Open Source Software: facilitating Open Science at TU Delft

Open Science in Practice
Max Planck Digital Library

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TU Delft & Open Science

Open Science Programme 2020-2024, Research and Education in the Open Era

- Policy on **Open Access** Publishing (2016)
- **Research Data** Policy Framework (2019, 2021)
- Code of Conduct (2020)
- **Research Software** Policy (2021)
- **Diversity & Inclusion** Office (2021)
- Vision on **Integrity** 2018-2024
- **Recognition & Rewards** Perspective 2021 – 2024
- Policy on **Open Educational Resources** (2021, under construction)

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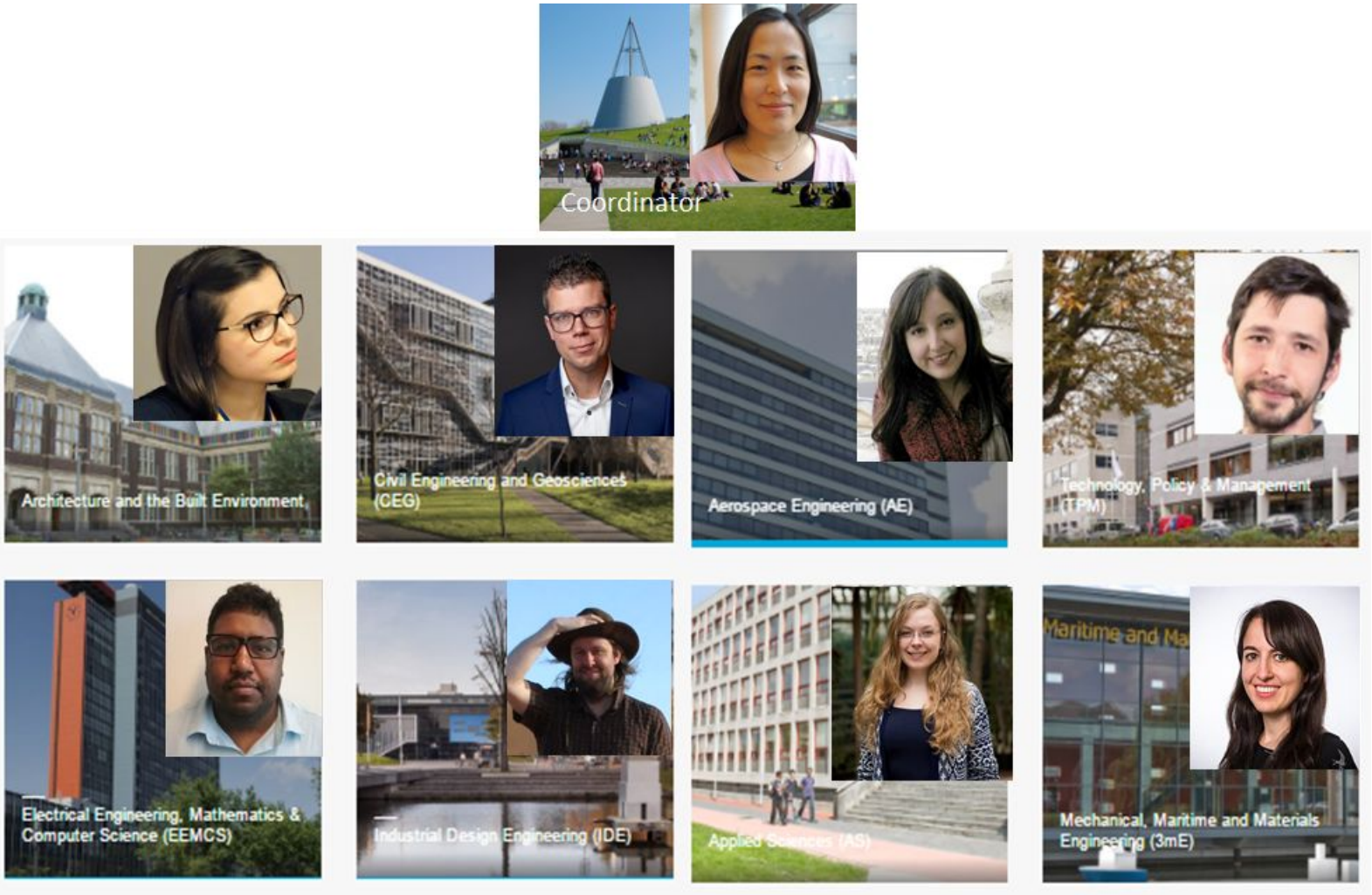
TU Delft: Data Stewards

Data Stewards

Research Data Management TU Delft Library

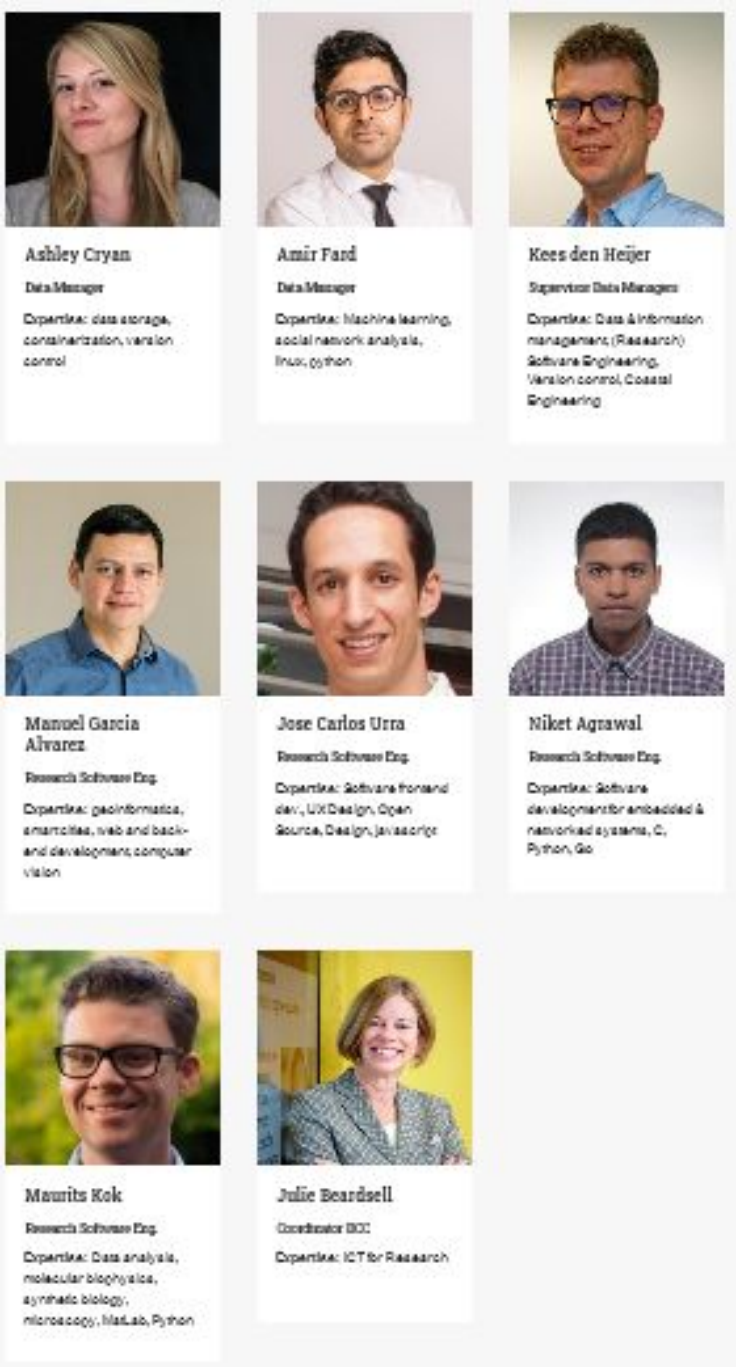
4TU.ResearchData



TU Delft Digital Competence Centre

https://dcc.tudelft.nl/

- **hands-on support**
- data management workflows and developing research software



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TU Delft: Research Data Policies

TU Delft Research Data Framework Policy

- Roles and responsibilities at the university level
- Several compulsory statements that provide a template for the faculty
- Published in 2018 and updated in 2021: 10.5281/zenodo.2573159

8 separate Faculty Data Policies

- Roles and responsibilities at the faculty level
- Reflecting disciplinary differences
- Published in 2021

Original slide: https://doi.org/10.5281/zenodo.2684278

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Why prepare a software policy?

Before the policy there was a **labour-intensive/lengthy procedure** to make software openly available:

- TU Delft decides which software can be made openly available and how
- Researcher should submit an Invention Disclosure Form and after evaluation by Valorisation Centre a decision was made

Original slide by Paula Martinez Lavanchy https://doi.org/10.5281/zenodo.4772235

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Why prepare a software policy?

Increase in push from **funders/journals** to request access to all research outputs

- European Commission:
  - immediately deposit **any research output** in a repository + provide open access to it under CC BY, CC 0 or equivalent
  - See slides by Alea López de San Román

Why prepare a software policy?

~2018: requiring Forms is too much work

2019/2020 Setting up the policy/guidelines

Contributors:

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Anton Akhmerov, Data Champion at the Faculty of Applied Sciences

The Software Policy intends to…

- **Describes the workflow** for sharing software openly
- Giving researchers **more freedom** to publish open source software
- Software as a **valuable research output** in the future rewards & recognition system

https://doi.org/10.5281/zenodo.4629662

The Software Policy is accompanied by Guidelines in order to:

- More **detailed information** about the workflow/licenses
- **Considerations** when making software available to others (commercial exploitation vs open source)

http://doi.org/10.5281/zenodo.4629635

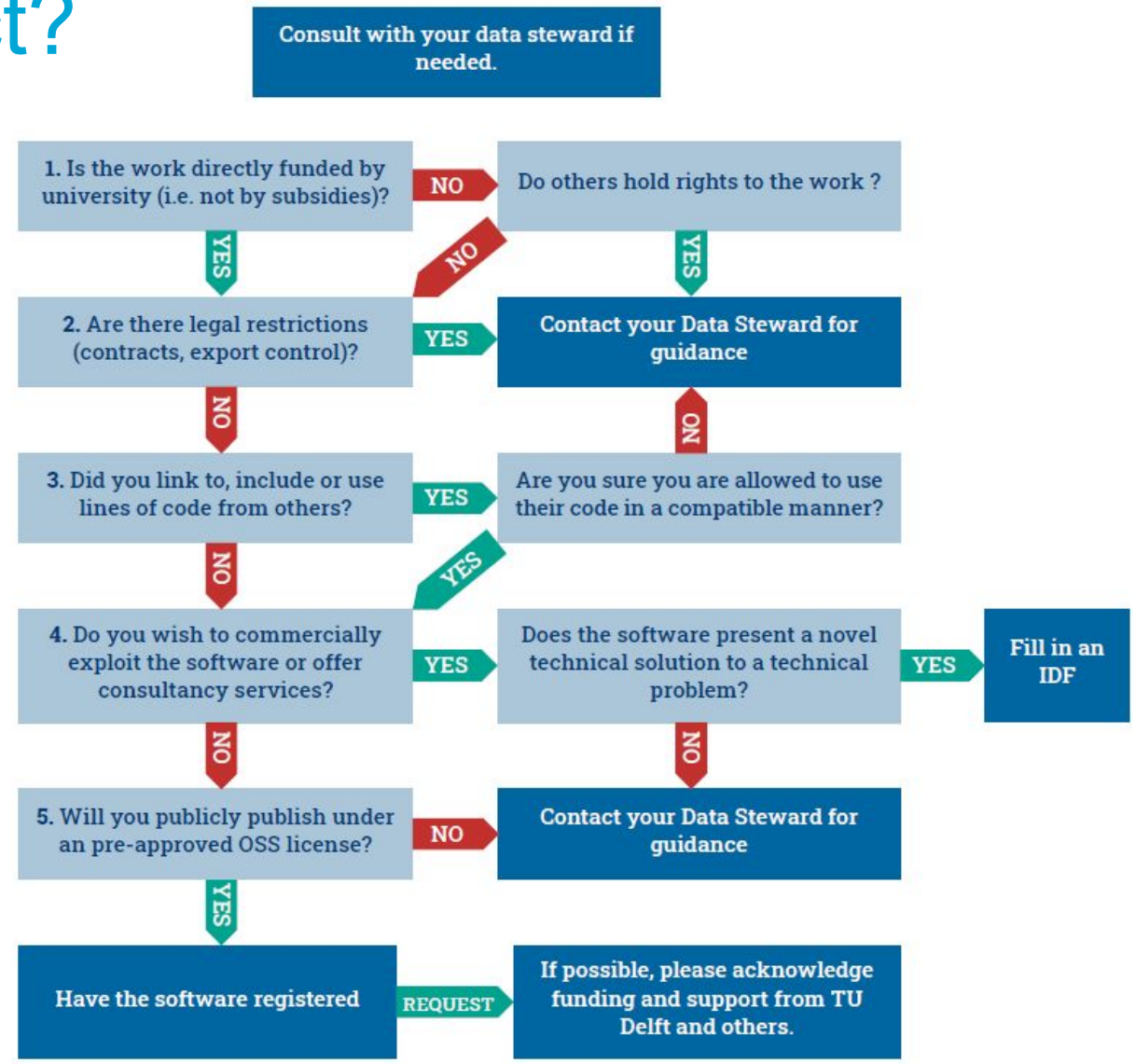
The Guidelines do not cover how to make your code readable/reproducible

The Turing Way: [Guide for Reproducible Research]

How to share software?

- Consider whether your output can be shared
- Include copyright waiver of TU Delft in README
- Choose a **pre-approved license**
  - (MIT, BSD, Apache, GPL, AGPL, LGPL, EUPL, CC0)
- **Publish the software** using a data repository to make the code citable

Step 1: Can you apply an Open Source Software license to your project?



"Guidelines on Research Software Licensing, Registration and Commercialisation at TU Delft" – Chapter 4 - http://doi.org/10.5281/zenodo.4629635

Original slide by Paula Martinez Lavanchy https://doi.org/10.5281/zenodo.4772235

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Step 2: Make notice that TU Delft is transferring the copyright to you

Add the copyright waiver of TU Delft:

Copyright notice: Technische Universiteit Delft hereby disclaims all copyright interest in the program "Name program" (one line description of the content or function) written by the Author(s). [Name Dean], Dean of [Name Faculty]

Assert your own, personal copyright:

© YEAR, [NAME], [REFERENCE project, grant or study if desired]

Original slide by Paula Martinez Lavanchy
https://doi.org/10.5281/zenodo.4772235

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Step 3: Apply one of the TU Delft pre-approved Open Source Software licenses

Permissive licenses: MIT, BSD, Apache

Restrictive licenses: GPL, AGPL, LGPL, EUPL

https://choosealicense.com/licenses/

"Guidelines on Research Software Licensing, Registration and Commercialisation at TU Delft" http://doi.org/10.5281/zenodo.4629635

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Step 4: Make the software openly available

- GitHub/GitLab
- Data/Code repository - (4TU.ResearchData, Zenodo or a Software specific archive)

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Step 5: Register the software

- Registration of research outputs at TU Delft is done in PURE
- Allows management to track the contributions
  - Information is automatically added if 4TU.ResearchData is used, otherwise it has to be added manually

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Recognition: ORCID

10.5281/zenodo.3332807

Why Open Source Software?

10.5281/zenodo.3332807

TU Delft: Open Science Community

https://osc-delft.github.io/

Thank you!

More information:

TU Delft Library: Open Science

Blog: Open Working

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