netherlands eScience center

DCC als landingsplaats van eScience-producten

Wageningen, 4 februari 2020
Netherlands eScience Center

Joris van Eijnatten, directeur
Tom Bakker, beleidsmedewerker

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Wat is het eScience Center?
Wat kunnen we doen voor DCC's?

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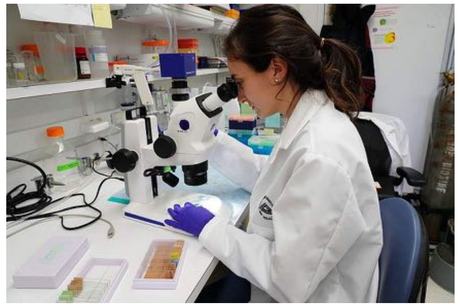
Tom Bakker, beleidsmedewerker

Photography: Elodie Burrillon

Enabling digitally enhanced research





NWO

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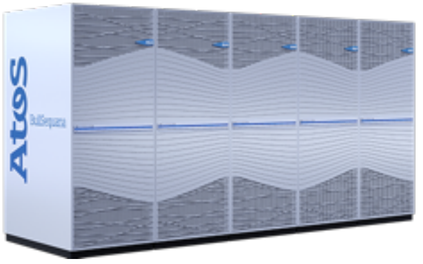
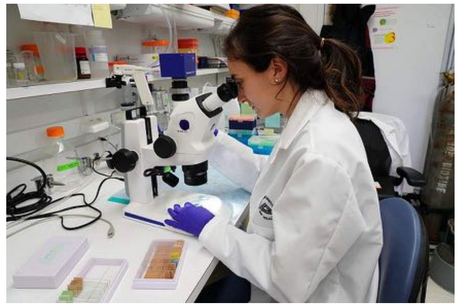
SURF



Optimized data handling

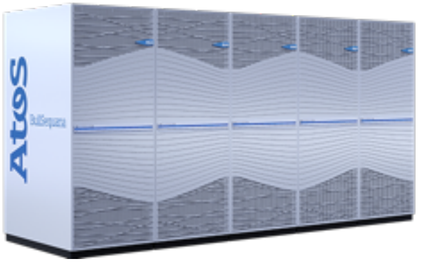
- Data Assimilation and Integration
- Databases
- Handling sensor data
- Linked Data and Semantics
- Real-time Data Analysis

Big Data Analytics

- Computer Vision
- Data Mining
- Machine Learning
- Natural Language Processing
- Statistics
- Visualization

Efficient Computing

- Accelerators
- Distributed Computing
- High Performance Computing
- Numerical Modelling and Algorithms
- Workflows and Orchestration



What are DCCs?

- ✓ generic term: infrastructure, data, software, research
- ✓ where are they?

eScience Center's new strategy?

- ✓ Spring 2020

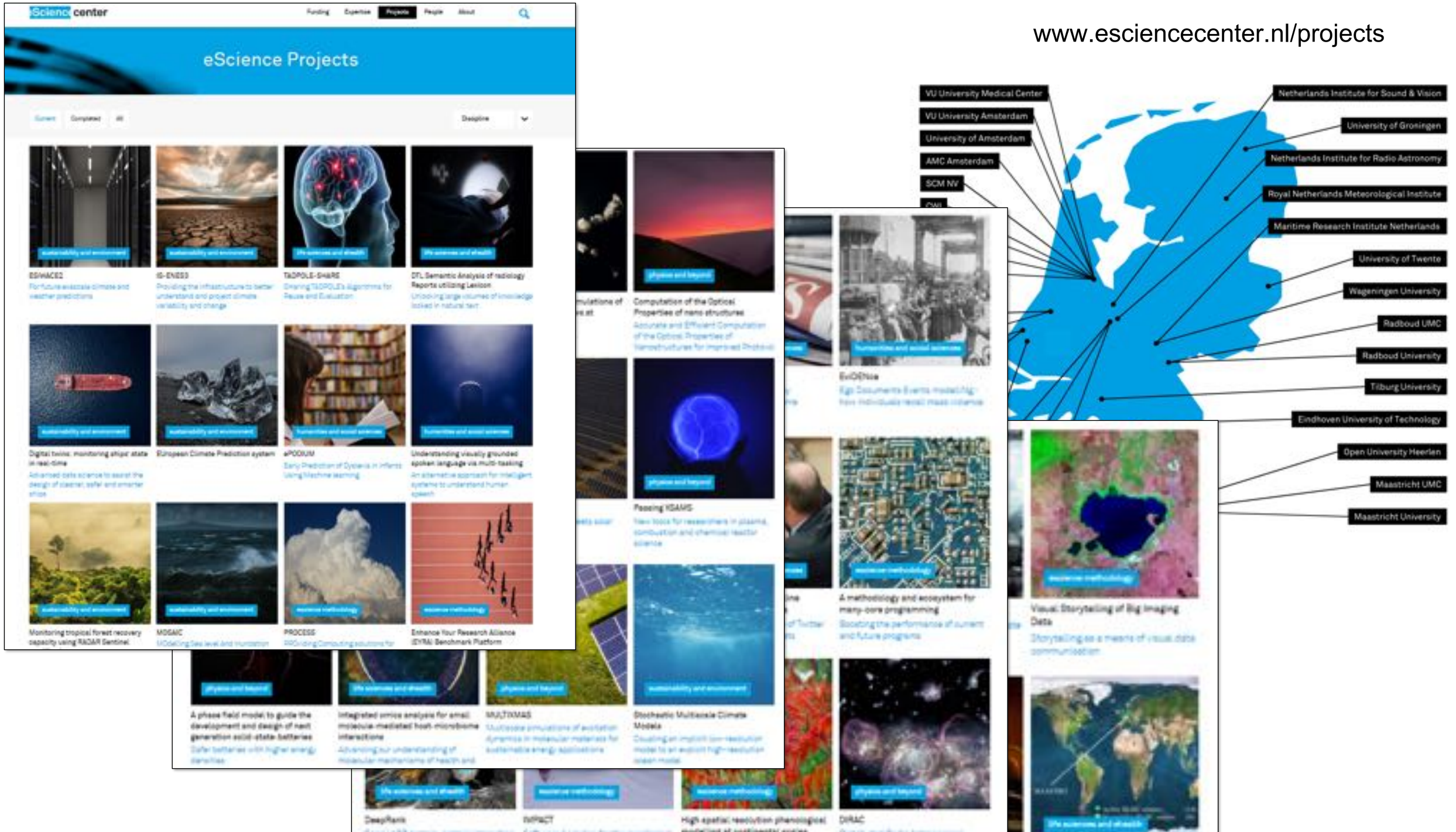
What do we need to make this work?

- ✓ peer to peer communication: Research Software Engineers (RSEs)
- ✓ softwareness
- ✓ mutual commitment

- Onderzoeksprojecten
- Workshops & trainingen
- Online resources
- Netwerken & communities

Samenwerking met DCC’s voor netwerk-effecten?

www.esciencecenter.nl/projects



1. Skills & open science training

- Version control, unit testing
- Reproducibility, Jupyter, myBinder
- Software licences
- Train-the-trainer

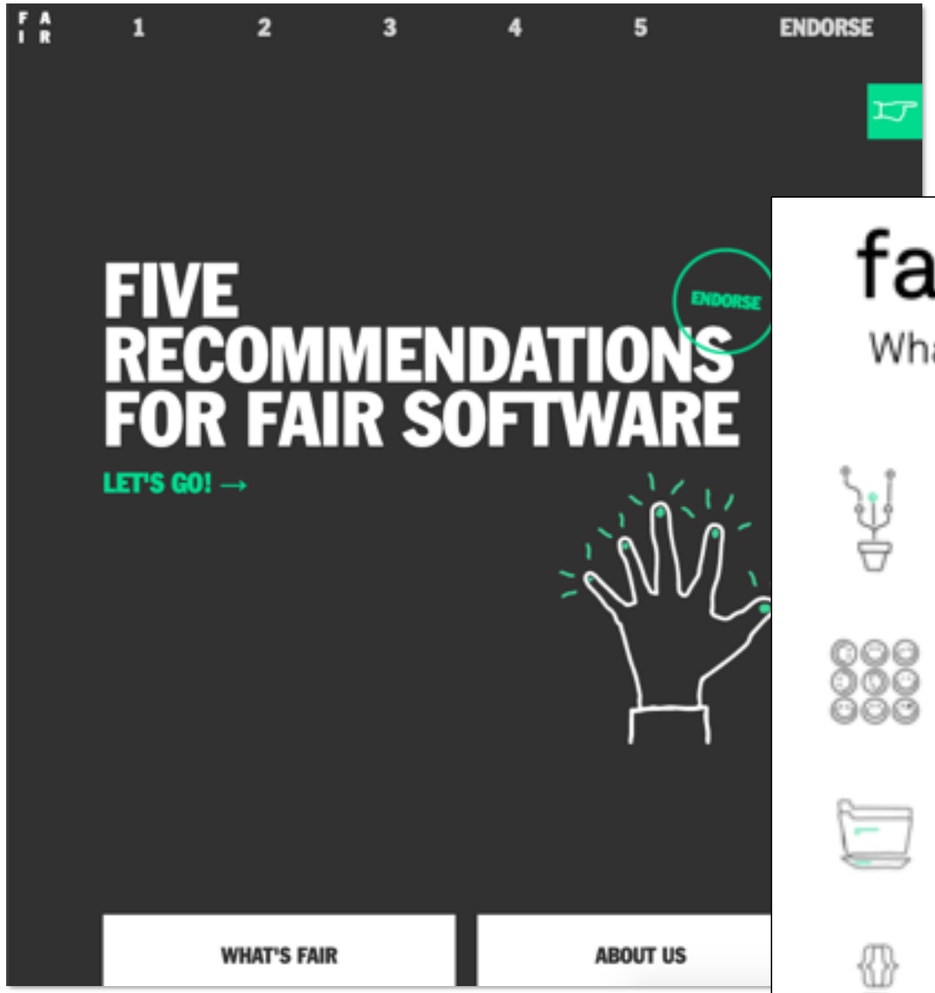
2. Technology workshops & SIGs

- Machine learning & AI
- Containers & Virtualization
- GPU, HPC, cloud computing

3. eScience Center software & tools

- McFly (machine learning for time series data)
- Xenon (middleware for computing resources)
- Case Law (visualisatietool Rechtspraak.nl)

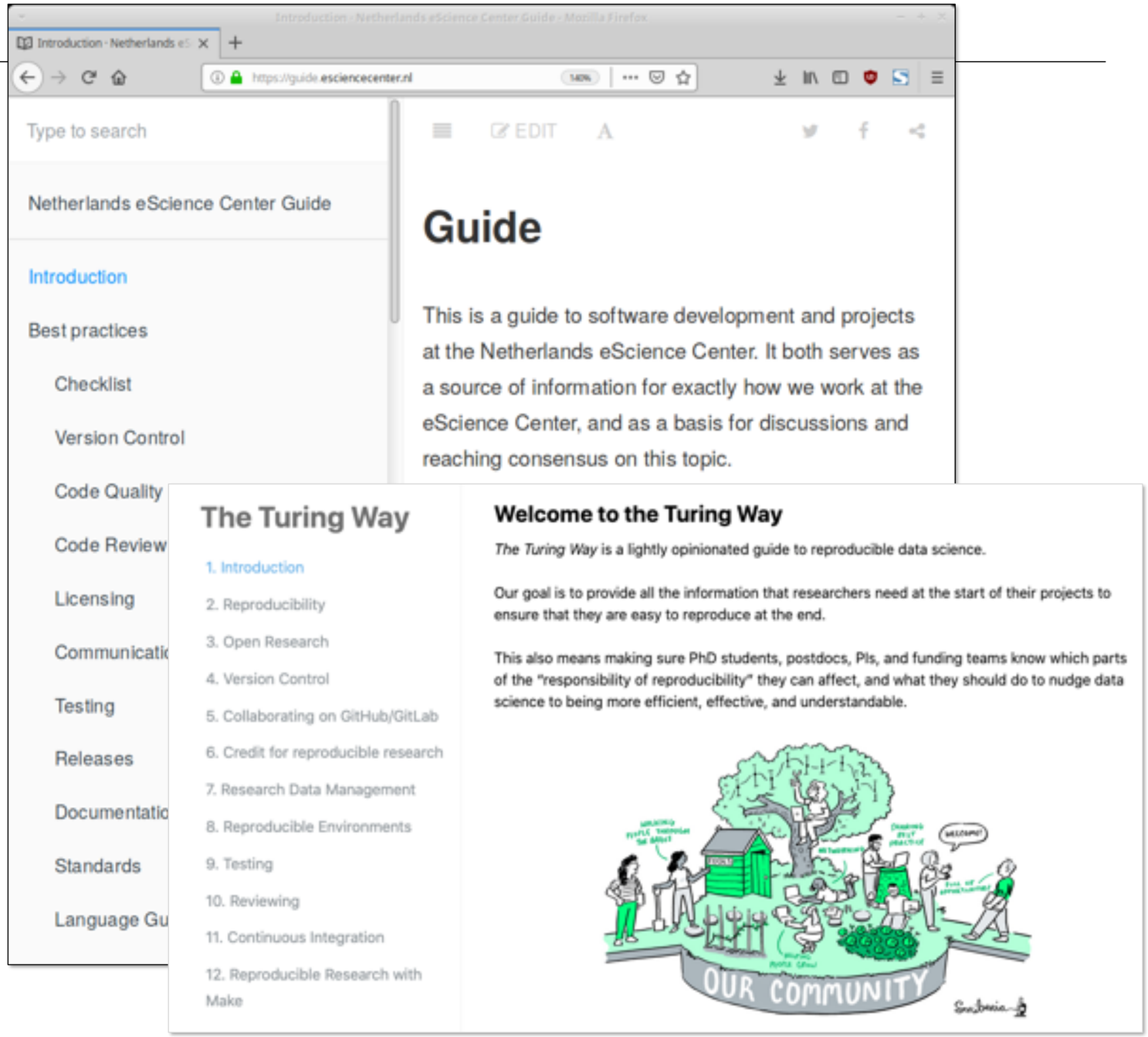
Online resources



Online resources

- version control
- branching model
- coding style
- testing
- code quality tools
- releases
- licenses
- packaging
- citation

https://guide.esciencecenter.nl
https://the-turing-way.netlify.com



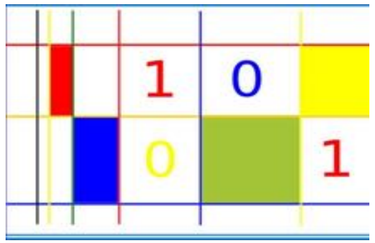
Special Interest Groups

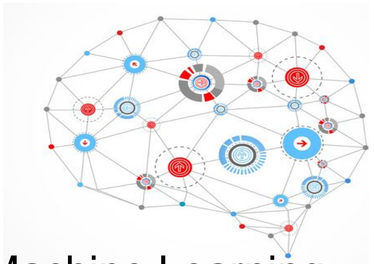
- Recurring meetings on technology areas
- Sharing knowledge and new technological developments
- Invited speakers from industry and academia
- Internal workshops, hackathons, following tutorials and MOOCs, etc.

Natural Language Processing

Analytics & Data Mining

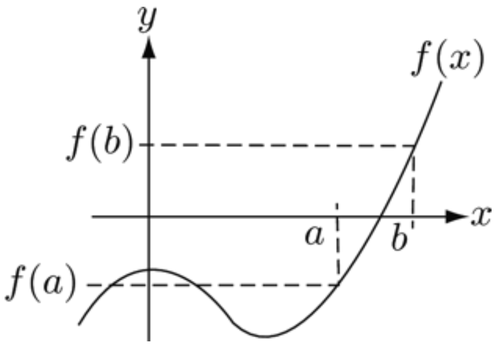
Data





Machine Learning & Computer Vision

Visualization



Numerical techniques

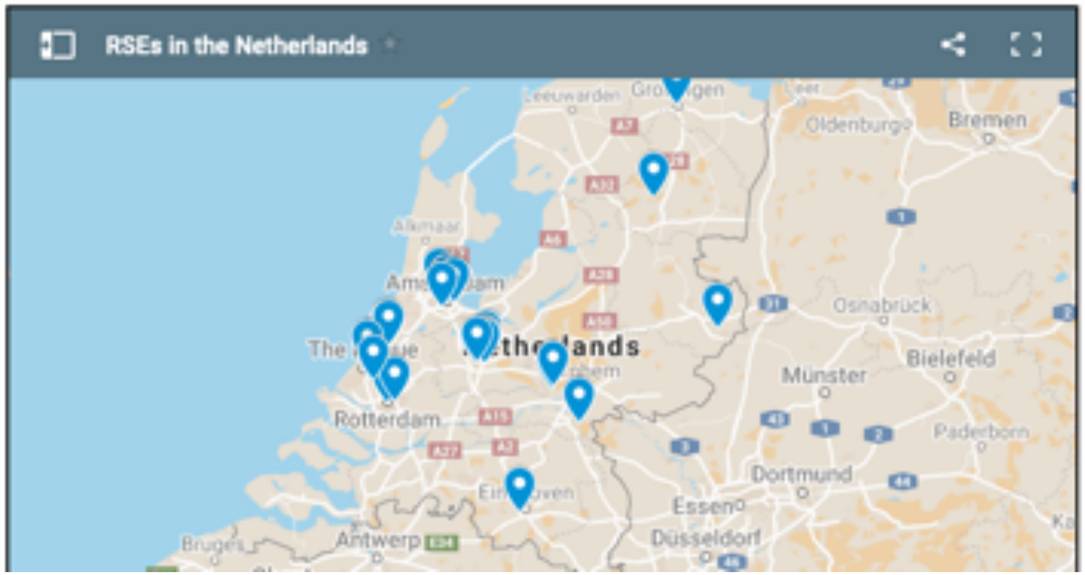
Workflows and Orchestration

Efficient Computing

https://nl-rse.org

NL-RSE

- Nationaal netwerk van Research Software Engineers (RSEs)
- Internationaal: Scandinavië, V.S., Duitsland, UK
- NL: 35+ instellingen, ~200 leden
- Activiteiten: meetups, programmers meetings, conferentie



en verder..

National Coordination Point Research Data Management

ePLAN National platform for data- and compute-intensive research in the Netherlands

nationaal programma open science

https://github.com/research-software-directory

Content Management System for research software

- Free, Open
- Customizable
- Rich metadata

Aggregate data from many sources:

- GitHub, Zenodo, Zotero, CFF, Medium, YouTube, …

Expose this data using standard formats

- schema.org, CodeMeta, OAI-PMH, …

Provide citation information:

- BibTex, EndNote, RIS, …

zenodo

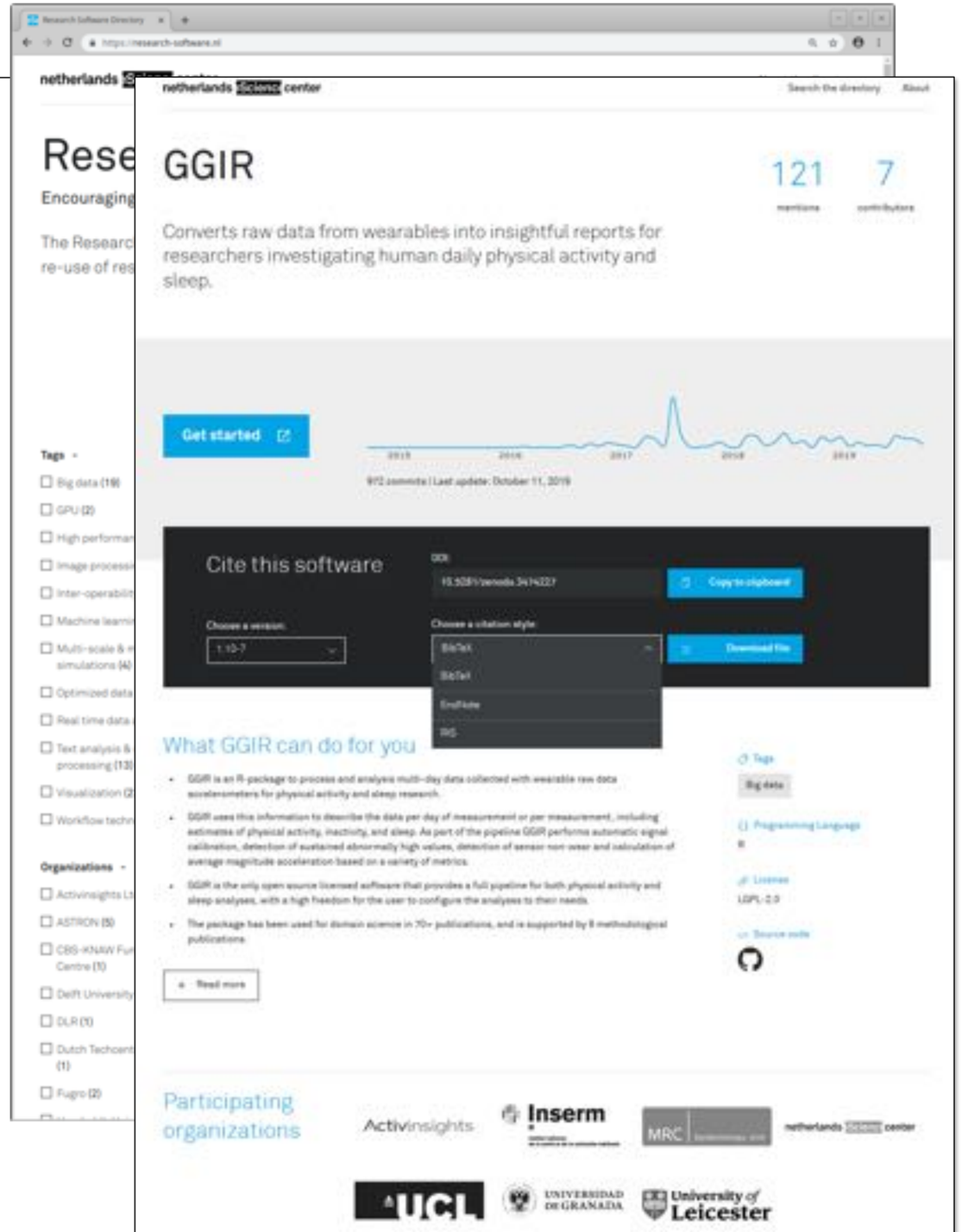
GitHub

OpenAIRE

NARCIS

Data Archiving and Networked Services

DANS



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Samenwerking met DCC’s

voor netwerk-effecten