

# TU Delft Research Software Policy





# TU Delft Research Software Policy V 1.0

16 February 2021

<b>Name of this document</b>	TU Delft Research Software Policy
<b>Date approved</b>	16 February 2021
<b>Version</b>	1.0 - <a href="http://doi.org/10.5281/zenodo.4629662">http://doi.org/10.5281/zenodo.4629662</a>
<b>Previous versions</b>	
<b>Person responsible</b>	Head of Research Data Services, TU Delft Library
<b>Location of the Policy and the accompanying Guidelines on TU Delft website</b>	<a href="https://www.tudelft.nl/en/library/research-data-management/r/policies/tu-delft-faculty-policies">https://www.tudelft.nl/en/library/research-data-management/r/policies/tu-delft-faculty-policies</a>

## Table of contents

<b>5</b>	Policy Objectives
<b>5</b>	Introduction
<b>6</b>	Those creating and managing software are responsible for:
<b>7</b>	Those supervising software creators or managers are responsible for:
<b>8</b>	Decision tree: When can TU Delft staff members apply an open source licence to software?
<b>9</b>	Contribution of other Stakeholders
<b>10</b>	Definitions
<b>12</b>	Colophon

## Policy Objectives

The TU Delft Research Software Policy facilitates best-practices on research software management and sharing, irrespective of whether the code is proprietary or open source.

Simultaneously, the policy emphasises the value of research software as a stand-alone research output and facilitates proper recognition of the contribution of TU Delft researchers to software.

The TU Delft Research Software Policy also improves the cumbersome process which was in place up until now for sharing software openly. Because TU Delft has the copyright on software created by staff members, researchers were required to file an Invention Disclosure Form (IDF) with the Valorisation Centre each time a decision on copyright on software had to be made. The process was not only inefficient, but also not well-known among the research community. This policy provides clarification on copyright on software at TU Delft and gives researchers more freedom to publish open source software.

## Introduction

Software is essential for twenty-first century research. An overwhelming majority of researchers develop and re-use software as part of the research process to generate, process or analyse results.<sup>1</sup> Consequently, software is increasingly recognised as its own research output. As such, software should be well documented, preserved and whenever applicable, the FAIR principles (Findable, Accessible, Interoperable, Reusable) should be followed.<sup>2,3</sup>

When possible, TU Delft encourages its researchers to make their software available Open Source, in the spirit of Open Science<sup>4</sup>. Yet, when making software available to others there should be a balance between the possible commercial exploitation of software and the benefit of open source.

---

1 S.J. Hettrick et al, UK Research Software Survey 2014: <http://doi.org/10.5281/zenodo.14809>

2 <https://fair-software.nl/about>

3 Lamprecht, Anna-Lena et al. 'Towards FAIR Principles for Research Software'. Jan. 2019  
DOI: 10.3233/DS-190026

4 [https://doi.org/10.4233/uuid:f2faff07-408f-4cec-bd87-0919\\_c26f](https://doi.org/10.4233/uuid:f2faff07-408f-4cec-bd87-0919_c26f) and <https://www.tudelft.nl/en/about-tu-delft/strategy/tu-delft-strategic-framework-2018-2024>

In this context, this policy sets out some high-level requirements for how software should be managed, the responsibilities of the different stakeholders involved in software development and describes the global workflows that facilitate sharing software openly.

This policy is accompanied by the document “[TU Delft Guidelines on Research Software: Licensing, Registration and Commercialisation](#)”. The guidelines provide a more detailed description of the workflows involved when sharing software under an open or proprietary licence, elaborate on relevant considerations and provide additional references.

This policy applies to all TU Delft staff members.

## Those creating and managing software are responsible for:

- Providing appropriate embedded and supporting documentation for their software;
- Making use of a version-controlled environment for managing software (e.g., TU Delft’s GitLab instance<sup>5</sup> or GitHub);
- Respecting the licence conditions when reusing software created by others, as well as attributing them by citing reused software<sup>6</sup>;
- Publishing software as open source where possible and appropriate, considering the following:
  - Evaluating the possibility of commercial exploitation;
  - Considering the risks of Intellectual Property Rights (IPR) infringement;
  - Using one of TU Delft’s pre-approved<sup>7</sup> open source licences (Apache, MIT, BSD, EUPL, AGPL, LGPL, GPL, CC0);

5 <https://gitlab.tudelft.nl>

6 Katz DS, Chue Hong NP, Clark T *et al.* Recognizing the value of software: a software citation guide [version 2; peer review: 2 approved]. *F1000Research* 2021, **9**:1257 (<https://doi.org/10.12688/f1000research.26932.2>)

7 When choosing other licence approval from the TU Delft Valorisation Centre is needed.

- Complying with TU Delft requirements regarding software registration (register published open source research software in Pure).<sup>8</sup> Registration and choosing one of the pre-approved licences grants researchers the right to publish their software without consultation with the TU Delft Valorisation Centre.

### **Those supervising software creators or managers are responsible for:**

- Ensuring that team members have, where required, sufficient training in writing and managing software;
- Ensuring that, when publishing open source software, the TU Delft requirements regarding software registration are followed;
- Ensuring that, when publishing open source software, the TU Delft Software Decision Tree presented in Figure 1 is adhered to.

---

8 [“TU Delft Guidelines on Research Software: Licensing, Registration and Commercialisation”](#) (Chapter 5)

## Decision tree: When can TU Delft staff members apply an open source licence to software?

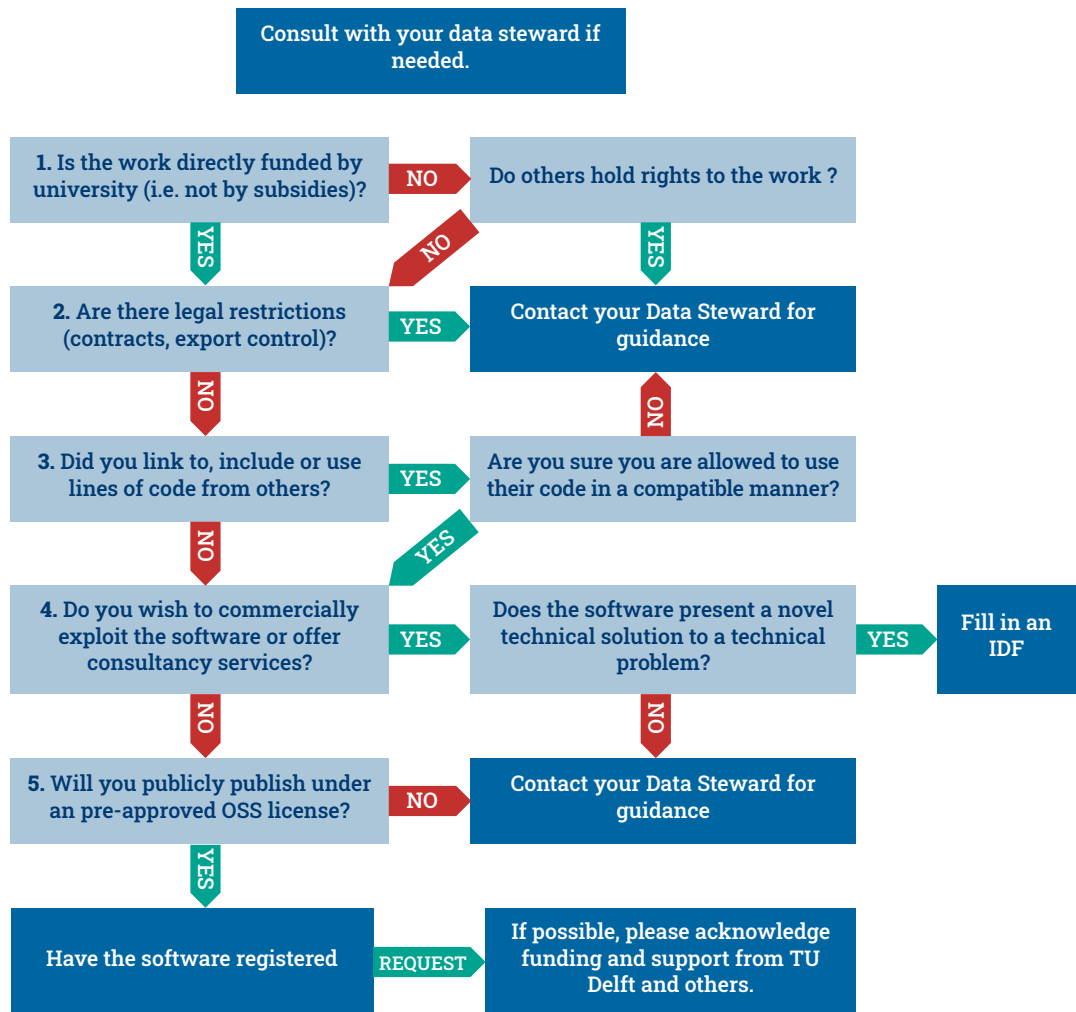


Figure 1. Decision tree to guide software developers, researchers and staff on when they can apply an open source licence to their software. OSS: Open Source Software, IDF: Invention Disclosure Form<sup>9</sup>. Steps 1- 5 are described in detail in Chapter 4.1 of the “[TU Delft Guidelines on Research Software: Licensing, Registration and Commercialisation](#)”<sup>10</sup>

9 <https://inventions.tudelft.nl/inventor> To access this link, the user must be connected to the TU Delft Intranet using an eduVPN connection.

10 “[TU Delft Guidelines on Research Software: Licensing, Registration and Commercialisation](#)” (Chapter 4)



## Contribution of other Stakeholders

- The Library will:
  - Offer a certified repository service (4TU.ResearchData) which ensures that software will be securely stored for at least 15 years (in collaboration with ICT)<sup>11</sup>;
  - Coordinate a network of Data Stewards who act as a first point of contact for software related questions and coordinate training provisions for best-practices on software management;
  - Oversee this policy and coordinate its revisions with relevant stakeholders.
  
- The faculties will:
  - Provide a first point of contact (Data Stewards) for software related questions.
  
- ICT will:
  - Offer secure version control tools to TU Delft researchers;
  - Coordinate a network of Research Software Engineers within the university who provide professional assistance with software development, management and publishing.
  
- Legal and Valorisation Centre will:
  - Review and update the TU Delft Software Licence Decision Tree in the light of broader legal and commercial developments;
  - Review and update the [“TU Delft Guidelines on Research Software: Licensing, Registration and Commercialisation”](#)<sup>12</sup>;
  - Update and publish the pre-approved list of open source licences that TU Delft endorses.

---

11 4TU.ResearchData is integrated with GitHub to facilitate long-term preservation of research software. TU Delft Library is also working on an automatic process to export metadata about software in 4TU.ResearchData to Pure, the TU Delft Current Research Information System.

12 [“TU Delft Guidelines on Research Software: Licensing, Registration and Commercialisation”](#)

## Definitions

**Software** - The term software generally refers to programs that are run on a computer or similar devices. In addition to the program, the software includes, for example, the source code, user documentation, test data and the architectural model.<sup>13</sup>

**Research Software at TU Delft** - A computer-based application that converts inputs into outputs to support the user in one or more research tasks. It can include:

- Scripts to process data for a publication;
- Administrative scripts to automate specific tasks within research workflows;
- Software that demonstrates certain functions or is developed to test functions within a research project;
- Software developed within university, public and third-party funded research projects (with or without long-term development strategy);
- Software resulting from dissertations (with or without long-term development strategy);
- Software that students help develop during their bachelor's or master's theses within a TU Delft funded project (with or without long-term development strategy).

**Data Steward** – The person that is the first point of contact for researchers at their respective faculties for any questions on data and software management. Data Stewards provide advice on how to make data and software more FAIR and liaise with other service providers as required.

---

13 Schlauch, Tobias, Meinel, Michael, & Haupt, Carina. (2018, August 17). DLR Software Engineering Guidelines (Version 1.0.0). Zenodo. <http://doi.org/10.5281/zenodo.1344612>



## Colophon

### Credits

#### **This policy was written by (in alphabetical order):**

Anton Akhmerov – Faculty of Applied Sciences  
Merlijn Bazuine – Valorisation Centre  
Julie Beardsell – Information & Communications Technologies (ICT)  
Rianne van den Bogerd – Legal Services  
Susan Branchett – Information & Communications Technologies (ICT)  
Alastair Dunning – TU Delft | Library  
Meta Keijzer-de Ruijter – Information & Communications Technologies (ICT)  
Maria Marques de Barros Cruz – TU Delft | Library  
Paula Martinez Lavanchy – TU Delft | Library  
Mark Schenk – Information & Communications Technologies (ICT)  
Margot Spaargaren – Legal Services  
Marta Teperek – TU Delft | Library

#### **With the contribution and feedback from (in alphabetical order):**

3D geoinformation group – Faculty of Architecture and the Built Environment -  
<https://3d.bk.tudelft.nl>  
Kim Batselier – Faculty of Mechanical, Maritime and Materials Engineering  
Neil Chue Hong – Software Sustainability Institute (UK)  
Sebastian Fajardo Bernal – Faculty of Mechanical, Maritime and Materials  
Engineering  
Nicole Will – TU Delft | Library

#### **TU Delft Contract Managers:**

John van Haare – Faculty of Mechanical, Maritime and Materials Engineering  
Rogier van Loghem and Jose van Vugt – Faculty of Applied Sciences

#### **TU Delft Data Stewards:**

Heather Andrews – Faculty of Aerospace Engineering  
Nicolas Dintzner – Faculty of Technology, Policy and Management  
Santosh Ilamparuthi – Faculty of Electrical Engineering, Mathematics and  
Computer Science  
Esther Plomp – Faculty of Applied Sciences  
Yasemin Turkyilmaz-van der Velden – Faculty of Mechanical, Maritime and  
Materials Engineering  
Yan Wang – Faculty of Architecture and the Built Environment

**Contact info:**

Delft University of Technology  
Research Data Services, Library  
library@tudelft.nl

**Design:**

Carla Feijen

**Photography:**

Getty Images

