
INCREASING NUMER OF SCIENTISTS PUBLISH OA AT TU DELFT

Experimenting with an Open Access Fund

TU Delft has an Open Access Fund to promote Open Access among its own staff. What has been published through this fund over the years? Anke Versteeg and Just de Leeuwe discuss the results and explain new developments.

Anke Versteeg and Just de Leeuwe

Who are...

Anke Versteeg works at TU Delft Library as Account Manager. She advises the faculties, staff, scientists and students on library services. Key topics: information skills, data management and (OA) publishing.

Just de Leeuwe is Product Manager at TU Delft Library. His work includes Research Support, negotiating licences with publishers, Open Access, and advising lecturers and scientists on copyright.

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OA Funds at Dutch Universities

Universities which currently operate an Open Access Fund in the Netherlands are TU Delft, Wageningen UR and the University of Utrecht. The University of Amsterdam, Tilburg University and the University of Twente have all had such funds in the past. No other Dutch universities have plans in this respect as yet. The situation at Erasmus University Rotterdam, the University of Leiden and Eindhoven University of Technology is explained here by way of example.

Current funds

Wageningen UR (University & Research Centre)

The Wageningen UR Open Access Fund was set up in 2006. The budget available for 2012 to the Library, as fund manager, is EUR 50,000. The fund allocates its budget on a first come, first serve basis. This year, EUR 25,000 has already been paid out in the form of prepayment membership to BioMed Central. The remaining EUR 25,000 is intended for other publishers, the most popular of which is PLoS.

Authors can submit an application provided it meets the following criteria:

- The contribution towards the costs applies to DOAJ registered OA journals only. Applications relating to Open Access fees for journals for which the Library already holds a licence and which offer an Open Access option will not be accepted.
- In the case of publications written by authors from different institutions, Wageningen subsidises the cost of the Open Access fees for the Wageningen authors only i.e. the fund will not pay fees relating to or payable by any other institution(s).
- Guest authors must have a demonstrable relationship with Wageningen UR. They must also have published the relevant article in affiliation with Wageningen UR.

University of Utrecht

The University of Utrecht introduced an Open Access Fund on 1 June 2012. The fund, which is managed by the University Library, has a budget of EUR 50,000 for both 2012 and 2013. Utrecht researchers can apply for a grant on the condition that their work is published in peer-reviewed and entirely Open Access journals. Publication of OA books and chapters of OA books is also eligible.

The money is broadly allocated across the faculties in advance. The researchers' publication fees will be reimbursed at 50%. As in Wageningen, the University of Utrecht applies a first come, first serve principle.

Closed funds

Tilburg University

Tilburg University Library had an Open Access Fund from 2007 to 2008. This was an experiment aimed at promoting Open Access within the university. The fund had a budget of EUR 20,000, which was not fully spent. It was used primarily by researchers at the Faculty of Social Science (medical psychology, care issues). The fund was closed due to budgetary restrictions.

INCREASING NUMER OF SCIENTISTS PUBLISH OA AT TU DELFT

UvA

The University of Amsterdam had an OA fund between 2007 and 2009. EUR 150,000 had been budgeted for a three-year period but the University Library decided to close the fund after two years. This decision was prompted by both austerity cutbacks and the disproportionate distribution among the faculties; 98% of the money went to 'hard scientists', of which over 80% went to the AMC. Not surprisingly, the majority of the author fees went to BioMed Central.

University of Twente

In 2011 the University of Twente offered a once-only subsidy for Open Access publishing. The available sum of EUR 20,000 was spent within a few months. In view of budgetary restrictions, it is uncertain whether or not the fund will be re-opened.

No OA Fund

Erasmus University Rotterdam

Erasmus University does not have an Open Access Fund but Erasmus MC medical researchers regularly publish their work in Open Access journals published by BioMed Central and PLoS. The research groups pay the related costs themselves. As of 2011, scientists are expected to file an author's copy of their work in the local repository.

TU Eindhoven

The Technical University of Eindhoven does not traditionally have its own fund. The matter has been discussed but, as yet, has not been pursued any further at policy level. The University Library refers any questions from individual staff wishing to publish Open Access to their own faculty or research group.

University of Leiden

Leiden University Library has not yet attempted to finance a central Open Access Fund. It nevertheless supports Open Access by publishing books and journals Open Access as Leiden University Press and as partner to OPAEN, an OA book platform for humanities and social science.

INCREASING NUMER OF SCIENTISTS PUBLISH OA AT TU DELFT

TU Delft advocates Open Access, intended to enable free and unlimited access to scientific publications. In 2005 TU Delft signed the Berlin Declaration, the moral charter of the Open Access movement. The Executive Board assigned the implementation of the Berlin Declaration to TU Delft Library. The library has since developed various activities at local, national and international levels.

The underlying principle is that Open Access will generate (1) greater renown for both the author and the institution, (2) solidarity with those who cannot afford to buy expensive publications and (3) a more efficient distribution of knowledge. Based on this, TU Delft Library developed repositories for various customer groups. The repositories render the institution's own publications, data and visual material accessible; they also contain external research material from companies such as Philips or knowledge institutions such as IHE-Unesco.¹

Open Access Fund

An institution has various means of promoting Open Access among its own staff. One such means is a fund to which scientists can apply if they wish to share their publications in their own specific field. Authors wishing to publish Open Access will almost always be required to pay the publisher an author fee. This fee could vary from 300 to 3,500 dollars for a single article. In 2008 TU Delft set up a small-scale experimental OA fund. The theory behind this was that while scientists (represented by a faculty or research group) remain responsible for financing OA publications, the fund offers valuable backing if the department is unable to pay the fee itself.

Various Dutch universities currently operate an Open Access Fund (see box). During the early years of the fund all applications which were peer reviewed and met the requirement that the *corresponding author* was affiliated to TU Delft were approved. As from 2012 additional criteria apply for publications to be eligible for funding.

For economic reasons, TU Delft Library no longer deems it responsible to buy an individual (dearly) paid article from a commercial publisher in favour of scientists outside TU Delft to whom it is not accessible. In most cases, these payments do not give rise to a financial discount for the author so that such hybrid models (see below) are primarily beneficial to the publisher's income. Current fund payments are intended for articles in journals to which TU Delft does not have paid access or for journals which use an OA business model. Most of the latter category is listed in the Directory of Open Access Journals (DOAJ). A welcome supplement to the fund was the Open Access Fund initiated by the Netherlands Organisation for Scientific Research (NWO) in 2010. This NWO fund

¹ The TU Delft Repositories contain over 70,000 digital objects, including practically all Delft dissertations since 1906, all books published by the Delft University Press up to 2000, and even more photos. To those interested, much of the Delft course material is freely accessible in the Delft Repositories as OpenCourseWare (OCW). See: repository.tudelft.nl/help/

INCREASING NUMER OF SCIENTISTS PUBLISH OA AT TU DELFT

guarantees payment of articles it sponsors; the fund currently covers all research disciplines.²

How has TU Delft benefited from four years of Open Access Fund? And have there been any particular developments during this period? This is best answered by placing the fund in perspective with global developments regarding Open Access.

Business models

On a global scale, Open Access has a steadily growing market share, estimated by some researchers to already exceed 25 per cent.³ This market was created as a result of relatively new publishers, such as BioMed Central, Chemistry Central, MDPI, Copernicus, InTech, PLoS and Hindawi building their business around Open Access. Besides these publishers many thousands of knowledge institutes, including universities, publish one or more OA journals themselves, with or without a compulsory author fee.

The DOAJ currently lists 7,880 journals with 820,000 articles, including 62 titles of Dutch origin (June 2012).⁴ Many of these titles as yet have only a modest impact on the scientific field in which they are published.

'Slowly but surely, established publishers are also moving towards OA'

Slowly but surely, established publishers are also moving towards this business model, increasingly publishing OA journals in addition to their traditional subscription model. Consequently, different business models operate on a single publishing platform. As yet, relatively few titles are listed for this category of established publishers. The Springer platform has but 83 OA titles, for example. That is just 4 per cent of the total Springer portfolio (2,100 titles), although this is actually a large number of OA titles compared to many fellow publishers.⁵

Hybrid model

Many publishers also operate a combined or hybrid model. This is when they provide 'open access' to individual articles within the framework of a paid subscription. These individual articles are 'paid off' by the authors.

² Information on the NWO fund is available at www.nwo.nl/nwohome.nsf/pages/NWOP_8FTBPQ.

³ For the foundation for this figure, see the well-founded argument of Heather Morrison: poeticeconomics.blogspot.ca/2012/05/about-30-of-peer-reviewed-scholarly.html.

⁴ See: www.doaj.org/doaj?func=byCountry&uiLanguage=en. No doubt there are many more Dutch OA journals, but these have not yet been indexed by the DOAJ. See: www.library.tudelft.nl/support/advies-bij-publiceren/open-access/.

⁵ The full list can be found at www.springeropen.com/journals

INCREASING NUMER OF SCIENTISTS PUBLISH OA AT TU DELFT

The number of OA articles in journals varies tremendously; from an incidentally purchased article to a successful hybrid title like *Nature Communications*, where 40% of the titles are Open Access.⁶

According to the economics theory of scarcity, the increase in the number of OA articles in hybrid journals should result in a (sharp) fall in the nominal price of a journal. However, such effects are barely noticeable to universities, effectively customers paying for both products. The reason: the relationship between licences and the percentages of OA articles within the paid subscriptions is (as yet) non-existent.

'As an experiment, TU Delft Library offers Dutch publishers a few architecture books OA'

OA Fund share

SCIENCE

ENGINEERING

DESIGN

Figure 1: Share in percentages among the TU Delft clusters Science (Electrical Engineering, Mathematics and Computer Science, Applied Sciences), Engineering (Mechanical, Maritime and Materials Engineering, Aerospace Engineering, and Civil Engineering and Geosciences) and Design (Architecture, Industrial Design, Technology, Policy and Management, and OTB Research Institute for the Built Environment). Scientists who are used to sharing their publications, e.g. in ArXiv, are overly represented in Open Access Fund applications.

Costs

The author fees for OA articles vary considerably, depending on the publisher's profit motives and the costs incurred during the peer review process. Universities are sometimes able to arrange deals with publishers and negotiate discounts. The Royal Society of Chemistry and BioMed for example, offer discounts to their members, including TU Delft. Via SURF Market, the body that negotiates many scientific licences on

⁶ See: www.nature.com/ncomms/index/html.

INCREASING NUMER OF SCIENTISTS PUBLISH OA AT TU DELFT

behalf of the Dutch universities, agreements have also been made with SAGE, resulting in a discount of 90 per cent.⁷

Results

Between June 2008 and June 2012 scientists applied to the TU Delft Open Access Fund 115 times. 99 of these applications were approved, of which 86 related to articles, twelve to books or chapters of books, and one to an OA journal.⁸ The total amount paid out was over EUR 115,000 and the average sum per application was EUR 1.161. The articles for which funding was granted are also included in the TU Delft Repository.⁹

The proportion of payments for articles published as hybrids was quite considerable, accounting for around 35% of the total fund payments in 2011. For 2012 the TU Delft Fund has a budget of EUR 40,000 which, it is expected, will be entirely spent. Considering the increasing focus on Open Access and the options of publishing OA, the annual growth is as expected.

Alternative funding

Scientists at the design faculties of TU Delft, particularly the Faculty of Architecture, tend not to publish in (international) journals so much as in books. Any (professional) journals they do publish in are usually in Dutch. Together with the management team, the Library encourages scientists from these faculties to also publish their work in international scientific journals. The Library has also entered negotiations with the key publishers of architecture books in the Netherlands. We have proposed allowing TU Delft to include a number of architecture books in the Repository¹⁰ and hence providing open access to them, as a pilot. We intend to monitor whether this would be detrimental to the sale of the titles concerned or actually promote sales.

In this pilot project TU Delft will be filing one title per publisher in the Delft Repository as soon as it is published (i.e. without embargo) for an agreed publisher's fee. This title will be monitored for two years and compared with a similar title from the fund of the same publisher which was not published electronically.

The fee is intended to compensate any sales loss incurred. One of the publishers used this fee to have an image copyright specialist establish which images were allowed to be used for electronic reproduction. Another publisher spent the money on extra marketing of this title and also published the title electronically (in addition to the physical edition).

⁷ During the period 2008-2012 there was a successful SURF-UKB pilot with Springer, in which all articles related to Dutch scientists could be placed in university repositories free of charge as Open Access.

⁸ In 2010 an OA journal was funded by the Faculty 3mE within the field of Mechanical Sciences (www.mechanical-sciences.net). Since 2011, the Netherlands NWO has played an active role in starting new OA journals in the Netherlands. 32 journals were subsidised, four of which were published by TU Delft. See: www.nwo.nl/nwohome.nsf/pages/NWOP_8R5EBQ.

⁹ See: repository.tudelft.nl/search/?q=OA-fund&faculty=&department=&type=&year=

¹⁰ The titles and publishers are as follows: *Begroeiende daken na 2010*, Techne Press; *Architecture as a Craft*, SUN Architecture (now Boom Uitgevers); *Exploring the Visual Landscape*, IOS Press; *Housing Design; a manual*, NAI010 publishers.

INCREASING NUMER OF SCIENTISTS PUBLISH OA AT TU DELFT

This title actually generates the most hits and downloads (see fig. 3). A third publisher filed another two titles in the Repository, besides the subsidised title, to enable him to gain an even better insight into the effect on sales.

What are the results of the pilot after a little more than a year? Initial figures indicate that sales have not fallen in respect of any of the titles that were not published electronically. This could even mean that filing a title in the repository could actually promote the sale of a book. It should nevertheless be noted that these figures are not yet convincing enough to make sound predictions as they relate to just six titles and we are still only halfway through the pilot.

Fund payments in thousands of euros	Downloads and Hits 2011-2012
2008	BEGROEIDE DAKEN
2009	RIJKE BRON
2010	SHIFTING SENSE
2011	ARCHITECTURE
2012	EXPLORING
	HOUSE DESIGN
	TOTAL

Fig. 2 TU Delft Open Access Fund Payments 2008-2012 in thousands

Fig. 3 downloads of and hits for OA Architecture books

Finally

Various publishers, scientific institutions, financiers and scientists are becoming increasingly aware that Open Access is a constructive way of sharing knowledge with peers inside and outside their own institution. This has resulted both in publishers gradually modifying their traditional business models and in many new journals being funded with Open Access, outside the established publishers. Traditional journals, which have been published as paid subscriptions for decades, now include Open Access articles. Besides being paid off by the authors, these articles are also made available by the requirements financiers attach to scientific research.

'In the long term, too great an increase in the number of OA applications would have too great an impact on Library finances'

INCREASING NUMER OF SCIENTISTS PUBLISH OA AT TU DELFT

At the same time publishers, especially commercial publishers with powerful shareholders and a strong lobby, have a significant interest in the preservation of the current, lucrative subscription model; a model they would like to continue to exploit for as long as possible. In this climate of polarisation, ever more scientists are recognising the advantages of Open Access publishing and finding their way to the Open Access Fund. In the long term however, too great an increase in the number of applications would have too great an impact on TU Delft Library finances and scientists would consequently have to be disappointed. For this reason the Open Access Fund is temporary, set up to boost the transition to scientists funding the publication of their work themselves. A new form of financial discipline, in which a (modest) part of scientists' research budgets is reserved for Open Access, is still in its infancy. Such allocation of research funding in the future is nevertheless highly desirable and TU Delft Library has the task of emphatically drawing this to the attention of the university board and researchers. In the long term Open Access must become the standard. During the time it takes to achieve this, the Open Access Fund will continue to operate, serving as an example and incentive to scientists.

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