

University of Groningen

From Project to Customized Service: Research Support at the University of Groningen Library

Abdolazadeh, Shaghayegh; Braun, Peter; Elsenga, Christina; Folgering - van der Vliet, Marijke; Knauer, Babette; Leij, van der, Ane; Sheedfar, Fareeba; Trentacosti, Giulia; Weber, Kathryn O.

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Chapter 1

From Project to Customized Service: Research Support at the University of Groningen Library

Shaghayegh Abdolazadeh

 <https://orcid.org/0000-0002-8255-6111>

University of Groningen, The Netherlands

Peter G. Braun

 <https://orcid.org/0000-0002-9870-465X>


*University Medical Center Groningen, University
of Groningen, The Netherlands*

Christina Elsenga

 <https://orcid.org/0000-0001-5799-282X>

University of Groningen, The Netherlands

Marijke Folgering-van der Vliet

 <https://orcid.org/0000-0002-5307-077X>

University of Groningen, The Netherlands

Babette Knauer

 <https://orcid.org/0000-0002-6021-3695>

University of Groningen, The Netherlands

Ane W. van der Leij

 <https://orcid.org/0000-0003-0202-5730>

University of Groningen, The Netherlands

Fareeba Sheedfar

 <https://orcid.org/0000-0002-1315-1903>

University of Groningen, The Netherlands

Giulia Trentacosti

 <https://orcid.org/0000-0002-4871-477X>

University of Groningen, The Netherlands

Kathryn O. Weber-Boer

 <https://orcid.org/0000-0002-4495-3001>

University of Groningen, The Netherlands

EXECUTIVE SUMMARY

The academic landscape of the Netherlands has been influenced in recent years by new governmental policies regarding open access and open science, national and European legal guidelines, developments in ICT, and changes in how researchers are assessed. The University of Groningen Library (UB) has seized the opportunity in these developments, providing research support in the domains of registration and archiving of research output, open access publishing, research data management, and research

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analytics. Increased efficiency in traditional library procedures and the introduction of project-based funding have provided staff capacity for these developments. Full-service customization, to meet the needs of researchers and alleviate their time and work pressure, lies at the heart of the UB's research support.

INTRODUCTION

This chapter describes how research support services at the University of Groningen Library (UB; *Universiteitsbibliotheek*) developed and how they are embedded in the organization—both in the library and the University of Groningen (UG; *Rijksuniversiteit Groningen*). What is UB research support, in the complex context of European (EU) and national (Dutch) science policies, the research funding ecosystem, the requirements of the university and faculties, and calls from research groups and individual researchers? What value does it add to UG research? Four specific academic support services are highlighted here: registering and archiving research output, open access publishing, research data management, and research impact analysis. The final section summarizes results and challenges, and attempts a look ahead.

Four Centuries at the Heart of Academic Groningen

Wandering through the Dutch city of Groningen, visitors quickly notice that it is a vibrant university city. One in four of its 200,000 inhabitants is a student at one of the institutes of higher education in Groningen, which makes the city the youngest in the Netherlands. The UG was founded in 1614. It is home to 30,000 students and is the alma mater of the first female student and the first female lecturer in the Netherlands, the first Dutch astronaut, as well as the first president of the European Central Bank. Astronomer Jacobus Kapteyn, historian Johan Huizinga, Nobel prize winners Frits Zernike (physics, 1953) and Ben Feringa (chemistry, 2016) are among those who have contributed to the international scientific reputation of the university (University of Groningen [UG], 2019b).

A new UG strategic plan for the coming years will soon be presented, but UG research has concentrated on the themes of healthy ageing, energy, and sustainable society. The UG mission statement emphasizes the ambition to be an international research university, with a strong regional rooting in the north of the Netherlands. The university aims for research of the highest standard, with strong core disciplines as the foundation of its cross-disciplinary research. These core disciplines and this cross-disciplinary approach are called upon in fundamental research, as well as in trying to find seeking innovative answers to today's societal challenges (UG, 2015a).

Today, the UG has eleven faculties, employs 6,100 staff (including 3,400 academic staff, of which one third is international), offers over 100 Master's degree programmes, of which 90% are taught in English, and produces 9,000 research publications a year (UG, 2020a). Along with all Dutch universities, it is a member of the Association of Universities in the Netherlands (VSNU). The UG cooperates closely with the universities of Ghent (Belgium), Göttingen (Germany), Tartu (Estonia), and Uppsala (Sweden) through the U4Society Network (U4Society, 2020); among its other European collaborations, it participates in the Coimbra Group (Coimbra, 2020). It partners with renowned universities in Asia, North and South America, Africa, and Oceania (UG, 2020b). It ranks number 65 in the Academic Ranking of World Universities (2019) and number 73 in the Times Higher Education World University Rankings (Times Higher Education, 2020).

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The UG prides itself on being a city campus with faculties spread all over Groningen. The heart of this campus (not only geographically) is the library. It is still situated at the location where it was founded in 1615, one year after the establishment of the university, as the only university library in the Netherlands. The UB was the university's very first "service unit" to support the academic community, and this mission is still at the core of UB services. The UB advises and supports individual researchers, as well as faculties and research centres at a policy level. Through existing services and the development of new research support services, the library is committed to developing innovative full-service solutions that alleviate researchers' time and work pressure, so that they may work more efficiently and effectively. To this end, the UB actively seeks partnerships with other organizational units within the university. Close and permanent partners of the UB include the Center for Information Technology (CIT); the Office of the University (the university's central administration), including the office of Legal Affairs and the Strategy Department of Education & Research (SER); and the Central Medical Library (CMB; *Centrale Medische Bibliotheek*) of the UMCG. The UB shares services (e.g., cataloguing, acquisition, and licensing) with the CMB, which serves the UG Faculty of Medicine and the University Medical Center Groningen (UMCG).¹ On a national scale, the UB collaborates with other university libraries, in the task forces and projects of the Dutch Consortium of University Libraries and the National Library of the Netherlands (UKB). A "no wrong door" policy ensures that contact with any library staff provides access to any service. In addition to its standard services, the UB customizes services and support by faculty (University of Groningen Library [UB], 2019).

The organization of the UG is a constellation of faculties which maintain a high degree of independence in terms of policy and practice. Therefore the collaboration between library and academic staff is fundamental for the success of UB services. These users are of utmost importance to the UB, notwithstanding that they are physically less visible than students in the library building. It is important to strengthen the relationship between the UB and academic staff, not only in order to support the university's education and research, but also to create a broad support base for the library's services within the faculties. To ensure its services are innovative and to keep the requirements of the research community in mind, the UB took up a project structure six years ago. Each project is headed by a supervisory board comprising, among others, representatives of the group directly impacted by the new service or product.

TAKING ON RESEARCH SUPPORT SERVICES

External Causes and Internal Development

This section broadly outlines developments in the library's organization, to clarify choices in taking on new research support services or adapting existing ones. From traditional collection development to (subject) cataloguing, to providing access to print and online research collections, the UB has a proud reputation of being the information hub for the UG academic community. In recent years, new tasks, challenges, and needs have arisen; the UB has responded by establishing new services to meet them.

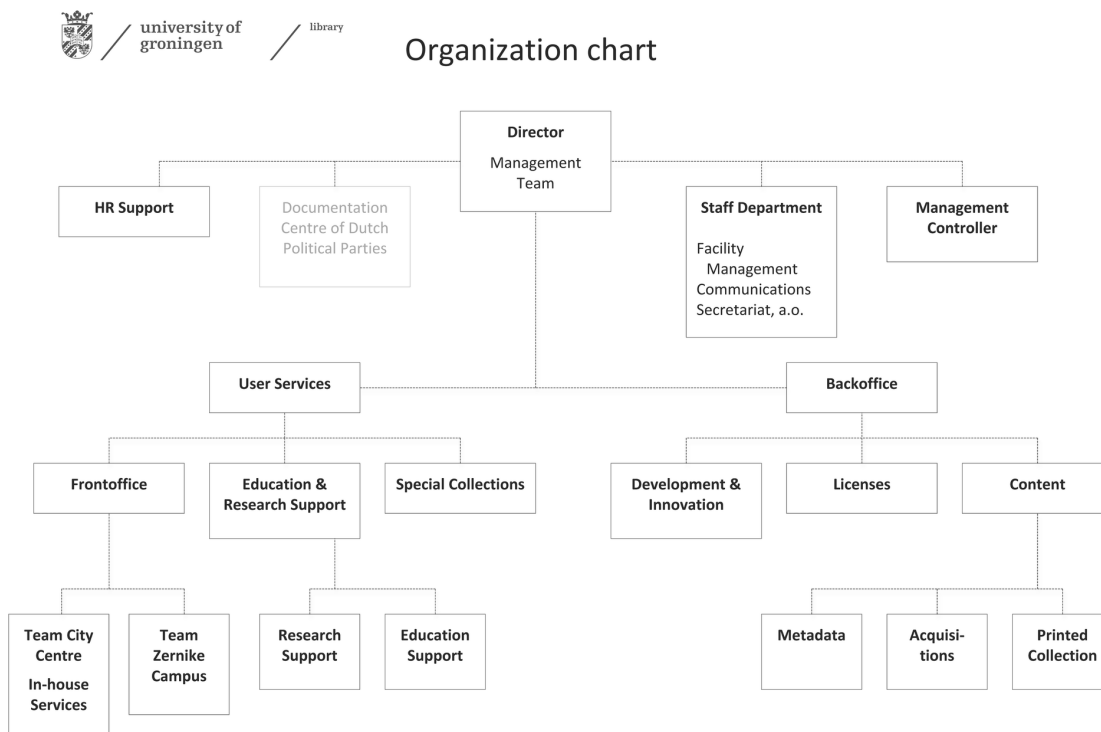
The centralization of the UG's faculty libraries into one organization, which began in the early 1990s in the sphere of IT and management, culminated in the faculty libraries physically moving into the central library between 2014 and 2016. This brought together both collections and library staff in one central library, in physical proximity to the Faculties of Arts, Religious Studies, Philosophy, Law and Behavioural and Social Sciences. Only one branch library with some printed reference collections

remains, serving the Faculties of Science and Engineering, Economics and Business, and Spatial Sciences on a campus on the outskirts of Groningen. As a consequence, although the library still is by far the most frequented university building, the library’s management was able to scale down the number of staff for lending and information desks.

There were good reasons for the new arrangement. The library budget was under pressure and the use of the print collection had decreased over the years, whereas the use of e-journals and e-books had increased dramatically. Resources that the concentration of services made available could now be used to maintain the high quality of collections and to take on new tasks and services, specifically in support of research. A simultaneous, complementary development was a peak in the outflow of personnel reaching retirement age. Many librarians reappointed from the closed faculty libraries were given the opportunity to acquire new skills and grow professionally in new services, with new colleagues in a new working environment. To top it off, the UB building, dating from the 1980s, underwent a much-needed, drastic renovation in 2015-2017.

Although the library still has a departmental structure on paper (Figure 1), its daily operations are characterized by a matrix organization that reflects multidisciplinary project teams, with staff from different departments within and outside of the UB. The heart and soul of the UB’s research support are now some 20 staff members with different disciplinary backgrounds: a historian, chemist, business administrator, psychologist, and philosopher, as well as people with a background in library studies and computer science—all appointed with the title ‘academic information specialist’. Because of the cooperative character of UB services, they also involve staff from other divisions and departments within and outside the library. Those active in UB research support projects and services can be employed in

Figure 1. Organization chart of the UB (Source: University of Groningen)



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the Research Support Department, but also in Development & Innovation, Communications, Licenses, Metadata, or elsewhere.

In addition to these internal organizational developments, the academic landscape has also changed due to several external factors over the last few years: new governmental policies regarding open access and open science, national and European legal guidelines, developments in ICT, changes in how researchers are being assessed, and internationalization. The UB has taken advantage of these developments, providing research support in the registration of research output in the current research information system (CRIS) Pure, in the domains of open access publishing, research data management (RDM), and research impact services. The increased efficiency in traditional library procedures, described above, and access to internal UG project funding have provided staff capacity for these developments. The following sections will describe these services' organization, goals, and achievements.

Pure Support: Registering, Archiving, and Showcasing Research Output

Background

The emergence of the CRIS and the institutional repository was a key factor in offering researchers library support: in showcasing their research publications and datasets, in taking advantage of open access opportunities, and in using the library's read-and-publish deals. It is also the institutional source database enabling reporting facilities, research intelligence, and analytics. The UG's research output had been registered and listed in an annual (printed) scientific report until 1990 and, since the late 1980s, in a database which evolved into the first CRIS at the UG. At first, the UB had very little to do with registration or the management of that system. This changed in the course of the 2000s: first, with the adoption of the METIS system and, subsequently, when Pure was licensed both as a CRIS and as the UG's first institutional repository in 2014. The UB got involved and took a leading role in both the content management and the information management of Pure, at first in an initial project, *Etalage* [Display Window].

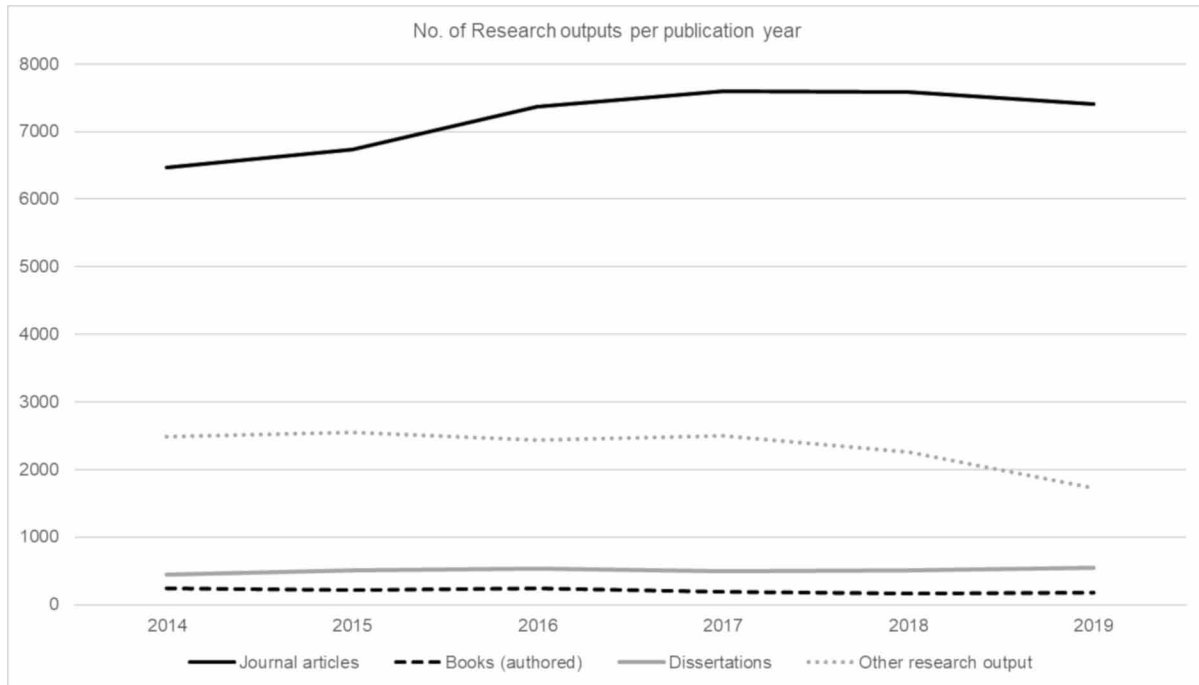
Organization and Activities

The Board of the University and the Board of Directors of the UMCG funded this project and consequently decided to make registration of research output in Pure mandatory for UG researchers. Once all research output that could be retrieved from other online sources and METIS had been migrated to Pure, the project team set up an extensive UG-wide training programme, to introduce Pure to researchers and support staff and to support them in using the software.

Usage of Pure increased significantly when the online research portal was launched in 2015, making the contents of Pure publicly available, and thus motivating researchers to regularly update their research profiles and output. Researchers consider it valuable, as all research output is stored in one place.

Pure registers research output in its broadest sense. In addition to publications, it contains research activities (such as conference talks and participation in peer-review committees), awards, datasets, and research-related media contributions. These rather new types of research output highlight researchers' societal impact, which is one of the UG's strategic focal points. Peculiar to the UG implementation is the close cooperation of UG and UMCG, which both use the exact same Pure environment (instead of a distinct environment for each organization), and the integration of Pure into the UG website, in the form

Figure 2. Research output recorded in Pure (data for the publication year 2019 are not yet complete) (Data source: The UG's Pure database)



of a research portal presenting all research output of the university. Figure 2 shows the research output of all kinds submitted by researchers to Pure since 2014.

Once the service had been firmly established, the initial project team handed its responsibilities over to the new Pure managers: Pure Support. This is a virtual office with a team consisting of about fifteen members based in the UB and CMB. To ensure that Pure is perceived as a service established for the entire university, Pure Support relies on a broad network of coordinators distributed among the faculties. They serve as a first, local point of contact for the researchers. Coordinators are responsible for the proper use of Pure in their faculty. Pure Support organizes bi-monthly meetings of this network.

The UB appointed a product owner, to whom the Pure Support team reports and who organizes quarterly meetings with the Research Output Management Board. To create a broad support base, not only among Pure users but also among stakeholders and decision-makers, the board consists of representatives from the faculties, including full professors or research deans, as well as the directors of the CIT and the Office of the University. The Dean of Research of the UMCG acts as chair. The management board takes strategic decisions in the area of RDM and on the use and development of Pure: for example, to extend the import facilities with additional online research databases or to enable the registration of datasets and research projects.

On the national level, Pure Support collaborates with the Dutch Pure User Group and provides its members with input. For the last two years, the UG's Pure product owner has been a board member of this group, which has meant that the UG has played an active role in organizing meetings, determining meeting topics, and prioritizing issues to discuss with the supplier of Pure.

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Pure Support contributes to the UB's core business: to make information accessible and combine state-of-the-art technology with traditional library expertise on (meta)data management. Pure Support fulfils a number of services for both users and stakeholders. Support includes introduction workshops for groups and individual contact: both face-to-face and by email. When research output is submitted into Pure, Pure Support validates it: verifies and completes the metadata, checks for and registers embargoes on full-texts, and makes the full-texts publicly available on the research portal when this is allowed. Pure Support also takes care of essential new releases, bug fixes, and maintains the online portal displaying research output.

The UG adopted a green open access policy as of 2017, asking researchers to upload the final author's version of their peer-reviewed articles to Pure. To facilitate this, researchers are offered an online form to "Deposit your Article". After the form is submitted, Pure Support completes the metadata; either registers the embargo period, if any, or makes the final author's version visible on the research portal immediately; and imports the final publisher's version in Pure, as it becomes available in one of the connected online databases. Since 2014, all of the university's PhD theses are registered in Pure. They are all made available in open access without restriction, though temporary embargoes are necessary in some cases. This is organized in collaboration with the team that manages the UG's online registration system for PhD students.

Request-a-Copy is the latest service offered in the research portal. The functionality operates on the principle of peer-to-peer sharing: If a publication in the database is not immediately available as a full text (e.g., due to an embargo), a database visitor can request the text directly from the author. The UB acts as an intermediary for these requests. UG authors receive a message from the UB if someone requests one or more of their publications using the Request-a-Copy function. With the researcher's approval, the UB fulfils the request. Currently the library receives an average of 100 such requests per month, with approximately 70% of these requests met.

Communication to end users relies on the regularly updated Pure Support website². When a user logs in to Pure, system messages inform them about issues or new releases, with detailed background information provided on the Pure Support website. Major stakeholders within the university, Research Output Management Board members, and faculty Pure coordinators are kept updated through a newsletter about new releases, resolved issues, and organizational news.

An internal evaluation of Pure Support among all faculties' support staff is scheduled for early 2020. The aims are to evaluate whether Pure Support works according to the procedures established during implementation and whether any updates to these procedures are necessary, in order to reach the goals of research output visibility and 'findability', or to comply with the European General Data Protection Regulation (GDPR).

Open Access Services: Stimulating, Monitoring, and Advising on Open Access Publishing

Background

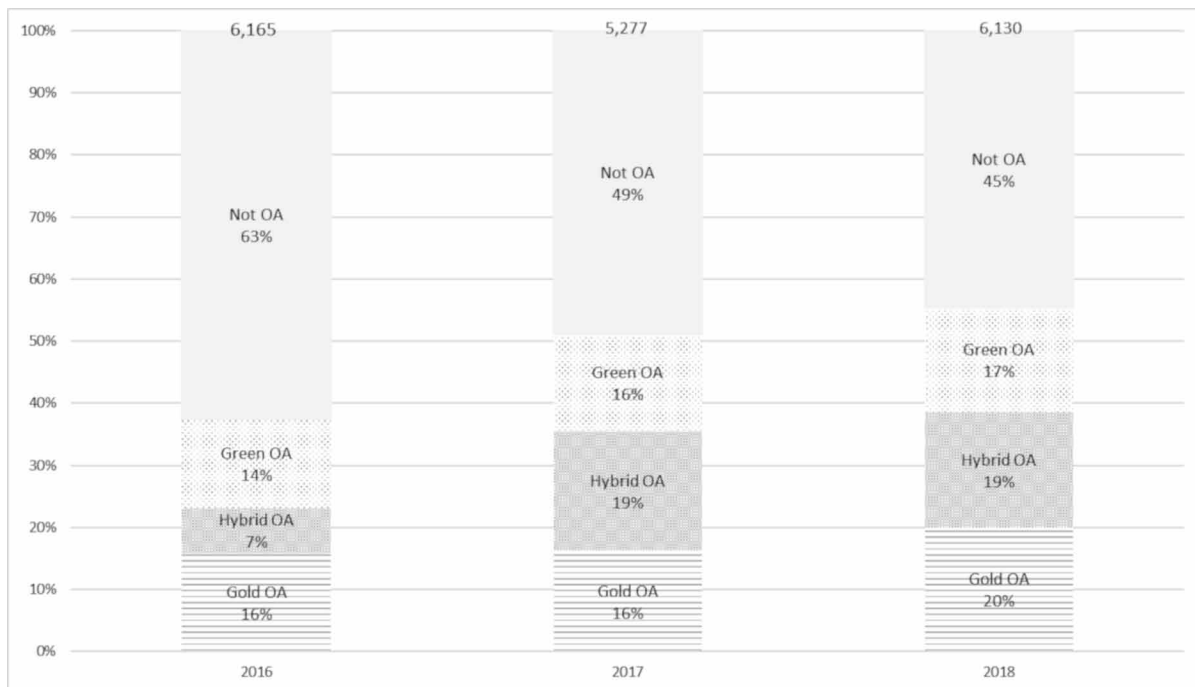
In its 2011 ten-year strategy memorandum, the UB committed to intensifying its efforts to implement open access at the UG (Nieboer, 2011), and in its Strategic Plan for 2015-2020, the UG referred to the implementation of open access as one of the strategies for promoting and facilitating a transparent research environment (UG, 2015a). But since the early 2000s, the UB had already been an active

player in international and national initiatives for open access. In 2001, the UB was one of the founding members of the Scholarly Publishing and Academic Resources Coalition Europe (SPARC, 2020), and signed the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities in 2005 (Open Access Max Planck Gesellschaft, 2020). The library also supported new publishing initiatives such as the Faculty of 1000, and became an institutional member of the first commercial open access science publisher BioMed Central in 2002 (van Laarhoven, 2004). The CEO of BioMed Central and one of the 16 original signatories of the Budapest Open Access Initiative in 2002, Jan Velterop, was the keynote speaker at a local conference on open access at the UMCG in 2003. In 2016, the UB played a key advisory role in the formulation of the UG’s first open access policy, which encourages researchers to upload the final author’s version of their papers to Pure.

Open access policy in the Netherlands became manifest in a 2013 letter by the State Secretary of Education, Culture, and Science to the Dutch House of Representatives, which says that the results of research financed by any public money should always be freely available: I prefer open access publishing through journals that make scientific articles available for free: the gold route. My aim is to have realised a full transition to gold open access route within ten years’ time, so by 2024 (Dekker, 2013)³.

The term *gold route* describes publications that are open access immediately, as a result of the payment of an article processing charge (APC) to the publisher. In 2017, the Dutch government, the VSNU, the national Dutch Research Council (NWO), and the Netherlands Organisation for Health Research and Development all signed the Dutch National Plan Open Science, which set out, among other things, to

Figure 3. Growth of the percentage of open access (OA) peer reviewed articles (green, gold, and hybrid) as part of the UG total between 2016-2018 (Data source: UG’s Pure database and Unpaywall, 2020)



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make all Dutch publicly funded publications open access by 2020 (van Wezenbeek, Touwen, Versteeg, & van Wesenbeeck, 2017), moving this goal forward by four years.

To meet this challenge, Dutch universities have collectively negotiated various read-and-publish (R&P) agreements with the largest academic publishers since 2014 (VSNU, 2020). These agreements allow Dutch-affiliated researchers to publish open access at no extra cost in thousands of (mostly hybrid) journals. The number of publisher deals has increased sharply since then; by the beginning of 2020, over 10,000 journals had been covered by R&P agreements and offered free open access publication to Dutch-affiliated researchers. Despite the initial focus on larger publishers, R&P agreements are now also being concluded with smaller publishers and society publishers. Publisher agreements have led to a rapid growth of open access uptake in the Netherlands, with the share of peer-reviewed open access articles rising from 42% in 2016 to 54% in 2018 (VSNU, 2018). The UG figures are in line with this national trend, with 55% of publications open access in 2018), as shown in Figure 3.

Between 2010-2018, the NWO established an Incentive Fund to finance open access publications and support activities to raise awareness about open access (NWO, 2017). In addition, since 2015, the NWO has adopted an open access policy mandating immediate open access publication for all funded publications (both gold and green open access are accepted, but gold is the preferred route). The open access mandate will become even more stringent from January 2021, since the NWO is one of the signatories of Plan S. Plan S is an international initiative launched in September 2018 by a coalition of research funders known as cOAlition S. The plan aims to accelerate the open access transition and mandates that publications funded by participating funders be published immediately open access, in compliant journals or platforms under an open license (cOAlition S, 2019).

Organization and Activities

Open access support services at the UB developed in response to the implementation of these new open access policies at the European, national, and UG levels; these policies also led to increasing demand for advice from researchers. A team of academic information specialists dedicated to providing publication strategy and open access services started at the UB in 2014. Raising awareness about open access discounts and information provision on publisher's workflows (i.e., how to redeem discounts and waivers) was one of the focal points of the team. The first R&P deals were essentially prepaid open access, and the UB wanted to make sure that these open access opportunities were fully utilized by UG researchers. Therefore, the team reached out to research institutes at all faculties, in the form of up-to-date open access information prominently visible on the UG's webpages and intranet, presentations at staff meetings, and the like. At the same time, it took care of affiliation verification and the approval of open access waiver requests from publishers. It also took on the task of identifying missed opportunities to use open access agreements.

To develop a more full-fledged open access support service, the UB submitted a project proposal to the Board of the University. The Open Access Services project was awarded two years of funding (2019-2020) from the university's multi-year IT budget. The overall goal of the project is to maximize open access uptake, while minimizing the efforts of researchers; this is to be achieved by improving the quality and visibility of existing support services and tools and developing new ones where needed. At the end of the project period, the services and tools established by the project should be firmly embedded within the UB's research support services portfolio and maintained with adequate staffing.

The project team provides counselling and advice on gold and hybrid open access outlets, and it has refreshed the institutional green open access policy, improved awareness about policy, and arranged workflows and tools to make the deposition of accepted manuscripts as straightforward as possible for researchers. In addition to informative activities, the team also implemented Article 25fa of the Dutch Copyright Act. This article, also known as “Taverne amendment” (named for the MP that introduced it), came into effect in July 2015. The amendment allows researchers to make their short scientific works (articles or book chapters) available to the public following a “reasonable period” after publication (Visser, 2015). The VSNU interpreted “reasonable period” to mean six months. In 2019, the VSNU and the National Platform Open Science (NPOS) ran a pilot project to test the implementation of this law on a national scale (Openaccess.nl, 2020). About 2,800 publications became available in open access via the institutional repositories as a result of the pilot, of which 200 were authored by UG-affiliated researchers (Schalken, 2019). The Taverne project now continues as a regular service provided by Dutch university libraries. The introduction of this law by the Dutch government can be seen as another sign of strong support for open access.

Another important task for the open access services team is to carry out institutional and ad-hoc analysis for faculties or departments, to monitor open access uptake and expenditures. This allows the UG to benchmark itself against other institutions and allows the UB to identify where extra support is needed. Determining the total cost of open access is complicated because there are APC expenditures in addition to R&P agreements, and even within these agreements, the cost of the open access component is difficult to isolate. These publication costs are usually paid from personal or project research budgets, or by individual faculties themselves; since these expenditures are not paid by the UB, it is difficult to track them with accuracy. The team has tried to find a way for the UB to monitor these expenditures by, amongst other things, liaising with faculty administrators to introduce a uniform cost code system for registering open access expenditures.

Although financed centrally by the Board of the University, the open access support services project is coordinated entirely by the UB. The project’s steering committee is led by a librarian and includes two other librarians and three academics from different faculties. Two full-time open access specialists with a research background, based at the UB and the CMB respectively, were appointed to manage and run the project. These two specialists collaborate closely on all aspects of the project and their tasks are not limited by “territorial jurisdiction”. The project team further includes two senior researchers and 18 library staff (primarily academic information specialists, the UB’s license manager, and communication staff), who dedicate a part of their working hours to the project. Its services are targeted towards the entire research community at the UG—from researchers, research managers, and research support staff at faculties and research institutes to central organizational units dedicated to research support. The open access support team works in close collaboration with other Dutch university libraries within the framework of the open access and licensing working groups coordinated by the UKB.

Since the start of the project, open access support services have worked to become more visible and increase awareness about open access policies and available discounts among the UG research community. This has been achieved chiefly by improving communication channels to targeted groups and by broadening the UB’s network at faculties and research institutes. The project team provides tailored support and advice to individual researchers via face-to-face contact and through an open access support inbox. The existing open access newsletter was restructured and rebranded as the Open Science Newsletter, to inform the UG community about the latest developments in scholarly communication, research data management, and open science research practices. The newsletter is distributed among all

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research staff, stakeholders, and policy staff at both the UG and the UMCG (more than 7,000 people in total). The web pages on open access were re-launched, and an Open Science blog was established featuring articles by researchers and library staff.

A regular programme of open access workshops for research staff was introduced. In addition, over 30 tailor-made presentations have been given at faculties and institutes (upon request). These presentations also include data on the uptake of open access by the respective faculty. Conferences on open access and open science have brought together researchers, funders, librarians, and publishers. When organizing these events, the UB takes care to give voice to both champions of open science and critical voices.

By 2016, the UB had established an open access publishing platform for UG staff: the University of Groningen Press (UGP). Currently, as part of this project, the UB is professionalizing its publishing activities by imposing stricter editorial policies on its journals, in order to meet the requirements of the Directory of Open Access Journals. Currently, the press hosts more than twenty academic journals; open access book publishing started in 2019 (UB, 2020). The University of Groningen Press combines traditional library expertise with advice on the latest publication trends and tailor-made technological support for academic editors and authors.

On a strategic level, project members pay individual visits to research directors, research policy officers, and funding officers to discuss the open access services offered by the UB. To increase support for open access and open science at the faculties, 12 researchers volunteered to become Open Access Ambassadors. They act as multipliers and help to disseminate information within their respective faculties. The UB has established a regular collaboration with the Open Science Community Groningen, a grassroots network of academics that aim to promote open science practices, connect open science advocates, and stimulate open science policy at the UG. This collaboration provides the UB with valuable first-hand information about what interests the UG research community with regard to open access and open science.

Research Data Services: Virtual Help Desk and Hands-On Workshops

Background

At the root of the initiative to set up research data services were cases in 2011 of scientific misconduct, such as the so-called “Stapel *affaire*” (social psychology) and the Poldermans case (cardiovascular medicine), and an advisory report by the Royal Netherlands Academy of Arts and Sciences (KNAW, 2013). Given the importance of research data and its management in empirical research, a central hotspot for research data management (RDM) was made urgent by technological developments, new regulations (such as the GDPR), lack of familiarity with helpful tools, and services spread over the entire university. Research funding organizations, academic journals, and the research community itself also started paying renewed attention to the handling of data. In 2013, the Board of the University initiated a three-pronged RDM approach that launched the Research Data Office (RDO), a joint task of the UB and CIT. In addition to setting up the RDO for support, SER was given the task of aligning research policies and quality management and Legal Affairs was asked to identify and clarify relevant laws and regulations. Additionally, the Board of the University asked the faculties to articulate their disciplines’ best practices in the form of RDM policies.

Organization and Activities

A project defining goals, services, operations, and staffing for the RDO was initiated. A helpdesk to share current best practices and provide access to existing national and international data facilities was identified as the most desirable service. In-depth interviews, with both researchers in various disciplines and research managers, identified additional required services. The UMCG's research support service remained independent, given the specific regulations for processing personal data in hospitals and health care centres, the size of the organisation, and its physical location elsewhere in the city. However, the UG and UMCG RDM teams continue to cooperate and exchange information on a regular basis.

What started out as a project quickly grew into a service, offering a lot more advice and support than a mere virtual helpdesk. Major research funders began requiring the transparency of data management during research projects and the availability of research data after finishing projects. Journals increasingly ask for data availability statements in articles, preferably with persistent links to data, descriptions, and scripts, to enhance research integrity and the re-usability of data. The RDO works on the basis of the FAIR principles: findable, accessible, interoperable, reusable (Wilkinson et al., 2016), to provide researchers with the tools and services that best meet their needs. For researchers working with human subject research data, RDO offers services and support to comply with the GDPR and relevant university policies.

In addition to researchers, regular users of RDO services include funding officers, research managers of research institutes, data managers (data stewards), ethics boards, and service departments. In fact, services often result from a cooperative process between researchers and support staff, wherever they may be stationed. The RDO closely cooperates with other services, such as those supporting open access, Pure, and research impact, to provide holistic advice for research policy officers of the university.

For researchers and staff, it may be difficult to find the right person in this network. Therefore, it is important to make sure there is "no wrong door". The RDO can only deliver by getting the right experts on board and by being referred to by colleagues whenever relevant. Several services have now been firmly institutionalized UG-wide as an outcome of the RDO project. The first services were the virtual helpdesk and information portal on the website⁴. Even though the main audience is UG researchers, the information on the web is deliberately public rather than restricted to the intranet. This makes it easier for partners in the UMCG and elsewhere to refer to relevant documents, such as policies in research proposals.

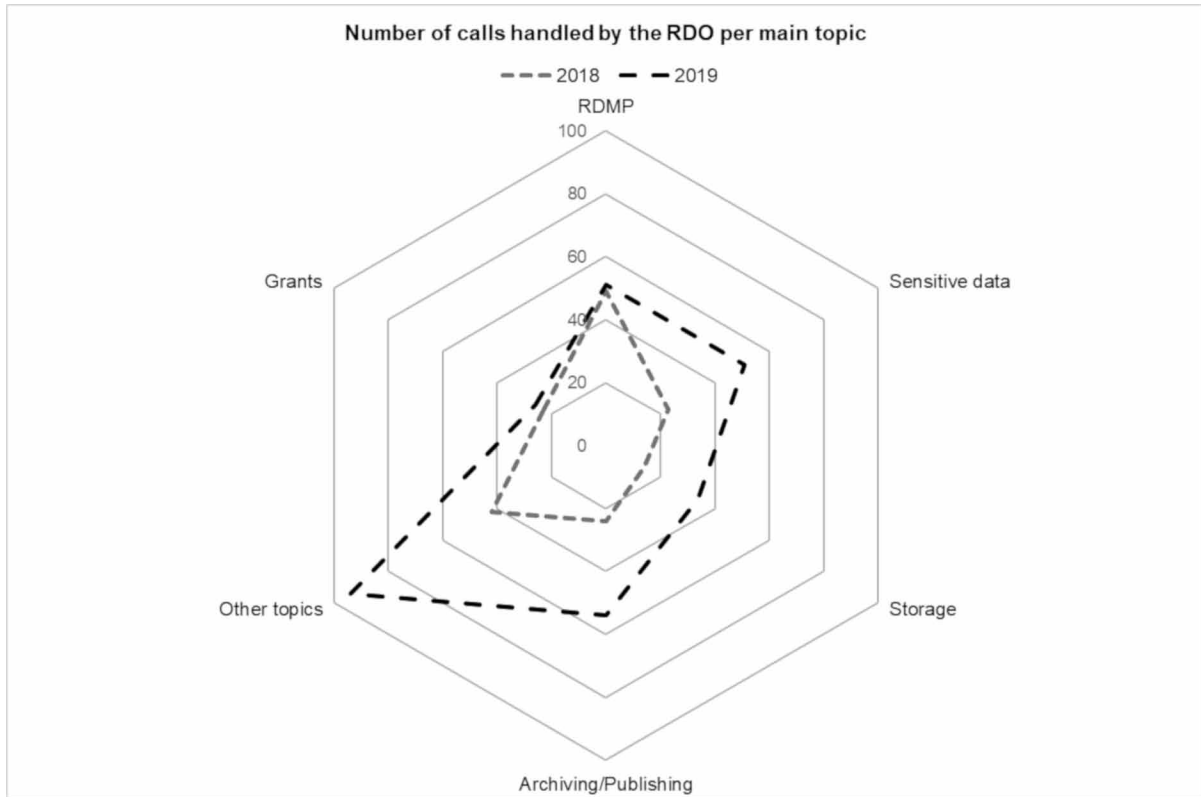
The virtual help desk consists of an email address and a telephone number. Emails are automatically sent to a tracking system, so the team can handle incoming questions promptly, connect with specialists in other departments, and track progress. Figure 4 shows the main topics of calls in 2018 and 2019. It reveals not only a strong growth in calls, but also reflects that different subjects become more important over time, influenced by policies, regulations, and phase of the research lifecycle. Researchers who ask for advice on RDMP, often return when it is time for data to be archived or published.

Nearly all research institutes or faculties have implemented a template of questions to align Research Data Management Plans (RDMPs) with the RDM policy of the university, subject- and institute-specific requirements, and a guide published by Science Europe (2018). The RDO supported this implementation by providing advice, managing a web tool⁵ that enables making and managing RDMPs (UG, 2019c), and developing help texts and references to further information.

Whenever an RDMP is required by research funders, the RDO offers advice and can help get the right tools and services on board, with the help of experts in other departments as needed. Researchers

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Figure 4. Development of cases per main topic handled by the RDO (Data source: the UB's issue tracking system, March 2020)



experience the RDO as a reliable advisor when they have to provide an ethics self-assessment as part of their applications for grants by the European Research Council.

The Data Protection Impact Assessment was recently implemented in close cooperation with the Legal Affairs privacy team. The aim of such an assessment is to identify risks in processing sensitive data and to take the appropriate organizational and technical measures to manage these risks. A methodology was developed (Hoorn & Montagner, 2018), using the approach of Bieker et al. (2016). Using these methods leads to more experienced research and support staff and, hopefully, to the identification of re-usable solutions that will lead in turn to greater efficiency.

The sharing of good practices also happens beyond the university level. The RDO links to national think tanks, such as the UKB's Research Data Management Working Group and the National Coordination Point of RDM in the Netherlands (LCRDM). Both groups keep a keen eye on developments at global and European digital data organizations.

The research data policy of the university (UG, 2015b) requires datasets to be findable and described for further use. Important instruments to achieve this are Pure and the research portal. Unlike publications, datasets are not stored in Pure due to its technical limitations. Hence, the datasets themselves are stored on external platforms, whilst their metadata including a persistent identifier and access information, are archived in Pure. To this end, RDO cooperates with the Pure team to ensure the quality of the metadata in Pure. Managed storage solutions that support archiving services are under development by the CIT.

Early 2020 saw the 100th UG dataset published in DataverseNL⁶, one of a set of archival data repositories approved by the Research Output Management Board, and nearly 700 datasets described in Pure.

As a network organization with members working at various university departments, the RDO's eight team members physically work in their own offices and at times together. Every team member contributes from their own professional background (e.g., library, IT) and relies on a broad network of expertise at their "home base". The RDO refers to the CIT for storage solutions, high performance computing facilities, data science, handling of geographical data, visualisation, and more. The team has recently been involved in clarifying requirements and testing new technological RDM services. Almost all team members work part-time for the RDO. In this way, everyone stays closely linked to departments across the university. As research data management is an ever developing subject, continuous learning and training is of the essence.

Research Impact Services: Analyzing and Benchmarking Academic and Societal Relevance

Background

A growing emphasis on evidence-based decision making and an increasing demand for evaluation of research for various purposes have motivated the UG to initiate centrally coordinated activities focused on research impact. The research impact team, with members from the UB and the Office of the University, leads the coordination of such activities and raises awareness about trends in research evaluation. This has brought unprecedented opportunities to support academics in demonstrating and optimizing the scientific and societal impact of their research.

How can the UG find collaborative partners? How can it acquire a quick overview of what is happening in a given field? What is the impact of adding a new researcher to a team? How is each UG research group positioned, with respect to national or international competitors? These are some of the most frequent questions raised by early career researchers, group leaders, and policymakers. Society, government, and funding agencies consider the impact of research within and beyond academia increasingly important. When used responsibly and interpreted in the right context, the answers to these questions assist researchers, managers, and policymakers in making well-informed decisions, strengthening funding applications, identifying collaboration partners, facilitating talent scouting, and boosting the overall reputation of the work of a group or institution. As a result, a growing number of institutions have introduced research impact services to their research community.

Research conducted at Dutch universities and research institutes is evaluated by the national Standard Evaluation Protocol (VSNU, NWO & KNAW, 2014) every six years, and the impact of this research must be demonstrated in applications for funding, promotion, or appointments. In response to the need of the UG research community for disciplinary benchmarking and in order to identify important patterns and trends within different research domains, the Research Analytics Alliance (RAA) project was initiated. The project started in January 2018 for a duration of two years, aiming to realize the goals of the UG Strategic Plan 2015-2020 concerning academic and societal impact (UG, 2015a). The overall objective of the RAA was to increase research intelligence expertise and foster the competent use of research analytics tools at all levels of the UG. The core of the RAA was built through the collaboration of the UB, SER, and the CMB.

Organization and Activities

Research Impact Services (RISe) was established in 2018 as an initiative of the RAA. It offers the UG research community the opportunity to establish benchmarks and gather insight into the strengths and weaknesses of its research performance. Such insights serve as a basis for organizational and individual development, resulting in better support of talent development within the university and a more comprehensive overview of the quality of the UG's academic output. In particular, RISe explores, implements, and coordinates a broad range of resources and tools to assist researchers in determining the academic and societal impact of their research output. As a result, RISe supports research staff in boosting their research impact by increasing their visibility and their scholarly output, optimizing their publishing strategies, and evaluating their own research performance.

The UB has subscribed to a selection of advanced research analytics tools, including SciVal and InCites, to analyse and visualize the academic impact of individuals, groups, and institutes at the university. In addition, the UG's subscription to Altmetric Explorer makes it possible to track and visualize the societal impact of research.

In order to establish the role of RISe in assessments of research excellence at both institutional and individual levels, the support team offers customized instruction in visibility of research and research impact strategy, tracking academic and societal impact, research communication strategy, responsible metrics, and responsible assessment. This instruction and support is tailored to the needs of diverse target groups, and enables researchers to effectively use the available research analytics tools to meet their needs. In addition to such training, an online learning portal⁷ has been developed to support the use of the research analytics tools.

While quantitative indicators can never replace expert opinion in research assessment, their responsible use can reinforce the expert narrative by providing complementary analytical evidence. Therefore, in line with international initiatives such as the San Francisco Declaration on Research Assessment (DORA, 2012) and the Leiden Manifesto (Hicks, Wouters, Waltman, De Rijcke, & Rafols, 2015), UG recognizes the importance of using metrics in a responsible manner. To this end, a clear public statement of principles and a policy on the responsible use of metrics are available to patrons at the UG (UB, 2017).

The RISe website⁸ was launched in November 2018 as a point of contact and a virtual help desk. The goal of this website is to raise awareness and provide a clear message of what RISe is, what it stands for, and how it can support the UG academic community in highlighting academic quality, societal relevance, and viability of research, among other things. The research impact support team aims to regularly update the available online content with helpful information, articles, and latest developments in the field. It uses various types of communication channels, such as a newsletter, Twitter, and other social media platforms, to publicize the support and services it offers and to improve the understanding of the services it provides.

The RISe team's experience has shown that while there is a continued need to strengthen research analytics expertise at all levels of the university, centralized research impact support is indispensable. Putting it differently, research impact services are a core task of the university as a whole and, thus, should be centrally organized, in order to provide efficient and adequate support. The centralized research impact experts have offices at SER and at the UB, in the physical vicinity of the executive and policy branch, as well as other related research support teams.

The progress of the RAA project was discussed in several meetings with a steering committee composed of representatives from different faculties and departments: scientists, librarians, and policy

officers. After the two-year project period, the steering committee was replaced by an advisory board, to which members are appointed for a term of three years. The advisory board has a maximum of ten members, who are invited to sit on the board as representatives of their faculties. The advisory board meets at least twice per year. Two full-time employees, one from the UB and the other from the Office of the University, lead and coordinate RISE. The senior research policy adviser and several colleagues from the UB and the CMB form the rest of the RISE core team. Members of the core team participate in national and international seminars, conferences, and workshops, to keep their knowledge of the research impact field updated and learn more about new models of research assessment and the global transition towards Open Science.

Moreover, to facilitate the exchange of knowledge among national research impact experts, close cooperation has been established with the UKB Research Impact Coordination Point and the Research Intelligence Network Netherlands. In addition to these national networks, to strengthen the position of research analytics within the UG and develop a knowledge-sharing network, an Expertise Network Research Analytics group has been initiated, which includes UG colleagues responsible for research policy and research assessment. The members of this group act as contact persons and intermediaries between the RISE core team and UG research institutes. Members discuss various aspects of research analytics, share the latest updates and developments of RISE, and subsequently decide on actions deemed necessary to enhance research impact services. One notable decision that emerged from these discussions was to form two working groups: one for the science, engineering, and medical science faculties and the other for the social sciences and humanities. This decision arose from critical differences between the evaluation of research in these academic disciplines.

The RAA project formally ended in 2019. After a positive assessment of the project by the steering committee, the Board of the University endorsed the continuation of RISE for a period of three years (2020-2022). The research impact services function will be reviewed regularly by the advisory board to ensure its continued relevance to UG's research policies during the next three years, before deciding on its structural financing as a centralized service. Perhaps the biggest approaching challenge is that RISE is a new and unorthodox service and, therefore, requires a culture change and continuous awareness-raising among researchers, support staff, and decision makers.

ADDED VALUE: CONCLUSIONS AND OUTLOOK

Contribution to UG Research

The UB's shift towards the research support services described above definitely seems to have met a need. These services fit a trend in academic libraries that Lorcan Dempsey (2010) called moving from "outside-in" to "inside-out" oriented services. The specific inside resources that were brought to the outside world were not primarily digitized images from the library's Special Collections, as Dempsey would have it, but first and foremost the university's research output: its scientific and scholarly publications and its research data (cf. Dahl, 2018).

Has the UB's research support been successful in contributing to the UG's research activity? The figures show an increase in the number of open access publications, regular registration of virtually all the UG's scientific publications in Pure, and growing numbers of other research activities entered in the

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Pure database. They also show a good turnout of researchers in symposia and workshops devoted to the library's research support services.

Pure

The Pure-based online research portal has come to serve as the “display window” for the research output of the UG as a whole and individual researchers, without the researcher needing to spend much time keeping it current. It is also a place where publications are openly accessible whenever possible, either in full text with a link to an open access version or with an option to request a copy. As Pure contains a vast amount of high-quality information, it has also become *the* reliable and efficient basis for annual research output figures. It is also useful as a source to substantiate research-quality evaluations and research analytics used by, for example, the local coordinator for research assessment. It is also an important tool for benchmarking purposes; in the Netherlands, researchers and research institutes are evaluated nationally by the Standard Evaluation Protocol, established by the VSNU, the Dutch Research Council (NWO), and the Royal Netherlands Academy of Arts and Sciences (KNAW; VSNU, NWO, & KNAW, 2014). The UG played a key role in designing a specific Pure module that meets the Standard Evaluation Protocol standards, providing figures that can be easily compared by research unit, over a period of six years.

Open Access Services

The UB's open access services have led to increasing numbers of UG researchers embracing open access publishing as the new normal (see Figure 3). This has become evident from the contact with researchers by the open access team: only a few years ago, open access publishing still needed to be advocated for; nowadays, most questions and requests for assistance have to do with open access submission workflows. Counselling and information activities seem to have paid off. The habituation to open access probably also has to do with the 10,000 journals now available for (gold or hybrid) open access publishing without financial barriers for Dutch-affiliated researchers. The recognition of Pure as the institutional repository with an added (green) open access function *and* the generally accepted notion that open access publishing leads to more exposure and, hence, to more citations and greater impact of research (a host of literature to support this can be found on SPARC, 2020b).

Research Data Management

Since it started, the Research Data Office has seen an increase in the number of datasets stored in data repositories, as well as in the number of RDMPs and Data Protection Impact Assessments drawn up with the help of RDO staff. Attitudes surrounding RDM have changed during their consultations: more positive feedback, growing interest in RDM, and increasing use of facilities. Having to deal with data and privacy regulations in the scope of a research process can sometimes feel like a burden for researchers. RDO sees, however, that more of them rely on RDO's services and advice (e.g., on FAIR data), beyond the mandatory red tape. The RDO now provides UG researchers with RDM training, tools, infrastructure, guidance, and support during the entire research lifecycle (and beyond), adhering to the GDPR and data management policies. Using the expertise of the RDO, researchers will be able to process data—at all stages from collection to archiving—in a more organized, understandable, and transparent manner.

Research Impact Services

Based on the research output data registered in Pure, and with the help of a number of analytic tools, the research impact services support team provides services that benefit individual researchers, UG research institutes and faculties, and the university as a whole. Individual researchers at all stages of their careers use RISE to support applications for tenure or promotion, to strengthen requests for grants and other funding with responsible indicators, and to increase impact by assessing and identifying existing or potential collaborators in a specific research field. Research and HR managers may want to identify top talent, for which RISE provides data analytics feedback that can be used by hiring committees. At an institutional level, RISE is exploring trends to help research managers identify strategic areas of research and to map the university's research strengths and potential areas for growth.

Communication Strategy

To support the library's support services, a communication strategy for research staff was developed, such that each faculty is approached individually with information that is specifically useful to them, to be disseminated through their own communication channels. This strategy requires thorough preparation and careful timing on the part of the UB's communications department, but it has been observed that a larger target group has been reached since its introduction; researchers find it easier to approach the UB's experts, and electronic information is used more often.

The library has increased its visibility by using the faculties' intranets and internal newsletters and presenting library topics at staff meetings, in combination with the UB's own communications instruments (printed material, website, newsletters, narrowcasting, events). In recent years, the structural use of social media has also proven an effective way to inform researchers, respond to questions, and reach a wider audience within the national academic community, but also to engage in substantial online discussions. To improve the "physical" visibility of the UB at the faculties, the UB is currently developing a concept for library roadshows at the UG faculties. A Pop-up Library, staffed with research support experts, will provide on-site support and information. The concept, content, and logistics will be coordinated with the faculties to ensure that this new service meets the information needs and habits of academic staff.

Challenges and Outlook

Decision makers may not always be fully aware of the value of the activities provided to researchers, and budgets to support these activities are not always available. Well-established services also need ongoing attention. A recurrent funding requirement for all projects has been that the services developed during the project phase should continue within the ordinary operational management of the library (or other divisions of the university). Supplementary staffing and retraining and (re)deployment of the workforce has helped to realize this, as have education, refresher courses, and in-service training of staff. The UB is currently developing a customer relations management project to professionalize its internal UG collaborations. A new project, Research Output 2020, aims to improve (meta)data quality in Pure, optimize administrative processes, and support processes related to research funding. The library recently started to ensure that all UG employees request an ORCID identifier and register it in Pure. These efforts, along with the renewal of the Pure portal, will result in an even better presentation of the UG's research output.

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At the time of writing, the RDO is in search of a sustainable funding structure. It has found a strong partner in the Data Federation Hub of the CIT (UG, 2019a), which organizes regular meet-ups and information markets about RDM. In spring 2020, the RDO will conduct a customer satisfaction survey to learn more about the expectations and experiences of researchers and faculty support staff. With CIT and the Office of the University, the library will explore the establishment and expansion of this relationship through a Digital Competence Centre: one single site bringing together knowledge about data (and data stewardship) and the software and computing this requires.

Figure 5. Bicycles in front of the University of Groningen Library (UB). Photograph courtesy of the UB (Leonie Freese, 2019).



Within the university, and in cooperation with external suppliers, large amounts of data have now been generated about successful or failed interactions with UB services (e.g., the uptake of open access opportunities, the use of journal articles). The UB is preparing to establish a Library Data Warehouse, in which these data will be systemically accumulated and analysed by multidisciplinary experts. This will allow the library to specify its own key performance indicators and fine-tune its services.

Some prejudices with regard to open access prevail; raising awareness about the responsible handling of research data will remain important, as will supporting and carrying out prudent research impact analyses. Tailored services are sometimes difficult to realize from a central service like the UB. Data management or publication strategies in astronomy, physics, mathematics, and computer science (where “open” is prevalent), are in sharp contrast to those in chemistry, where active research projects are often surrounded by secrecy. Researchers in the arts and humanities are also usually inclined to keep their data to themselves, at least until a research project has been finalized. Furthermore, open access outlets for the humanities and, to a lesser extent, for the social sciences are not as widely available as for STEM-researchers. Likewise, and unsurprisingly, the research support team has found that there are generational differences in receptiveness to new ideas.

The focus of the UB’s research support will remain to advise researchers on publishing with maximum visibility and impact and relieve them of tasks that may deter them from carrying out research. In the composition of its expertise, the UB considers variation in types of research, the means of research and publication, and the cultures of publication and evaluation that exist across the various faculties (UG, 2015a). Specialist teams in the fields of open science, research output, research data, and research analytics will continue to help researchers stay up-to-date with developments in these areas and meet the diverging and emerging demands of authorities and research funders—welcoming them to the library online or in person (Figure 5).

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KEY TERMS AND DEFINITIONS

Current Research Information System (CRIS): A database in which all sorts of research output are registered and stored, usually by a research institution and with a focus on publications. Data sets, presentations, awarded research funding, prizes, and so forth may also be registered. Metadata describing the research output can be used to present, manage, analyse, and exchange the research performed at an institution or aggregated at a national or supranational level.

European Research Council: A public body for the funding of scientific and technological research conducted within the European Union (EU).

General Data Protection Regulation (GDPR): A European regulation, which came into effect 25 May 2018, designed to harmonize data privacy laws across Europe and to empower all EU citizens to protect their data privacy. In addition to other effects, it protects participants in research projects by offering transparency about the processing of data, and by requiring adequate security measures during the entire data lifecycle, including long-term archiving. The GDPR defines new obligations for organizations that handle and control the processing of personal data.

Gold Open Access: All articles in a journal are available for free on the journal's website upon publication under an open license. Many gold open access journals charge publication fees (so called Article Processing Charges, or APCs). A variant of Gold open access is Diamond (or Platinum) open access, in which the journal or platform is financed by the research community (research funders, libraries, learned societies). No APCs are charged in this model.

Green Open Access (also known as Self Archiving): Researchers upload their publications to a freely accessible online website. This can be a personal website, the website of the research institution that funded the research (e.g., the institutional repository of the university), or an open repository. The version of the publication is ideally the final publisher's version (or version of record) or the accepted author's manuscript (final author's version). Embargo periods may apply.

Hybrid Open Access: A subscription journal that offers open access publication for individual articles upon payment of an APC.

Open Access: A publishing model through which scholarly publications are made available online to readers at no cost and with an open license allowing for re-use of the material.

Open Science: An umbrella term for a movement that aims to make scientific and scholarly activities more accessible to a large number of people. This includes making research results as openly accessible as possible. It includes, but is not limited to, practices such as open access publishing, open data, sharing code and software, and improving the transparency and reproducibility of the research process. It can also be understood as the opening up of scientific processes, which includes citizen participation.

Read and Publish Agreement: A deal between a library or a consortium of libraries and a publisher which combines the traditional license fee for reading access with an arrangement for the (pre-)payment of publishing articles in open access.

Research Data Management (RDM): The structuring, organization, and control of data produced throughout the research cycle, RDM can involve recording, dissemination, and archiving of research data and results. Responsible RDM must respond to the policies and conventions of local research institutes and funding agencies, as well as national and international legislation and codes of conduct for research integrity.

ENDNOTES

- ¹ Reference to the UG should be taken to include the UMCG, just as reference to the UB includes the CMB, unless stated otherwise.
- ² Pure Support website can be accessed in <https://www.rug.nl/library/support/pure>.
- ³ Mijn voorkeur gaat uit naar Open Access publiceren via tijdschriften die de wetenschappelijke publicaties online gratis beschikbaar maken, de Golden road [sic]. Mijn streven is erop gericht om binnen tien jaar, dus per 2024, de volledige omslag naar Open Access Golden road [sic] te realiseren.
- ⁴ Research Data Management web page www.rug.nl/researchdata
- ⁵ RDMP Web tool <https://www.rug.nl/research/research-data-management/tools-services/rdmp/rdmp-web-tool>
- ⁶ DataverseNL <https://dataverse.nl>
- ⁷ Research Impact Services Learning Portal <https://rug.thecampster.com>
- ⁸ Research Impact Services <https://www.rug.nl/library/research-impact-services>