provider for researchers and students permeates the strategy and is evident in many products and processes.

In addition to the function as a service provider to the members of TU Delft, the library serves the function of a national archiving and fulfilment organisation for technical-scientific publications.<sup>6</sup> In line with the strategic goal to operate cooperatively, the archiving function is exerted in collaboration with other libraries: Agreements ensure that the last remaining copy a work under the archiving regime will be archived at the TUDL. Similar agreements are in preparation for electronic objects, for instance for content in dark archives such as the one by Portico or the KB.

Again a consequence of the strategy, the library is currently undergoing further organisational change to improve quality of service and to increase the efficiency of their workflows. The library presently has about 120 employees (under 100 FTE), organised in six departments. With the planned restructuring the number of departments is reduced to four. As is the case already, the department heads together with the director will form a management team to determine strategic decisions. Central to the new organisation structure will be six new 'product groups', which will be supported by the departments for collection management, user services and innovations.

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<sup>2</sup><http://www.ukb.nl/werkgroepen-commissies> (accessed 2013-04-17)

<sup>3</sup><http://www.surf.nl> (accessed 2013-04-17)

<sup>4</sup>[http://www.library.tudelft.nl/fileadmin/redacteur\\_upload/bezoekersinfo/organisatie/Strategie\\_TU\\_Delft\\_Library\\_2011-2015.pdf](http://www.library.tudelft.nl/fileadmin/redacteur_upload/bezoekersinfo/organisatie/Strategie_TU_Delft_Library_2011-2015.pdf) (accessed 2013-05-12)

<sup>5</sup> ibid.

<sup>6</sup><http://www.library.tudelft.nl/en/visitor-info/organisation/> (accessed 2013-04-17)

## Building

A core service is to create a productive and engaging atmosphere for studying and researching, both alone and in groups. The central building of TU Delft Library, called “Library Learning Centre”, has earned a lot of praise for its modern architecture.<sup>7</sup> It is shaped as a rolling hill, inviting users to rest on the grass roof. The roof is pierced by a gigantic cone, which represents technology.<sup>8</sup> Inside, the library mainly consists of a large hall with reading and study spaces in the cone and in several study areas of various sizes, including a number of work areas for groups, lounging spaces, two seminar rooms and a coffee bar. The wall opposite the entrance is entirely covered by the library’s open shelf collection. Offices for library employees are located behind the book wall, and the closed stack is situated on one floor underneath the main hall. Access to the Library Learning Centre is free to anyone, and the building is open daily from 8 a.m. until midnight. During examination period opening hours are extended until 2 a.m. After 5 p. m. the service desk is staffed with student assistants and security services. The open shelf collection is secured by RFID tags, which also allow users to check out and return books at a self-service facility.

Demand for publicly available workspace for students (and employees) appears to have increased in recent years. The TU Delft is reacting to this demand by creating new workspace areas across the campus, for instance the new “StuDoc” study centre of the faculty for civil engineering and geosciences. The library management is involved in this process, and offers their expertise in creating and managing public work space to the entire university (also see description of the “Open Space” product group below).

## Collection

The collection development of the TUDL is strongly driven by the information needs of researchers and students. Especially for technical-scientific subjects the importance of printed books and journal articles has decreased significantly in past years. While the library’s holdings still contain a large volume of printed books<sup>9</sup>, the proportion of print over electronic resources available is dwindling. Since 2003 the library has been following an e-only policy and currently only 5% of acquisition funds for books are spent on print media. The remaining funds cover licenses for e-books, electronic journals and databases. About 4.5 Million Euro are spent on journal subscriptions each year. Part of this sum is taken up by payments for so-called “big deal” consortial licenses, which are negotiated through the UKB consortium<sup>10</sup>. Because of its archiving task, the TU Delft library gets additional funding from the ministry for education, culture, and research (Ministerie van Onderwijs, Cultuur en Wetenschap [OCW]). For e-books, the TUDL uses two types of patron-driven acquisition (PDA). One acquisition scheme replaces the traditional approval plans (AP) which have been negotiated with Blackwell’s library services. The existing approval plans were considered ineffective to meet the demand of their patrons - about 40% of the acquired books were estimated to have zero circulation<sup>11</sup>. Instead, a mediated PDA model is used for those books that are available as e-book (paper-only works are still acquired through regular AP deliveries): Blackwell forwards the list of electronically available books selected for the approval plan to EBL, who make the

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<sup>7</sup> For instance, it was placed on CNN’s list of “7 of the world’s most beautiful libraries”:  
<http://travel.cnn.com/explorations/escape/7-coolest-libraries-world-934450> (accessed 2013-04-17)

<sup>8</sup> <http://www.library.tudelft.nl/bezoek-info/gebouw/> (accessed 2013-04-17)

<sup>9</sup> <http://www.library.tudelft.nl/collecties/overzicht-collectie/> (accessed 2013-04-17)

<sup>10</sup> <http://www.ukb.nl/licentiebeleid> (accessed 2013-05-18)

<sup>11</sup> Zofia Brinkman-Dzwig (collection manager TUDL), pers. comm.

books available in the TUDL's catalogue. A user can select a book, browse it for up to 5 minutes and place an order request to the library. If the request is approved by the library, the book will be made available on EBL's platform within minutes, and is billed to the library through Blackwell's. This model combines the convenience of an approval plan with the advantages of PDA ("just in time" instead of "just in case"). Another PDA variant used by the TUDL is Elsevier's programme for evidence-based selection, which makes large collections of electronic resources available at about 10% of the price of the entire collection. At the end of one year the library can make a selection from the collection based for instance on usage statistics, which is credited against the payment made at the beginning of the contract period. Apart from their more current electronic and physical collection, the library keeps a collection of historical books and documents ("Trésor"). It contains about 50000 books, maps, photographs and prints, as well as theses and speeches held at the TUD which have not been published otherwise. The Trésor collection is seen as a historically important testimonial to the history of engineering in the Netherlands.<sup>12</sup> Parts of the collection, for instance historical prints and maps, have already been digitised and are made available through the university's document repository.<sup>13</sup> In addition, the library's collection also contains objects not typically found in a library, for instance historical instruments and measures. Originally part of the cultural heritage collection of the TU Delft Museum of Technology, these objects have been incorporated into the library collections in 2008.<sup>14</sup> Some highlights of the collection include geodesic measuring instruments (tachymeters and theodolites, levelling devices), a vast collection of mechanic and electric calculators, historic standard measuring devices (metric and non-metric), an Enigma encryption device, pictures of former rectors, furniture and other objects as part of the former study collection of the faculties for architecture and industrial design. A catalogue of the objects in the heritage collection will be made available online in the near future.<sup>15</sup>

## Product groups

The six new product groups form part of the planned new organisation structure of TU Delft. They offer services which in many cases go beyond 'traditional' library services and strongly focus on innovation, in order to strengthen the position of the library within the university organisation.

## Research support

For many years the TU Delft library has been offering specialised support services to researchers, for instance with advice on Open Access, or by providing 'virtual knowledge centres' ("Virtuele Kenniscentra" [VKC]). The new research support product group sets out to bundle all library services targeted at researchers. Crucially, the scope of the group is broader than just library services. Head of the group Alenka Princic collaborates with other supporting services from university departments, e.g. the valorisation centre, ICT, finance, HR, etc. The immediate goal is to provide a portal with an integrated guide to all services

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<sup>12</sup> <http://www.library.tudelft.nl/collecties/bijzondere-collecties/> (accessed 2013-04-12)

<sup>13</sup> <http://repository.tudelft.nl/MMP/> (accessed 2013-05-20)

<sup>14</sup> <http://www.sciencecentre.tudelft.nl/over/geschiedenis/> (accessed 2013-04-17)

<sup>15</sup> See <http://www.academischecollecties.nl/>

that support research work at the TUD. Long-term goals are to add more features into the portal, for instance a directory of researcher profiles<sup>16</sup>.

### Education support

Based on four of the standards for information literacy skills suggested by the Association of College and Research libraries (ACRL)<sup>17</sup>, the members of the education support product group have developed course modules on information literacy, with different levels for Bachelor, Master and PhD students. Two modules are geared towards Bachelor students at the beginning of their studies. They are integrated into propaedeutic courses for the different subjects at the TUD and available online for self-study through the university's online learning platform "Blackboard". The Master level online class aims to further deepen the topics dealt with during the Bachelor level courses, and contains video lectures on different topics related to the research cycle, including the publication process with basic information on bibliometric measures, how to stay up to date within a subject area, and how to use bibliography software. For PhD students a workshop on information literacy skills is offered, which spans two afternoons and includes homework exercises for the time between the two sessions. Again it aims at heightening students' awareness for different issues involved in the publication process or some topics from bibliometric research, e. g. using bibliometric measures to identify key players in a field and 'map' research areas.

An additional source of information for self-study is the TULib platform<sup>18</sup>, which contains texts and video presentations on search strategies. The platform is freely available and aimed at different levels of education.

### Research data (3TU.Datacentrum)

The 3TU.Datacentrum data repository is a joint operation of the three technical universities in the Netherlands (Delft, Eindhoven, Twente [Enschede]). The tasks of the centre cover a wide array of services for collecting and archiving research data from the technical-scientific field. Each of the universities taking part in the project has a front office, the project management and back office are located at the TU Delft library.

The centre's work is intended to provide support for the entire life cycle of data collection/production, analysis and archiving. A key service is the long term archiving and making accessible of research data, including data models and even software tools used for data analysis. Preferably the data are being made available through the data centre's OPeNDAP interface, which allows further processing and aggregation of data, as well as programmatic access through APIs. In order to make research data citeable, the 3TU.Datacentrum provides DOIs for data sets hosted in their archive.

Part of the services is also to host and support virtual research environments during the lifetime of projects, and to develop new services and tools for data management. Starting even before data collection begins, the centre offers consulting and training for researchers and research groups that want to collect and make available data, for instance providing advice for writing data management plans. Apart from the services aimed at producers and con-

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<sup>16</sup> This directory might be potentially based on the semantic-web enabled researcher database system VIVO, which is about to be implemented on a national scale in the Netherlands; cf.

<http://vivoweb.org/about>

<sup>17</sup> <http://www.ala.org/acrl/standards/informationliteracycompetency> (accessed 2013-04-17); the selected four skills are: determine extent of information needed, effectively and efficiently access needed information, evaluate information and its sources critically, use and disseminate information effectively.

<sup>18</sup> <http://tulib.tudelft.nl/> (accessed 2013-05-20)

sumers of data, the centre is also offering training for library employees who want to attain qualification as 'data librarian'.<sup>19</sup>

### New Media Centre (NMC)

The New Media Centre was recently integrated with the library and provides services and facilities for creating and managing multimedia content like audio and video files and interactive ("rich media") web applications. This content is primarily used for the TU's online courses and blended learning activities, as the TU has taken the strategic decision to heavily invest in the development of online course content. Their activities in this field include MOOCs<sup>20</sup>, blended learning and e-Learning offers both for on-campus and external students. Recently the TU has joined MIT's edX platform<sup>21</sup> to disseminate course content across a worldwide audience. In addition, for-credit online courses at bachelor and master level are being developed, and the TU's own multimedia platform hosts lecture recordings as well as training videos or tutorials. Currently about 17000 lecture videos are online, and in the past year the university's multimedia content was visited by about half a million users.

The technical and organisational services to create rich media learning environments are coordinated by the NMC. In order to create content, the department's facilities comprise a television studio and about a dozen miniature production units that can be operated by students to capture lectures. The studio facilities at the NMC are also used for video conferencing or even online examinations.

What is more, the NMC provides advice and training services to internal and external customers. The production of lecture recordings or video lectures in the studio provides lecturers with visual feedback and possibility to improve presentation skills. This is seen as a means to improve the quality of courses online as well as on campus. In the same vein, the NMC pursues the strategic goals to equip lecturers with the skills to produce their own multimedia content.

### Document management and Archive (DMA)

The document management and archive product group provides archive services to the entire TU Delft library. This product group has been part of the library since the early 2000s. In 2012 all archiving tasks at the university have been centralised at the DMA, and as part of this process all departments and faculties with own archives have been scoured for records. This material is currently being processed and ordered and large portions are being digitised, as the mid- to long-term goal of the archive is to rid itself of all paper holdings. After successfully going through an audit process, the paper copies of scanned documents can be discarded, along with documents which do not have to be kept indefinitely according to Dutch archiving legislation. Remaining paper material for which stricter policies apply will be handed over to the national archive, or to an archiving service provider. Eventually the DMA will keep documents either as a digital copy or as a reference to an archived document at an external storage site. To implement the digital archive for the university, the DMA uses Microsoft SharePoint for document management.

### Open Spaces

The "Open Spaces" product group grew out of a project for the introduction of new, more flexible work environments, schedules and policies at the TU Delft Library. Such measures

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<sup>19</sup> <http://dataintelligence.3tu.nl/en/home/> (accessed 2013-05-20)

<sup>20</sup> [http://en.wikipedia.org/wiki/Massive\\_open\\_online\\_course](http://en.wikipedia.org/wiki/Massive_open_online_course) (accessed 2013-04-17)

<sup>21</sup> <https://www.edx.org/> (accessed 2013-04-17)

have been implemented by different organisations in the Netherlands in recent years and are usually referred to as “het nieuwewerken” (‘the new way to work’).<sup>22</sup> The introduction of the measures at the library was initiated as a means to increase employee satisfaction. A pilot group’s work organisation was changed to give maximal flexibility in terms of where, when, what and how an individual works within his or her role or function. Work hour registration was given up and technical tools like flexible phone routing, instant messaging software and cameras for video chat are provided that allow flexible work from different places, geared toward workflows better suited to an individual’s needs. After positive evaluation of the pilot, the project group began to remodel the entire library’s work policies to be based on a number of different “work personas” or roles, grouping different kinds of work routines.<sup>23</sup> Except for cases where for instance information counter services have to be scheduled, job performance is now evaluated based on individual goals.

An integral part of the development to make work at the TU Delft Library more flexible is to change the office structure, from individual two-person offices towards more open office spaces (“kantoortuinen”), meeting rooms and quiet zones available to everyone participating in the new work model. This way the available workspaces are functionally defined and can be flexibly chosen depending on the current task. A number of dedicated quiet work zones and meeting rooms have been installed already at the Library Learning Centre. More severe architectural changes to (parts of) the background area of the TU Delft Library are planned for 2014, comprising for instance the removal of walls between offices.

What is more, the “Open Spaces” product group generalises the idea of creating flexible and functionally differentiated work space. Current plans are to remodel the current background area within the library towards work areas available for employees of the library, the TU, students of the TU and potentially even for people from outside the university wishing to use office facilities. This concept might even be expanded to the entire university, with work space for (to-be-defined) user groups across the campus.

## Project tasks

During the three weeks at the TU Delft library I worked on two project tasks. The first task allowed me a more detailed view of products and services of the 3TU.Datacentrum product group. From the second task I got a good insight into current developments around the Dutch national catalogue and the nationwide interlibrary loan system, and the possible implications for the TU Delft Library. More detailed reports on both projects are available upon request (in Dutch).

### **3TU.Datacentrum: How to carry out customer satisfaction research?**

As described above, the data centre product group provides different services for producers and consumers of data. In order to learn more about existing customers and their experience of the 3TU.Datacentrum services, head of the project group Jeroen Rombouts wants to carry out an initial measurement. The results are intended for tracking the centre’s performance over time, both for internal benchmarking as well as external evaluation of the services. For the project I researched possible ways to measure customers’ satisfaction with the centre’s services. This analysis required me to familiarise myself with the entire spectrum of products offered, and listing possible ways for customers to make contact with the data centre. In addition, I briefly acquainted myself with some existing models for customer satisfac-

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<sup>22</sup> cf. for instance <http://www.hetnieuwewerkendoejezelf.nl> (accessed 2013-05-20)

<sup>23</sup> <http://www.moqub.com/2011/11/01/ikwerk/> (accessed 2013-04-17)

tion, as well as methods for measuring it. As a result I grouped customers according to their user role as either producer or consumer, and according to the amount of service they require for using a particular product. For each group, I listed options to measure customer satisfaction, for instance by standardised questionnaires or focus group interviews.

### **Document fulfilment: A model workflow with OCLC WorldShare ILL**

Dutch libraries are currently researching a transition to cloud-based library services and one of the building blocks is a plan for a new nationwide interlibrary loan (ILL) system.<sup>24</sup> Collaborative services and products on a national level have been in use for quite some time, for instance for cataloguing of books and printed serials (GGC, gezamenlijkegeautomatiseerde-catalogisering), which results in the Dutch central national catalogue (NCC, nationalecentralescatalogus). The NCC together with article-level metadata (Online Contents) is being marketed through the search system PiCarta<sup>25</sup>, an OCLC product which libraries have to license individually. OCLC also runs the current ILL system for academic libraries based on the NCC<sup>26</sup>, which is accessible for end-users via PiCarta. In addition to NCC/IBL there is VDX<sup>27</sup> (another OCLC product), which is exclusively used by public libraries in the Netherlands, based on a federated search system<sup>28</sup>.

In order to unify the two existing ILL systems, the GII consortium (“Gemeenschappelijke Informatie-Infrastructuur”, ‘common information infrastructure’) has set up an advisory commission to draft specifications and workflows for a new system. The consortium has been founded in 2008 as a joint board of library directors and managers across library types, to facilitate nationwide licensing of products from OCLC.<sup>29</sup> The premises for the advisory group included the adherence to international standards and the use of off-the-shelf, software-as-a-service (SaaS) solutions.

My task was to research the current workflow for ILL and document fulfilment at the TU Delft Library, and to analyse how this workflow could be mapped to WorldShare ILL, under the (still hypothetical) assumption that the national ILL system were to be migrated to OCLC’s platform. One rather obvious realisation was that a national ILL system based on WorldShare would require the current national catalogue to be integrated into WorldCat, including holding information for electronic resources. However, both from the available product documentation and support documents it appears that the OCLC product in its current state would not support the complete range of functionality available at present. For instance, the rather sophisticated criteria-based mechanisms to determine lender strings implemented in VDX and NCC-IBL are currently unavailable with the WorldShare ILL service. Also, user-initiated ILL requests which are quite common for customers of Dutch libraries are also not possible at the moment. The promise of the new platform to help further automatize and streamline the processing of fulfilment requests at the TU Delft library is thus contingent on some functionality being added to OCLC’s product and, crucially, on the data quality of the new national catalogue within WorldCat.

<sup>24</sup> Frits van Latum, TUDL project manager, pers. comm.

<sup>25</sup> [http://picarta.nl/xslt/login/DB=2.41/LOGIN\\_ABOUT](http://picarta.nl/xslt/login/DB=2.41/LOGIN_ABOUT) (accessed 2013-05-18)

<sup>26</sup> <https://www.oclc.org/support/services/ncc-ibl.en.html> (accessed 2013-05-18)

<sup>27</sup> <http://www.oclc.org/vdx.en.html> (accessed 2013-05-18)

<sup>28</sup> <http://stichting.bibliotheek.nl/pagina/14727.aanvragen.html> (accessed 2013-05-18)

<sup>29</sup> <http://stichting.bibliotheek.nl/pagina/14726.nationale-bibliotheekcatalogus.html> (accessed 2013-05-18)



## Summary

I mentioned initially that I had come to Delft with the expectations that the library would be among the forerunners of electronic information services and that it would set itself high standards for innovation of collection and services. As I hope to have illustrated with this report, my expectations were more than fulfilled. Perhaps the most impressive trait of the organisation in my view, however, is its consequent customer orientation as a driving force to improve and innovate. With the planned organisational changes in place, the library presents itself as a streamlined organisation with efficient structures. What is more, the reshaping of the library organisation appears guided by a pragmatic view at more traditional library tasks and structure, aiming at intensified cooperation and standardisation of software and services. Hopefully this development will help to make (staff) resources available to further innovate the services in line with the needs of the researchers and students at TU Delft.