How to support and upskill
After Digitization and Digitalization comes Digital Transformation

Kristoffer L Nielbo
kln@cas.au.dk
knielbo.github.io

Center for Humanities Computing, chcaa.io
Aarhus University ARTS, arts.au.dk
Outline

1 Deluge

2 Automation

3 Organization

4 Effect
The Data Deluge

- The **Data Deluge** is transforming knowledge discovery and understanding in every domain of human inquiry.

- A large part of these data are **soft** and **unstructured**.

- To get value from these data, **Humanities** needs to leverage **Automation** and become **Data-driven**.
Automation & Data-driven Research

Automation and data-driven research are organizational challenges

Automation

- Research and evaluate applications of Machine Learning in the humanities
- Move beyond research where ML applications are the end-goal
- Train, validate and apply “models as a service”

Data-driven

- Build, maintain & utilize high quality data sets
- Create a culture that embraces data (appreciates, uses, prioritize)
- Develop and employ software that empower people and supports good process
[solution] An adaptive research and development unit that intervenes in humanities research through collaborative development

- **build communities** across institutional boundaries, seed potential research projects and utilize peer pressure

- breed cross-domain respect and ensure that scientific developers and research software engineers have a career path within the organization
Effects of Competency Development and R&D

Through digitalization of research, competency development prepares the ground for digital transformation

- create a cross-domain language and value system
- generates a research- and problem-oriented community (a ‘userbase’)

Sustainable R&D units are the transformative tool that can interface and develop technology for research

- facilitate research → ++publications & visibility
- streamline funding applications → ++€
- enforce open science standards → ++research
- development of research spin-offs
How to support and upskill

Kristoffer L Nielbo
kln@cas.au.dk
knielbo.github.io

Deluge
Automation
Organization
Effect

RDM spin-off

Collection of Documents

Full-text searchable web application

node.js
Vue.js
mongoDB

chcaa.io

Document Data Schema

- Date
- Title
- Content
- Curator
- ...

Lucene index
Define Data Field > Build Lucene Query

Field Name
- title

Field data type
- String

Brief description of the field
- The title of your document in your filesystem

- is text searchable: true
- is in default index: true
- results can be sorted by this: true

Lucene Query String
```
(title: "foo bar" AND body: "quick brown") OR title:fox
```

Logic Plane Editor
```
And
- title: "foo bar"
- body: "quick brown"
- title:fox
```

RDM spin-off
How to support and upskill
Kristoffer L Nielbo
kln@cas.au.dk
knielbo.github.io

Deluge
Automation
Organization
Effect
Implementing upskill and support for your research project or organization:

- Description ...
- Preconditions ...
- Goal ...
- Risk ...

10 minutes table followed by general discussion