



Delft University of Technology

## Working together to ensure a free flow of knowledge

### TU Delft Library Roadmap 2020-2024

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# Working together to ensure a free flow of knowledge Roadmap 2020-2024

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# About the Roadmap 2020-2024

The TU Delft Library Roadmap 2020-2024 provides guidance for organisational development and the personal growth of staff. It also aims to show students, researchers, lecturers, colleagues and our Dutch and international network what we intend to focus on in the years ahead.

This is why we have involved all of these target groups in the roadmap's development, both in compiling the information and fine-tuning it. We would like to thank everyone who contributed to this process. We look forward to working with you to make the ideas and action points in this document a reality in 2020-2024.

As well as involving these target groups, we have also ensured the roadmap is aligned to the TU Delft Strategic Framework 2018-2024: Impact for a better society. Finally, the roadmap is a living document. In the years ahead, we will continue to add good examples to it, in order to provide inspiration and demonstrate progress.

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# Introduction

## The importance of freely available, reliable knowledge

Because of the vast amount of digital data that can now easily be accessed, it has become increasingly difficult to find the right, relevant and reliable information that you actually need to make progress. For high-quality research and education, we must have access to reliable and freely available information.

### **The changing role of the Library**

Digitisation has transformed the Library's role. Traditionally known as a place where reliable knowledge is stored, this is no longer the case. In this new age, the Library now fulfils the role of guide, helping to find valuable knowledge that can raise study, research and society to a higher level – regardless of where it may be: physically in the Library or digitally all over the world.

### **Valuable knowledge**

Every day at the TU Delft Library, we help people to find relevant and reliable knowledge produced by others and to publish and store their own knowledge. By thus ensuring the free flow of knowledge, we enable TU Delft knowledge also to be of value to others. We help students to progress by offering them that final piece of the puzzle they need to complete their thesis. We also assist researchers and lecturers in publishing their work openly, enabling everyone to use and reuse it. Together, we make sure that reliable and relevant knowledge is not locked away in an ivory tower, but is put to good use. In this way we are contributing to a better society.

# TU Delft Library in 2020-2024

## Building on the qualities of TU Delft

At the TU Delft Library, we ensure that relevant and reliable knowledge can reach everyone, not only in the international academic world, but also in society as a whole. In this way we are contributing to the overarching mission of TU Delft: impact for a better society. We are also ensuring that the Library is ready for a future in which knowledge will increasingly be available digitally.

### **Qualities required**

TU Delft contributes to solving global challenges by educating new generations of socially responsible engineers and by pushing the boundaries of the engineering sciences. Such solutions are achieved by working together across disciplinary boundaries. This calls for an accessible, inclusive organisation, with short lines of communication and a pragmatic approach: what is known as a 'can-do' mentality.

### **Building on TU Delft characteristics**

These qualities characterise TU Delft and its Library: multidisciplinary collaboration, an accessible organisation and a 'can-do' and 'show-don't-tell' mentality. This involves tackling issues and demonstrating how they can inspire and enrich. In this process, the Library believes it is important to make the needs of users the key priority in developing its services.

In 2020-2024, the Library will continue to build on these qualities by making more TU Delft knowledge freely available, findable and visible. By analysing and identifying which knowledge is of value to the academic world and to society as a whole and by using a stimulating programme of events to show how freely available, reliable knowledge can enrich life.

# Three strategic themes

We have defined three strategic themes to help shape our efforts for 2020-2024 in concrete terms. These themes will be reflected in our day-to-day work and decisions during this period and are based on our qualities and working methods. Briefly, they are:

- 1) **Open Science.** Our network function on campus, informal working methods and can-do mentality, makes us the driving force within TU Delft in enabling the culture shift towards Open Science. Over the next four years, we will be coordinating the university-wide strategic programme “Open Science – Research and Education in the Open Era”.
- 2) **Visibility and impact.** Our expertise and tools in the fields of data management, research intelligence and publishing enable us to increase the findability, visibility and impact of TU Delft knowledge.
- 3) **Inspirational learning and working environment.** In the Library, everyone is welcome to study in peace and quiet. This reflects our approach as an inclusive organisation. The Library is also an inspirational place where you can find new ideas and insights.

## Interwoven themes

The strategic themes are not individual pillars, but overlap and are interwoven with each other. For example, if more knowledge becomes available because the transition to a culture of Open Science proves successful, this can also increase visibility and impact because society has access to this knowledge. At the same time, knowledge that is easily accessible can inspire people in their work or studies

### Why, how and what

In the next chapters, we take a closer look at the strategic themes, answering three key questions for each one of them. These are: why this theme is important, how the Library intends to approach it, and what proactive measures we intend to take in the form of specific key action points. Finally, we examine the organisational building blocks, which will help to guide Library staff, enabling them to contribute to achieving the strategic themes.

## Strategic theme 1

### Open Science

Open Science represents a new, more open and inclusive way of providing academic education and conducting research. This calls for more collaboration and greater transparency in all phases of research. Just like research results and methods, teaching methods will be developed more collaboratively and shared more openly in the future. This sharing will not only be between researchers and lecturers, but also with society as a whole. It will boost the quality and efficiency of research and education as well as encourage innovation, creativity and opportunities for breakthroughs. We also expect that greater openness and transparency will improve trust and confidence in science.

To make Open Science the standard working method, the way science is practised must change. Existing systems for valuing and rewarding academic research and teaching, with their overemphasis on the number of academic publications, no longer suffice. And society will need to be more effectively involved in the practice of research.

We will also need to invest in an efficient, open data infrastructure, alternative systems of publication, and open platforms. Staff will be trained in order to ensure that they have the necessary expertise to provide appropriate services in such areas as good data management and open publication and that their knowledge is kept up-to-date. Pilot projects and coordination will be areas that require close attention. Through investment, we can ensure that more knowledge becomes freely available. This will help bridge the gap between scientific knowledge and society.

#### The Library's approach to Open Science in 2020-2024

For TU Delft, Open Science will require two important changes that will form the basis for the next steps in making knowledge findable, visible, shareable and reusable. This will move TU Delft forward from the information age to the open era.

We will start by moving from a closed to an open infrastructure, in which both final and interim results can be stored and shared. The Library is committed to achieving a transition into a reliable, open infrastructure for recording, publishing and disseminating TU Delft research.

Next, there needs to be a culture shift within TU Delft, so that researchers and lecturers will make their knowledge freely available in the appropriate way. The Library will inspire, facilitate and drive this culture shift, based on our conviction that Open Science will make research and education on campus easier.

## Key action points for 2020-2024

**Key action point 1: Initiator of the TU Delft-wide strategic programme:**  
*“Research and Education in the Open Era”*

With this four-year Open Science programme, TU Delft aims to make Open Science the standard approach to day-to-day research and teaching practice. We are the programme initiator and will play a leading role in achieving the necessary culture shift. Facilitated by different forms of infrastructure, skills training, services and the specialised expertise within the Library, TU Delft will have completed the successful transition to Open Science by 2024.

**Key action point 2: Developing Open Science expertise and applying it in day-to-day practice**

We will work together with other libraries and universities in the Netherlands and beyond to develop expertise on the transition to Open Science. We will contribute to and participate in networks and discussions on such topics as systems for evaluating academic research, intellectual property and open education. The Library will translate this expertise from the international vanguard into guidelines for day-to-day practice.

**Key action point 3: An open infrastructure for academic communication**

In alliance with international partners, we will move towards an infrastructure for academic communication that is as open as possible. That means taking concrete and realistic steps away from the current closed systems towards more open systems. We will do this by encouraging the implementation of open-source software and making use of open file formats. We will launch pilot projects to develop these.

**Key action point 4: Services that make research and education on campus easier**

Implementing the Open Science strategy and achieving the necessary culture shift will ask a lot from the people on campus in addition to their day-to-day activities. So we want our service to make working and studying on campus easier, thereby having a positive impact on the lives of students, lecturers and researchers. This means that people will always be able to come to the Library with their questions. By offering additional training, advice, interactive events and workshops, we will improve their skills, acting as facilitators in enabling people to make Open Science a reality.

## Strategic theme 2 Visibility and impact

TU Delft has an impact on society in various ways: through technological breakthroughs, practical solutions for the world's problems and designs that contribute towards achieving a better quality of life. This impact goes beyond the campus itself and also encompasses the work of the socially responsible engineers that TU Delft brings forth. However, this impact is not always visible and cannot be taken for granted.

The Library can improve and reinforce TU Delft's visibility and impact by making the knowledge and information produced by TU Delft as openly available as possible and easily findable for everyone; but also by offering our academics, lecturers, students and alumni relevant academic publications and study materials produced by others, which can be built on and developed further. We can use advanced analyses (including bibliometric analysis), to make trends and developments visible. Our colleagues can help in such aspects as decision-making on publication and dissemination strategies, potentially beneficial alliances or emerging research disciplines.

Once knowledge has been published, it is important to understand what value that knowledge may have for society. We can gain more insight on this by analysing how knowledge is used. This involves looking at traditional methods, such as citations in academic publications, but also the use of other media (including social media) as well as reusing datasets, software, research methods and teaching materials, etc. In this way, we will learn which valuable knowledge we wish to preserve for the future and be able to archive more sustainably, both digitally, in our physical repositories, and in the National Archives of the Netherlands.

#### **The Library's approach to this in 2020-2024**

We will provide support to researchers and lecturers from the very start of their process. We will help them to find the right resources, even if these are not yet freely and openly accessible. We will assist lecturers in developing open study materials, such as open textbooks, virtual and augmented reality environments and videos for online education (including MOOCs). We will offer advice on the publication and archiving of many different types of research results, including articles, FAIR research data and software, and also provide our own publication platform. For optimum findability, we will ensure that high-quality metadata are added to all these materials and we will link our own open infrastructure to the worldwide network of search engines, databases and communities (both general and specialised).

Besides increasing findability, we are also working to improve visibility by exploring new forms of publishing, for example the sharing of publications that feature an interactive element, such as visualisation or simulation. We will adopt a pragmatic approach to this, in line with our organisational culture, demonstrating what is possible in concrete terms and providing scope to first take action, then to upscale and then, if necessary, we will draw up relevant policy.

Once TU Delft knowledge has been published, we will analyse its visibility and impact using research intelligence expertise and tools that we have at our disposal and are developing further. Our analyses are already being used in policy development, but this also opens up an opportunity for closer collaboration with our colleagues in Communication. We are already seeing success stories of how TU Delft knowledge contributes to finding solutions to societal challenges.

#### **Key action points for 2020-2024**

##### ***Key action point 1: Making TU Delft knowledge easier to find***

The Current Research Information System (CRIS) enables researchers to document all kinds of results themselves. We can make these results visible to a wider audience, especially if they have an appropriate open licence. The Library ensures that these results are accompanied by the right metadata, because these play an important role in selecting and filtering search results. We are working to make it easier to find software, datasets and methodologies as research output. By 2024, more information will be freely available and easy to find. Ensuring that people can easily be found is also important, so that researchers and lecturers can be found by other societal partners, for example when establishing collaborative alliances.

##### ***Key action point 2: Developing open access publication forms and services in order to improve visibility***

Open Access publications are easier to find and are cited more frequently than those behind paywalls. We are working to further improve the visibility of TU Delft publications by advising people on campus about this issue and by providing assistance with different types of open-access publication. We will further develop the TU Delft OPEN initiative to ensure that by 2024 it will be the central place for researchers and lecturers to publish for open access and to receive advice on new publication and dissemination strategies. We will also collaborate with external parties on open-access publication initiatives and develop alternatives to traditional forms of publishing.

**Key action point 3: Analysing the societal impact of TU Delft output**

The Library has set itself the task of analysing and reporting on the visibility and impact of TU Delft knowledge. To achieve this, we will use research intelligence tools and new metrics and research methods. We will provide information to policymakers to enable TU Delft's scientific and societal impact to be evaluated and assessed. An improved understanding of the value of knowledge can ultimately result in better strategy.

**Key action point 4: Identifying examples of success from analyses and in our network**

The Library's position and the nature of its work means that it has an important networking function for TU Delft. The Library is the physical place at the heart of TU Delft, where our staff are in day-to-day contact with people on campus. This means that we pick up everything that is going on. Our Research Intelligence tools also give us an insight into which publications are read and used the most. These networking and analysis roles enable us to actively identify and share insights with our Communication colleagues. By 2024, our aim is for the Communication and Library networks to effectively complement each other, enabling inspiring examples of TU Delft research and education to be identified and shared.

## Strategic theme 3

# Inspirational learning and working environment

Digitisation has changed the role of the Library as a physical place. The Library is the place where everyone who wants to acquire and share knowledge is welcome; the place where you are helped to find reliable knowledge that you need for your development, education and research. It is also a place where you acquire new understanding and insights. We ensure that the qualities that people expect from a Library are foremost in the presentation of the building as well as the digital environment.

### **The Library's approach in 2020-2024**

We will position ourselves more strongly as an inclusive, safe and inspirational place to be. We offer a unique place at the heart of the TU Delft campus, where everyone can learn, work and acquire new insights. This means that both the building and the Library staff must be easy to access, and that we must provide appropriate places to work and organise stimulating activities that inspire new ideas for our visitors' studies, research or work. By actively embracing our role as knowledge broker, we will also encourage the unexpected acquisition of new ideas and knowledge. We will organise activities focused on co-creation and showcase specialist subjects in a wider arena.

The library experience may start in the building itself but it can extend far beyond: to home, the lab or the lecture theatre. This is why we are putting inclusivity and inspiration at the very heart of the development and positioning of our digital services and platforms.

## Key action points for 2020-2024

### ***Key action point 1: Developing and implementing a new communication strategy based on clear positioning***

We will position ourselves in a way that is based on the qualities traditionally associated with the Library. These include the inclusive and inviting character of the building, where you can learn in quiet concentration, gain inspiration and share ideas with others. The Library will continue to be a place where reliable and unique knowledge is stored and where experts are on hand to help you find this knowledge. In 2020-2024, we will develop and implement a new communication strategy based on this positioning.

### ***Key action point 2: Continuing to develop the Library physically and digitally as an inclusive, safe and inspirational learning and working environment.***

We are a central place at the heart of the campus where you can learn, work and share ideas. We will provide state-of-the-art places for work and co-creation that are easy to find and where you can develop both individually and together with others. For these we will engage in discussion with our (potential) visitors and capitalise on user experience in order to actively cater to needs and meet demands. New learning places, such as the VR Zone, will also continue to be developed and to grow in line with user needs. Findability, inspiration, sharing and co-creation are standards that we will also apply to the digital environment, which will be experienced as an extension to the physical support offered.

### ***Key action point 3: Setting up a stimulating annual programme***

We will promote the general development of both students and staff by critically questioning the role of technology in our society and broadening the academic horizon of our target groups beyond the boundaries of their own specialist disciplines. We will position our programming at the interface between science, art and society, connecting people and ideas to benefit initiatives that will have an impact on a better society (Library as knowledge hub/knowledge broker). We will use themes to make the physical, digital and special collections – including our heritage collections – visible and accessible to our users. We will also keep a record of important ideas raised in debates, in order to enable us and others to build on these further.

### ***Key action point 4: Experimenting with new concepts***

We will use the Library as a Living Lab, in which we develop and try out new concepts that make working and studying more enjoyable. We will explore new ways of sharing skills and knowledge and enabling them to be found. And we will share inspirational stories about the impact of knowledge on society. Where possible, we will forge links between the knowledge on campus and knowledge in society. The Living Lab will provide living proof of the can-do mentality of both TU Delft and the Library.

# The organisational building blocks

The strategic themes provide direction for the Library for the 2020-2024 period. To make this future possible, everyone in the organisation must be able to contribute to the strategic themes. For this reason, we have drawn up four organisational building blocks to ensure that we know what we need to be able to do, how we work together, who we are, and what we need.

## **Knowledge and skills**

### *This is what we can do in 2024*

- 1) We are experts in searching for, selecting, adding metadata, managing, and presenting information. We stand for quality and are well informed about what is going on around us.
- 2) We have improved our skills in acquiring knowledge in a targeted and creative way. We pass on these methods of searching and finding to students and researchers.
- 3) In addition to specialist knowledge, we also have skills that can be applied more widely and which reflect a fast-changing society. We are able to build networks and apply them in our work. We are also creative and flexible. In addition, we are capable of critical thought, enabling us to assess the value and applicability of information, media and technical possibilities.
- 4) We consider it important to be able to move with the changing needs of our target groups and stakeholders. So we use ideas from both inside and outside the Library as our feeding ground, enabling us to work with others to accelerate the impact of knowledge.

## Co-creation

### *This is how we collaborate in 2024*

- 1) Together we know more and are capable of achieving more. So our staff engage in similar collaboration and work together in co-creation to improve products and services. We acknowledge the expertise of colleagues within TU Delft and collaborative partners outside the university. Co-creation ensures that all stakeholders have an influence on the process and the result.
- 2) We invest in communication – the key to every form of collaboration. We listen to our partners, ensuring we have a better idea of what they are doing and enabling others to forge links easily that can result in new forms of collaboration. This applies within and beyond TU Delft.

## Conduct and Attitude

### *This is us in 2024*

- 1) We are visible, approachable and service-oriented and offer our own knowledge as accessibly as possible. Listening to our target groups ensures we know what they need. This means that our actions are defined by an open and proactive attitude.
- 2) We demonstrate personal leadership. We take the lead in our work and continue to grow and develop. We know when to lead and when to follow. We are proactive and engaged with what we are working on as well as with the people with whom we are working. Personal leadership also means that we actively anticipate movements in the world around us.
- 3) Our work is in line with TU Delft's integrity policy. This means showing respect for each other and each other's values and embodying the interests of TU Delft in our work.

## Infrastructure and services

### *This is what we need in 2024*

- 1) The Library is future-oriented, which calls for innovative processes, facilities, infrastructure and systems. These are essential preconditions for doing our work effectively and they reinforce our Open Science strategy.
- 2) We actively gain ideas and feedback from our users, for example through user experience and our 'ask-your-library' customer service and we use this information to improve our services. We also work actively with partners and we participate in the right networks, so that we can identify changing needs at an early stage. In order to anticipate these needs effectively, we need to continually re-evaluate our procedures and facilities and develop them further where possible.
- 3) We use technology not because of its form, but because it helps us in our work. We experiment on a small scale with new technologies to find out what benefits they can bring. We anticipate the latest developments and identify innovations of today that may turn out to be the standards of tomorrow.

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