

# Contribution of university libraries to data literacy and open science skills: TU Delft Library experience

Paula Martinez Lavanchy, 26 October 2021

# TU Delft at a glance

Education	Bachelor	Master
Programmes	16	33
Student population	13,081	11,151
First year students at TU Delft	3,971	1,750
Diplomas (2017/2018)	2,474	3,357

Personnel	fte	head-count
Faculty staff (full, associate and assistant professor)	981	
Other scientific staff	1015	
Professional services	2,144	
PhD students (total)		2,798
out of which employed by TU Delft	1,243	
<b>Total staff</b>	<b>5,383</b>	

**TU**Delft

(Figures are based on 2018)

[www.tudelft.nl/factsandfigures](http://www.tudelft.nl/factsandfigures)

## Eight faculties

- Aerospace Engineering (AE)
- Applied Sciences (AS)
- Architecture and the Built Environment (ABE)
- Civil engineering and Geosciences (CEG)
- Electrical Engineering, Mathematics and Computer Science (EEMCS)
- Industrial Design Engineering (IDE)
- Mechanical, Maritime and Materials Engineering (3mE)
- Technology, Policy and Management (TPM)

*“Open Science, including access to data, is being widely promoted and there is increasing investment in cyber-infrastructures and digital platforms but the skills that are required by researchers and research support professionals to fully exploit these tools are not being given adequate attention.”*

OECD *publishing*

# **BUILDING DIGITAL WORKFORCE CAPACITY AND SKILLS FOR DATA- INTENSIVE SCIENCE**

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July 2020 **No. 90**



*“Academic libraries (...) are a natural focus for digital skills support and capacity building (...). [They] train others in data and software practices, particularly in relation to foundational skills and data stewardship.*

*(...)*

*...Libraries can be an important resource for universities to increase their digital workforce capacities, provided that the necessary investment is made.”*

*(Section: Recommendations for universities)*

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# **BUILDING DIGITAL WORKFORCE CAPACITY AND SKILLS FOR DATA- INTENSIVE SCIENCE**

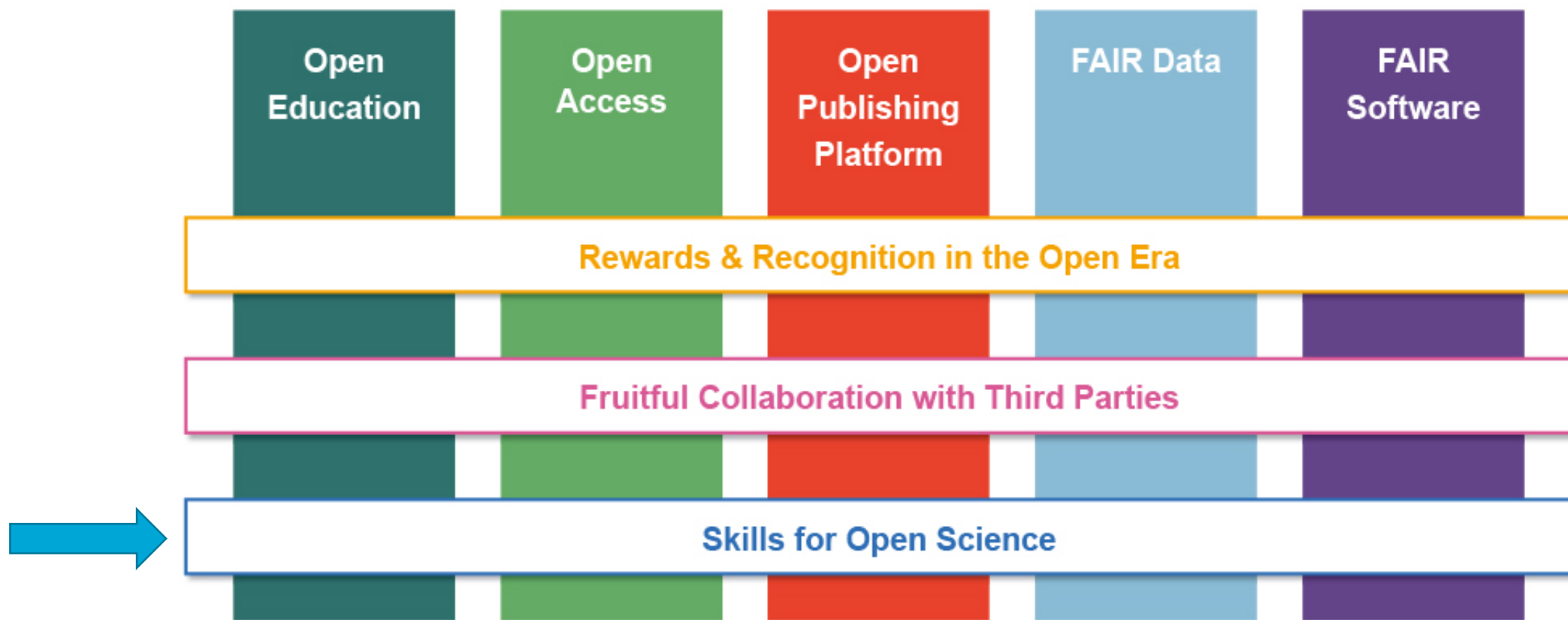
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# Open Science Programme 2020 – 2024 - ‘Research and Education in the Open Era’

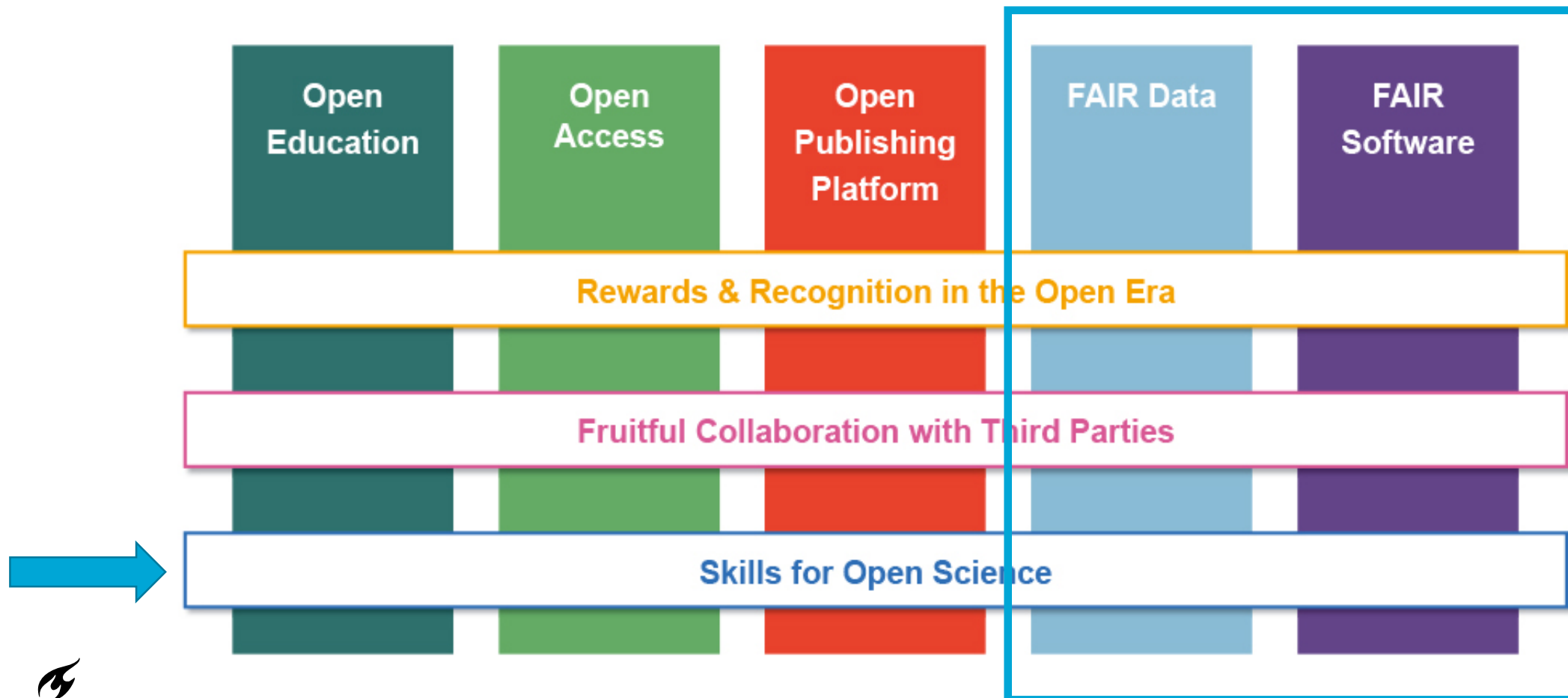


# Motivation

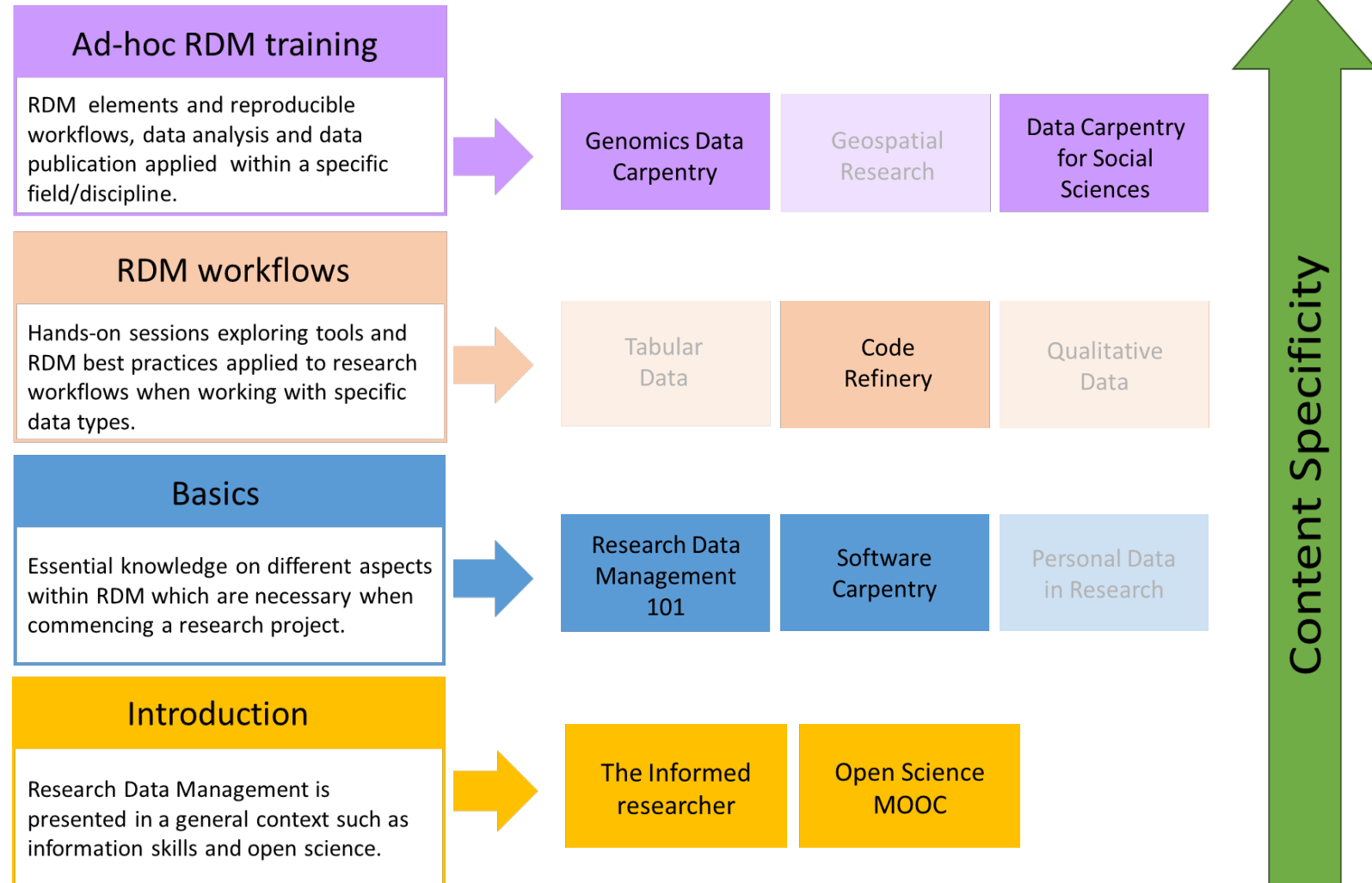
To help students and researchers at TU Delft develop the necessary skills to be able to work as **efficiently**, **reproducibly**, and **openly** as possible.

We consider these important steps for making **Open Science a reality**.

# Open Science Programme 2020 – 2024 - ‘Research and Education in the Open Era’

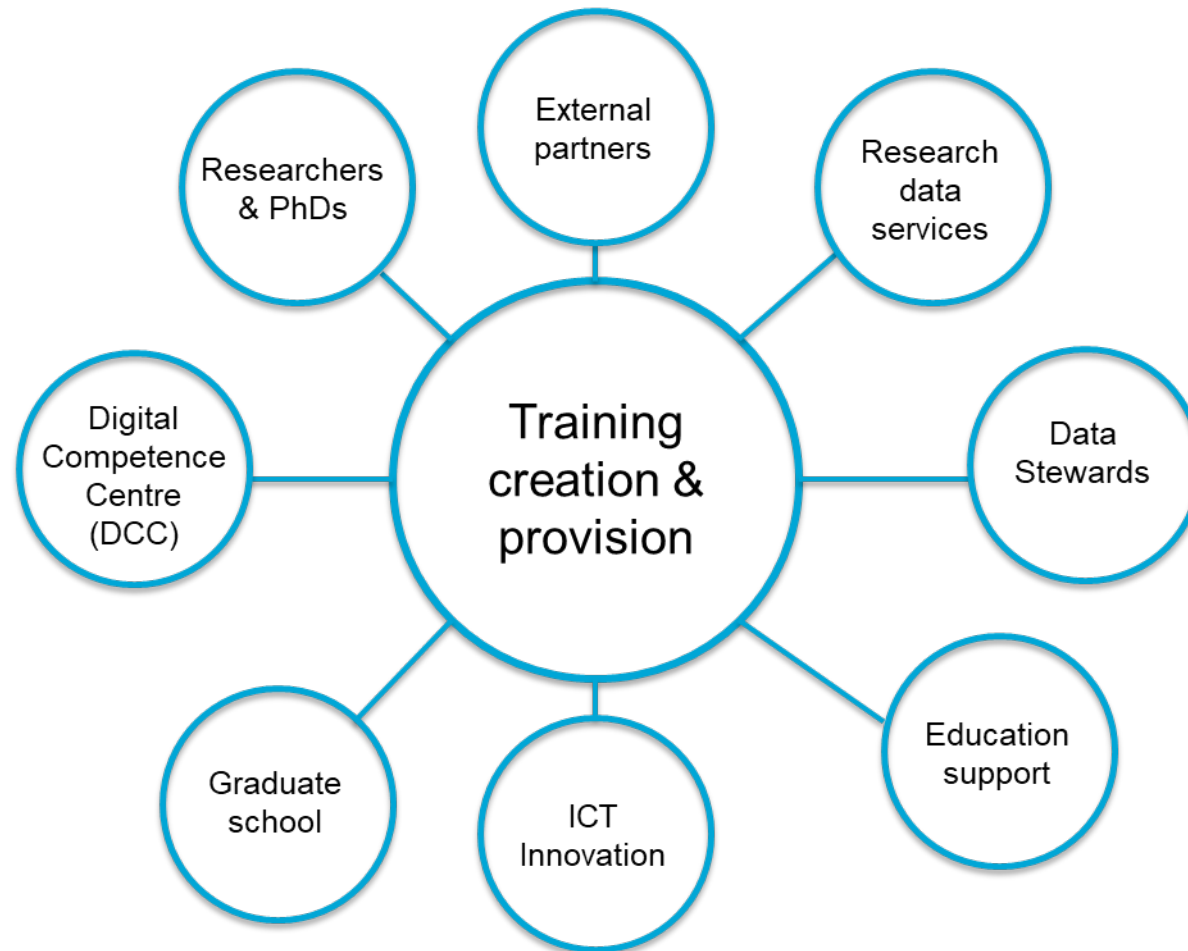


In 2019, the Research Data Services team and the Faculty Data Stewards drafted and started implementing a Vision for Research Data and Software Management training.





# A collaborative effort



# The Library as training provider

# Research Data Management 101

- RDM101 is a blended three-week course aimed at first-year PhD candidates
- Time investment: 4 – 6 hours per week
- 25 students per run; 4 runs per academic year
- After taking this course, participants should be able to:
  - Realise the importance of **good data management** for research
  - Identify different **data types** relevant for their projects
  - Recognise the **relevant regulations, policies, and legal requirements** for their data
  - List the main components of the **FAIR data** principles
  - Connect the FAIR data principles to their **own research workflow**
  - Use what they learned to design an efficient **RDM strategy**

Tell us something that you really like about the course!

*“The **assignments**. They help me a lot about my data management plan. I can answer almost all questions in DMPonline.”*

*“The **highly practical orientation** of the course: I found a lot of suggestions on practical tools, strategies and methods to improve my RDM practices.*

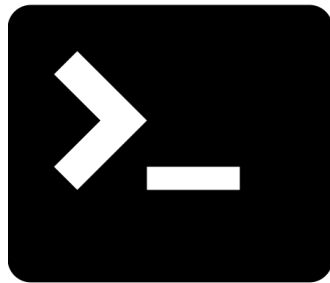
*The **interaction with the organisers**, who did a great job, showed a lot of commitment and put significant effort in answering all the doubts we had and even gave **personalised suggestions** for specific research areas.”*

So far the feedback has been really positive 😊

# The Library as training coordinator

# Software Carpentry workshops

- These are hands-on workshops, currently given online over four half-days
- Aimed at students and researchers with no prior programming experience
- These workshops cover the basic skills needed to work reproducibly with code, such as:



- Instructors and helpers are data stewards, members of the Digital Competence Centre, colleagues from ICT innovation, Data Champions and PhD students

# What participants have to say about Software Carpentry workshops!

*“This course is **amazing!** I learned a lot about Unix and how to use Git”*

*“Good course, the **instructors** really know what they are talking about.”*

*“Thanks for the software carpentry workshop, it was the **best example of successful online education** I have experience (within the graduate school and beyond).”*

# The Library as a community hub



# Open Science Community Delft



The 13 open science communities worldwide. Image by [Anita Eerland](#), licensed under [CC BY-ND 3.0](#).

## Delft Open Hardware

- Design and develop open hardware projects together, through sharing our ideas in meetups.
- Organise training and events to raise awareness around open hardware
- Mentor and supervisor open hardware bachelor & master theses projects and internships

# Summary

*“Libraries can be an important resource for universities to increase their digital workforce capacities, **provided that the necessary investment is made**”*

Thank you for  
your attention!

And a huge  
thank you to...



Alastair Dunning

Amir Ebrahimi Fard

Ashley Cryan

Barbara Vreede

Ben Companjen

Bjorn Bartholdy

Carlos Teijeiro

Claudia Engelhardt

Claudiu Forgaci

Cok Francken

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