Annual Report 2015
-Knowledge when it matters
The Library's main task is to support NTNU's education and research by providing good services directly to the individual student and the individual researcher. The physical libraries are primarily geared towards students' needs for work spaces and a good learning environment, and are therefore situated with good locations on every campus.

Physical libraries must be further developed into places that support learning processes with flexible student workstations in collaboration with the University’s study support services and IT. An example of this kind of successful cooperation is Orakel Support Services (Orakeltjenesten), which is operated by NTNU IT, but located in the

The traditional library will go on to become a centre for knowledge and learning. Libraries will continue to be places for knowledge and learning, but the library’s physical space will be used in new ways. There will be a clearer goal of supporting and facilitating different types of learning and working. To achieve this, knowledge and learning centres must become multifunctional spaces. NTNU knowledge and learning centres will be social meeting places, have space for different types of student services and study support, and good access to IT services: software, computers and multimedia technology. There will be varied reading rooms and workspaces for students, including large and small seminar rooms. In addition to traditional library services, there will be help available for academic writing and guidance in the critical evaluation of digital information resources and sources. In a centre like this, the boundaries between the library, study support services, social meeting places and IT will be erased. This new library must be available 24/7. We're not quite there today, but this is the goal to strive for.

NTNU must build vital and vibrant communities around academic subjects and knowledge. We must create good and inspiring meeting spaces that will enhance students' sense of belonging to the campus. The library's participation in the Pilot U1 project is one contribution to realizing this vision.

Photo: Nils Kristian Th. Eikeland, NTNU University Library
Bibliometrics

Modern research institutions are met with ever-greater demands to document research, teaching and outreach efforts, and the need for research support and analytical services related to this demand is on the increase.

In 2015, the NTNU University Library hired a separate bibliometrics librarian to provide data and analyses related to publications, citations and other statistics that are relevant in measuring NTNU’s research output.

One of the main tasks for the bibliometrics expert is to help researchers answer questions about issues such as choosing publication channels, adapting a research profile for different grant applications or for research networks, or other aspects related to academic publishing.

In addition, the bibliometrics expert should be able to provide university faculties and departments bigger picture analyses of publishing, such as developments in publishing over time, or overviews of NTNU’s different partnerships with foreign research institutes.

The bibliometrics expert will also be involved in efforts to develop new digital services at the library, and will be a part of the Open Access environment at NTNU.
In 2015, NTNU joined the Norwegian Brage Consortium. The new archive was named “NTNU Open”, and on 1 January, all data from DiVA were transferred to NTNU Open.

NTNU's institutional archives mainly contain theses, PhD dissertations and scientific papers. New procedures and user manuals were prepared on how the different document types should be registered in NTNU Open.

Some students submit their master’s theses via the DAIM filing portal, which is operated by the Department of Computer and Information Science. In view of this, a routine was created so that DAIM can automatically transfer theses to NTNU Open. This automatic transfer from DAIM to NTNU Open began with theses submitted in the spring of 2015.

We have also spent time checking the contents of NTNU Open after these transfers, to correct any shortcomings. The automatic transfer of data from Cristin works as it should in NTNU Open.

NTNU uses its institutional archives both for open publishing and closed archiving. This presents challenges when search engines index the contents of NTNU Open. The NTNU University Library receives a number of inquiries for master's theses and doctoral dissertations that are not available in full text in NTNU Open.
Publishing Fund

In 2013, NTNU established a publishing fund to finance author publishing costs related to Open Access publishing. This arrangement was evaluated in the first half of 2015. The evaluation resulted in the decision to continue the fund up to and including the 2018 publishing year. Some changes have been made in the guidelines on the support for open publication of journal articles and the fund has also been opened to support the open publication of books and book chapters.

The following changes have been made in the fund’s guidelines for support for open publishing:

• The limit on the maximum annual amount of support has been removed.

• The payment for scientific OA articles related to the Research Council of Norway will be made via the fund.

• The fund now will support the open publication of monographs and anthologies.

Guidelines have also been adopted to allow support for the open publication of books and chapters.

Twenty-one applications for support were granted in 2013 for a total of NOK 210 000, which is an average of NOK 10 000 per article. In 2014 this number rose to 44 approved applications totalling approximately NOK 445 000, which was an average cost per article similar to that in 2013. In 2015, the number of approved applications increased to 102, at a cost of NOK 1 402 218, which is an average of about NOK 14 000 per article. The largest increase in price per article is likely due to drop in the exchange rate for the Norwegian krone.

The fund did not provide support in 2015 for the Open Access publishing of books or chapters.
Emtacl 15

The NTNU University Library organized Emtacl (Emerging Technologies in Academic Libraries), for the third time on 20-22 April. The conference's main focus was the implementation of new technologies and the modification and adaptation of already existing technologies.

The conference is designed for information professionals who work in academic libraries, whether university colleges or universities. This time we wanted to have specially invited keynote speakers who were mostly drawn from institutions outside of the library sector.

We realized that if we wanted to avoid being “locked into” a particular way of thinking, it was important to hear about the exciting use of technology from institutions outside of the academic library sector.

Among the conference keynotes were:

• The Architecture of Understanding, Peter Morville
• How to Make Sense of A Mess, Abby Covert
• Why Game-based Learning? Alf Inge Wang (NTNU), who is Norway's only game professor and creator of Kahoot.

We had specially invited and renowned guest speakers David Nicholas, Jurgen Appelo, Andrew Prescott and Johanna Frelin.

The Emtacl conference helps to promote the NTNU University
The academic programme:

In each emtacl conference, we send out a Call for Papers to bring in contributions from more than “just” invited guest speakers. We suggest some topics that we consider to be "emerging" and ask those who submit entries to link their contributions to one or more of the suggested topics.

The approved presentations are divided into sessions. We had the following sessions in 2015: Managing technological innovation, Learning technologies, Digital humanities and text mining, Digital library content, Research and publishing and User Experience.
The Library’s new website

The Library launched its new website at the start of the autumn 2015 semester. The new structure of the pages is the result of the reorganization of the content—which is distributed throughout the NTNU intranet, library section and 14 academic bloggers. These decisions were taken based on interviews and workshops with users, conversations with library staff, consideration of NTNU’s content strategy and expertise from engaged consultants.

Among the objectives of the project were that the end user’s experience be predictability and that information be more easily accessible in both searches and navigation. We also wanted a modern and consistent visual expression.

The web pages were also developed in keeping with NTNU’s common design templates on its central sites to make it clear that the Library is a part of NTNU.

We want to ensure that all information is kept up to date. We have therefore cut back on the content that is put out on the pages, along with the individuals who publish and maintain the information.

At the same time, it has been important to allow our employees to be able to share their expertise directly with our users online. We therefore created blogs in each of our disciplines, and we are working on the establishment of new blogs. The blog platform also supports the library’s intention to be visible and communicate directly with our larger user community.
Against this backdrop, we also released a calendar of events to attract people to activities in the library. Smart filtering allowed us to promote the arrangement to different audiences on different parts of the NTNU website with just one publication. A similar function is also used for letting users know about library courses, while the administration of these courses is handled via a separate course catalogue.

This approach also takes account of the trend towards the increased use of mobile devices and is designed to work equally well on small and large screen sizes.

The guidelines on the universal design of website from the Norwegian Agency for Public Management and eGovernment (DIFI) have been followed as much as possible, to ensure that everyone—regardless of their abilities—is able to use the Library websites. In addition, almost all of the library's website available in English, at the same quality as the Norwegian pages.
In November 2015, we replaced the BIBSYS search service with Oria. For library patrons, the transition to Oria means that they now can search for printed and electronic literature from a single location. In other words, when you search in Oria you will find articles and book chapters from most of our electronic resources (journals, archives, papers, databases), as well as printed materials (books, reports, notes, etc.) and electronic materials from open sources.

Oria.no is also used as search service by the other Norwegian university libraries and at many university colleges.
Norway’s Memory of the World UNESCO register: “The Norwegian Committee on Concrete in Seawater”

In January, the Norwegian Broadcasting Corporation’s (NRK) regional news programme Midtnytt produced a story on “The Norwegian Committee on Concrete in Seawater.” The story was filmed in the Dora storage magazine and shown on NRK’s Regional News programme on 7 January and on the national news programme Dagsrevyen 21 as a story under “Norway today”.

The Norwegian Concrete Association appointed a committee in 1962 that was commissioned to investigate the conditions and identify lessons to be learned from all marine concrete structures along the Norwegian coast. The lessons learned from this research would later prove to have far greater significance than what could have been imagined. Based on research results from Norway, it became accepted both nationally and internationally to use concrete as a structural material in oil platforms and installations at sea.

This research helped Norway achieve a special position internationally in petroleum technology and concrete technology. Odd E. Gjørv led the research on the use of concrete in salt water. The picture shows a party on 12 May 2015 where Gjørv gave a lecture entitled: “Research on Norway’s concrete piers included in Norway’s UNESCO Memory of the World register.”

Photo: Nils Kristian Th. Eikeland, NTNU University Library
The TV story led to increased interest in NTNU's private archive and to increased requests for the use of the Library’s resources in new contexts.

Arkivet etter Leiv Tronstad er nøkkelen til NRKs dramaserie: «Kampen om tungtvannet»

In connection with the NRK drama series “The Heavy Water War”, the Faculty of Natural Sciences and Technology created an online exhibition called Tronstad and heavy water – the history of the NTH professor and resistance fighter Leif Tronstad. The Leif Tronstad archives are kept by the NTNU University Library, which contributed archival materials and photos to the online exhibit. The content has been digitized and has been posted on Arkivportalen (the Archive Portal).
The first episode of the drama series on NRK1 received a great deal of attention and 1.3 million people watched it. NRK’s regional news programme Midtnytt did a story about the Library’s storage magazine at Dora. That afternoon NRK went to NTNU’s Natural Science Library and filmed the setting up of the physical exhibition. The two recordings were put together for a TV story that was shown on NRK’s Midtnytt programme on 5 January. The drama series won six Gullruten awards in 2015. This further increased interest in Tronstad, heavy water and NTNU. The library received several inquiries about the archive in the wake of the series, including from Universitetsavisa, the independent weekday online newspaper that reports on NTNU.

Leif Tronstad, photographed in January 1942, on the occasion of having completed an officer’s training programme and being appointed second lieutenant. By March of that year he had already been promoted to Captain.

Photo: Unknown photographer
Young Researchers’ Night

Young Researchers’ Night is held each autumn as part of the Researchers' Night programme during Norway’s Science Week. The event aims to create enthusiasm for research by giving young people research-related experiences from NTNU. In 2015, the event had 1200 students and teachers from high schools and folk high schools.

The Medicine and Health Library hosted a booth during Young Researchers’ Night on 25 September. The theme of the 2015 Science Week was Food, and visitors to the Library’s booth could use Kahoot to guess what was shown in various microscopic images of the digestive tract: taste bud on the tongue or intestinal villi? Oesophagus or colon? The booth was very popular, with high participation throughout the evening.

The booth was offered in partnership with the NTNU Faculty of Medicine (DMF), which loaned the exhibit a light microscope and samples of villi that could be looked at.

Atle Van Beelen Granlund, a DMF postdoc, spent a few hours at the stand and talked about the importance of a healthy gut for our health. The Library is an important part of researchers' everyday lives, where databases are central to getting an overview of what is being studied elsewhere in the world. The Library was able to convey this idea through its participation in the event.

Microscope Photo: Bowel or tongue? Researcher Atle Van Beelen Granlund helped interpret these images.
Katrine Aronsen uses Kahoot to test how much youths know about their bowels.
Trondheim Science Fair

The Science Fair is an important event during National Science Week. Researchers from NTNU and other research institutions participated with a stand in the Science Fair Research Tent at the Trondheim Torget on 18-19 September.

The main theme during National Science Week was Food. We chose the title "Hungry for knowledge about food" for our booth. The target group was children, youths and the city’s residents. Visitors to our booth were able to hear about everything from food scandals in the 1800s, to villa pigs and villa chickens during the war, table manners and table settings.

The booth presented selections of culinary history with a lighter look at culture, war, scandals and inventions.
The library has weekly posts on Instagram and Facebook. We have started posting “book faces” or “bokfjes”, as a new way to portray the library's physical and electronic collections.
Pilot U1 – innovative learning spaces and informal meeting places in the Natural Science Building.

The Natural Science Library has eliminated almost 2 km of journals to make way for the project entitled Pilot U1—innovative learning environments and informal meeting places in the Science Building. The project is a collaboration between the University Library, the Property Division, the Student and Academic Division and the IT Department.

Many paper journals are no longer used and have been removed since they are found in digital form. Many have been sent to the National Library’s division in Mo i Rana for archiving. This has been part of a national collaborative, http://www.uhr.no/documents/Rapport_Depotprosjekt.pdf

This assessment of the need for paper copies of journals freed space in the Library basement (U1) for other uses, which led to the initiation of the project “Pilot U1 - innovative learning and informal meeting places in the Natural Science Building.”
Orakel Support Services moves into the Natural Science Library

The Orakel Support Services “help desk” for students moved into the Natural Science Library in the summer of 2015. The service is a partnership between IT Services and the Library.
Academic publications by Library staff


Haugen, Marius Warholm. Livet etterlikner kunsten: speilingen mellom verk og liv som meningsproduserende figur i lesninger av Jean Potockis Manuscrit trouvé à Saragosse. Norsk litteraturvitenskapelig tidsskrift 2015; Volume 18 (2) pp. 164-177. NTNU


Landøy, Ane; Raade, Johanne; Bøhn, Harald. Benchmarking through Performance Indicators for Norwegian Academic Libraries. Revista Româna de Biblioteconomie si Stiinta Informarii 2015; Volume 11(3) pp.30-35. NTNU UiB UiT

Landøy, Ane; Repanovici, Angela; Gastinger, Almuth. The more they tried it the less they liked it: Norwegian and Romanian student’s response to electronic course material. I: Information literacy: moving toward sustainability. Springer 2015 ISBN 978-3-319-28197-1. pp.455-463. NTNU UiB
A day at the Library*

- 2340 visited one of our libraries. (Figures from the Medicine and Health Library not included)
- 257 books were loaned out
- 1175 visited us on the Web
- 5418 articles were downloaded
- 3688 e-books were downloaded
- 2492 full text documents were downloaded from NTNU Open

* Figures are divided by all 365 days of the year
Statistics

<table>
<thead>
<tr>
<th>The Library in numbers</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work years 1)</td>
<td>122</td>
<td>122</td>
<td>124</td>
</tr>
<tr>
<td>Bugget in NOK 1000 2)</td>
<td>170 672</td>
<td>179 985</td>
<td>187 324</td>
</tr>
<tr>
<td>Visits to the Libraries 3)</td>
<td>906 156</td>
<td>861 669</td>
<td>853 916</td>
</tr>
<tr>
<td>Visits to the home page</td>
<td>559 466</td>
<td>433 646</td>
<td>428 752</td>
</tr>
<tr>
<td>Work places / reading rooms in the Libraries</td>
<td>1 593</td>
<td>1 624</td>
<td>1 593</td>
</tr>
<tr>
<td>Number of courses</td>
<td>253</td>
<td>284</td>
<td>267</td>
</tr>
<tr>
<td>Number of participants in courses</td>
<td>5 633</td>
<td>6 311</td>
<td>6 312</td>
</tr>
<tr>
<td>VIKO, number of visits 4)</td>
<td>161 479</td>
<td>190 074</td>
<td>238 968</td>
</tr>
</tbody>
</table>

1. This figure includes 11 work years from student assistants
2. Framework grants and project funding
3. There is a decline in 2014 because there were no tallies made in the Medicine and Health Library
4. VIKO—interactive courses on information literacy
Full text databases are collections of original documents in which all or a substantial part of the document is available electronically.

Calculation of price per download should be viewed as a trend more than an exact cost.

The illustration shows that of a total of 1.4 million downloads in 2015, Science Direct had the largest share of 49%.

<table>
<thead>
<tr>
<th>Use of full-text databases</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Downloads</td>
<td>Price per download</td>
<td>Downloads</td>
</tr>
<tr>
<td>Science Direct</td>
<td>641 885</td>
<td>26 NOK</td>
<td>785 841</td>
</tr>
<tr>
<td>Springer Link</td>
<td>128 510</td>
<td>28 NOK</td>
<td>118 168</td>
</tr>
<tr>
<td>Wiley</td>
<td>141 144</td>
<td>36 NOK</td>
<td>166 077</td>
</tr>
<tr>
<td>American Chemical Society</td>
<td>116 454</td>
<td>5 NOK</td>
<td>55 662</td>
</tr>
<tr>
<td>JSTOR</td>
<td>100 019</td>
<td>2 NOK</td>
<td>89 184</td>
</tr>
</tbody>
</table>
## Downloads from Open Access journals at NTNU

<table>
<thead>
<tr>
<th>Journal/Title</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHIRONOMUS Newsletter on Chironomidae Research</td>
<td>14 813</td>
<td>17 467</td>
<td>43 027</td>
<td>19 376</td>
</tr>
<tr>
<td>Norsk epidemiologi</td>
<td>93 324</td>
<td>114 503</td>
<td>217 701</td>
<td>128 380</td>
</tr>
<tr>
<td>Fauna norvegica</td>
<td>6 399</td>
<td>10 130</td>
<td>20 338</td>
<td>10 894</td>
</tr>
<tr>
<td>Det Kongelige Norske Videnskabers Selskabs Skrifter</td>
<td>59 309</td>
<td>80 270</td>
<td>186 675</td>
<td>66 565</td>
</tr>
<tr>
<td>Etikk i praksis</td>
<td></td>
<td></td>
<td></td>
<td>28 639</td>
</tr>
</tbody>
</table>

Open access journals where NTNU University Library is the host. The table shows the number of downloads. The figures for 2014 are very high because of the number of downloads from March to October. Figures for 2015 show that the number of monthly downloads returned to normal values again.

## Loans and downloads

<table>
<thead>
<tr>
<th>Category</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial loans of printed literature</td>
<td>135 000</td>
<td>119 000</td>
<td>108 000</td>
<td>95 000</td>
</tr>
<tr>
<td>Downloads from article databases</td>
<td>1 406 000</td>
<td>1 536 000</td>
<td>1 746 000</td>
<td>1 978 000</td>
</tr>
<tr>
<td>Downloads from e-books</td>
<td>615 000</td>
<td>843 000</td>
<td>1 151 000</td>
<td>1 346 000</td>
</tr>
<tr>
<td>Downloads from inst. archive (DiVA)</td>
<td>1 280 000</td>
<td>1 707 000</td>
<td>1 351 000</td>
<td>906 000*</td>
</tr>
<tr>
<td>Downloads from other databases</td>
<td>4201</td>
<td>531 000</td>
<td>254 000</td>
<td>285 000</td>
</tr>
<tr>
<td>Total downloads</td>
<td>3 305 000</td>
<td>4 617 000</td>
<td>4 502 000</td>
<td>4 515 000</td>
</tr>
</tbody>
</table>

Loans of printed literature since 2012 have shown a decrease of 30%. Total downloads of all media during the same period increased by 37%.

* We changed our system from DiVA to NTNU Open. It is therefore somewhat uncertain that the figures are comparable.
Downloads of e-books have shown an increase of 119% from 2012 to 2015.
Literature and payroll make up 73% of the total budget.
Division of funds for the purchases of literature

<table>
<thead>
<tr>
<th>Year</th>
<th>E-magazine</th>
<th>P-magazine</th>
<th>E-books</th>
<th>P-books</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>44 000 kr</td>
<td>2 600 kr</td>
<td>800 kr</td>
<td>2 717 kr</td>
</tr>
<tr>
<td>2011</td>
<td>42 665 kr</td>
<td>1 684 kr</td>
<td>979 kr</td>
<td>2 678 kr</td>
</tr>
<tr>
<td>2012</td>
<td>43 231 kr</td>
<td>1 868 kr</td>
<td>2 938 kr</td>
<td>2 149 kr</td>
</tr>
<tr>
<td>2013</td>
<td>41 917 kr</td>
<td>1 628 kr</td>
<td>3 371 kr</td>
<td>2 128 kr</td>
</tr>
<tr>
<td>2014</td>
<td>50 865 kr</td>
<td>1 601 kr</td>
<td>7 475 kr</td>
<td>1 883 kr</td>
</tr>
<tr>
<td>2015</td>
<td>55 556 kr</td>
<td>1 490 kr</td>
<td>4 325 kr</td>
<td>1 497 kr</td>
</tr>
</tbody>
</table>

In 2015, NOK 55.5 million was spent to purchase electronic journals. In order to get better insight into other purchases, e-journals have been pulled out of the table.

The purchase of e-books increased by 122% from 2013 to 2014. This strong increase was due to increased focus on this medium and thus the purchase of more e-books. The exchange rate in 2015 was not advantageous for Norway so that less materials were purchased. If the overall trend from 2010-2015 is considered, purchases have shown a 28% increase.
Front page: Troll B plattform. Photo: Håkon Thingstad, https://creativecommons.org/licenses/by/2.0/
Back page: Leif Tronstad. The picture on the left was taken in 1938. Photo: Schrøder. The source for the image on the right is unknown.