

# research.chalmers.se

The collage consists of four distinct visual elements:

- Network Graph:** A complex network diagram with nodes of various colors (yellow, blue, red) and connecting lines. Labels include 'Depal', 'Volvo Group', and 'Volvo Cars'.
- Projects per department:** A donut chart showing the distribution of research projects across departments. The data is as follows:

Percentage
27.1%
22.9%
18.6%
8.1%
6.7%
- Project partners:** A world map showing the geographical distribution of project partners. A legend indicates 'Private' (yellow) and 'Academic' (purple) partners. Countries labeled include Grönland, Island, Norra Atlanten, Algeriet, Libyen, Egypten, Saudiarabien, Irak, Iran, Afghanistan, Pakistan, Mali, Niger, Nigeria, Tchad, Sudan, Etiopien, Turkiet, Kazakistan, and Ukraina.
- Website Screenshot:** A screenshot of the 'research.chalmers.se' website. The main heading is 'CHALMERS RESEARCH (T) RESEARCH INFORMATION'. It features a search bar, navigation tabs for 'RESEARCH PUBLICATIONS', 'RESEARCH PROJECTS', and 'SUSTAINABLE DEVELOPMENT', and sections for 'Research in Departments' and 'International cooperation'.

# How to build a CRIS-system relevant for your institution, allowing the researchers to do research rather than administration




Jessica Lindholm

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How to build a CRIS system relevant for  
your institution  
research rather than  
administrative

..OR THE STORY  
OF WHY WE  
CHOOSE TO  
DEVELOP A CRIS  
IN-HOUSE!

Jessica Lindholm  
Chalmers University of Technology, Sweden

- 
- WHY DEVELOP A CRIS FROM SCRATCH?
  - HOW WE DID IT?
  - EVALUATING OTHER SYSTEMS
  - AGILE METHODS 
  - MAIN MOTIVATIONS AND DRIVING FORCES
  - ↳ NEXT STEPS 

Jessica Lindholm  
euroCRIS 2018

# Assignment

**Create a research  
information system  
(projects first)**

for Chalmers University of Technology  
and possibly others as well

# The team

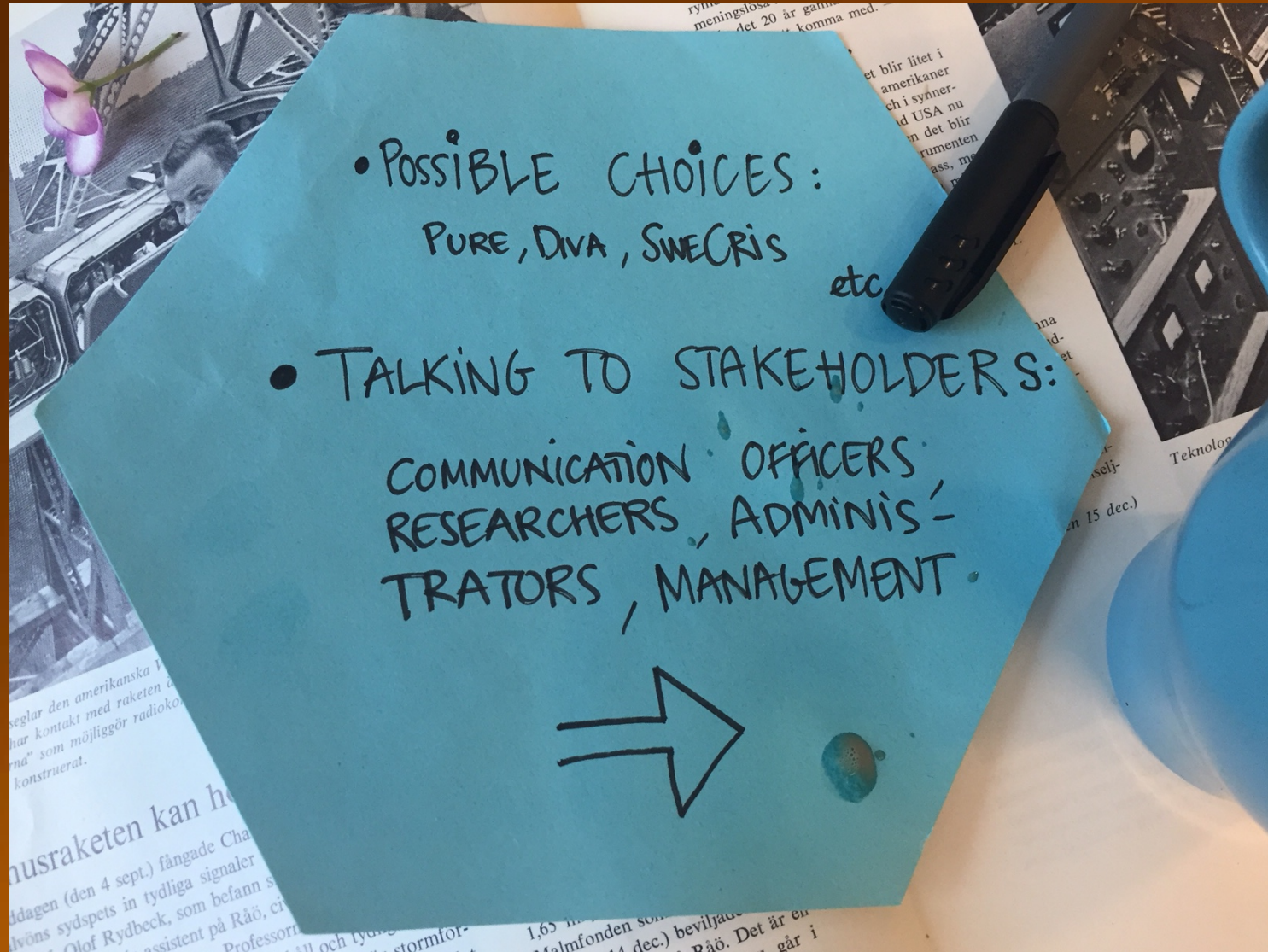
UX expertise, librarians and  
systems developers



# SCRUM team



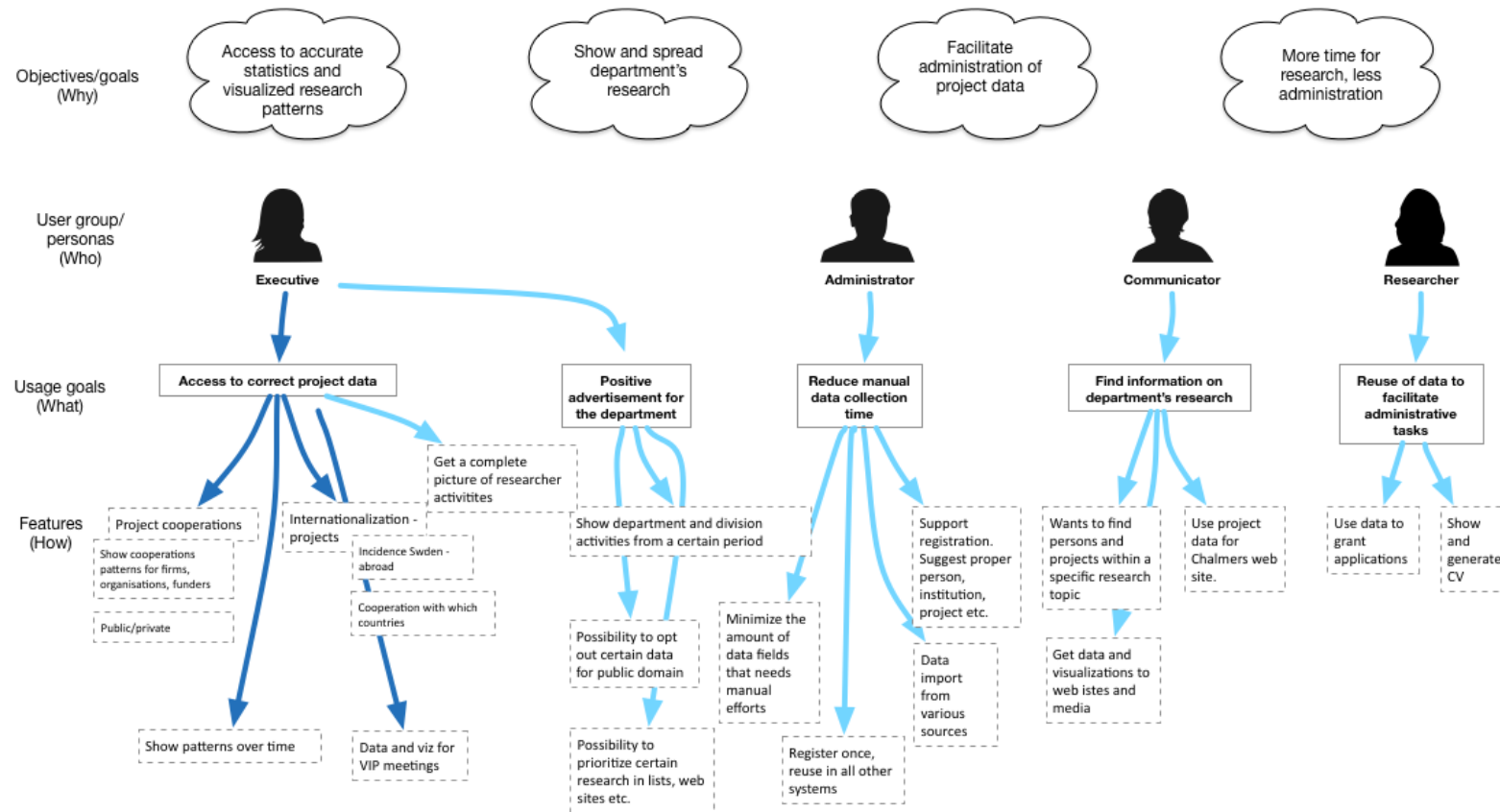
# Initial work



# Input from stakeholders

# Example method for user input

Effect map research.chalmers.se



13 May 18 2015

Objectives/goals  
(Why)

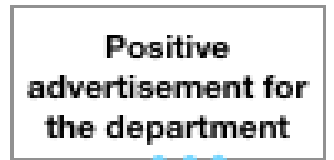


User group/  
personas  
(Who)



Executive

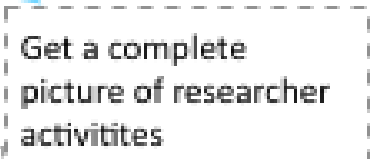
Usage goals  
(What)



Features

Project connections

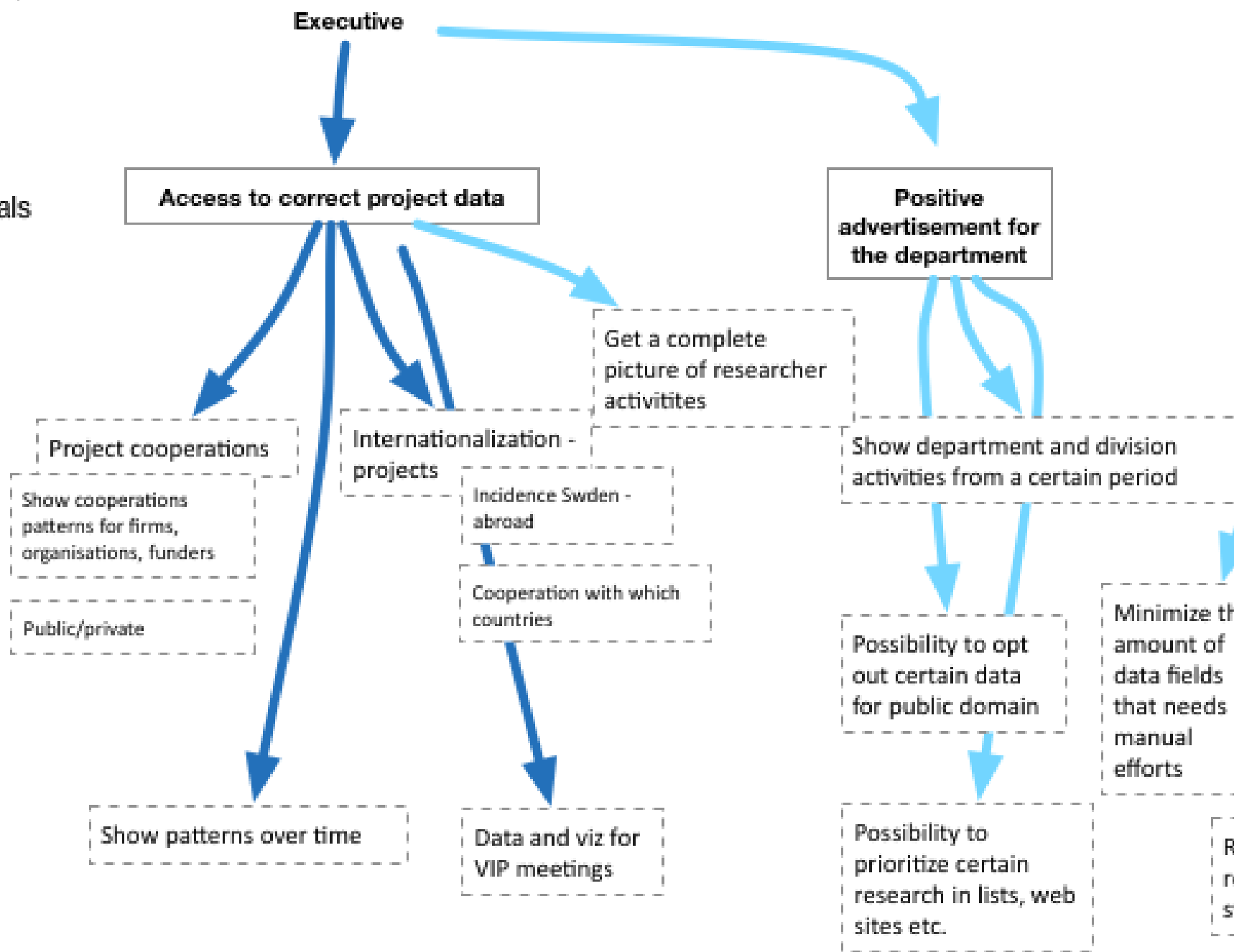
Internationalization



Show department and division

Usage goals  
(What)

Features  
(How)



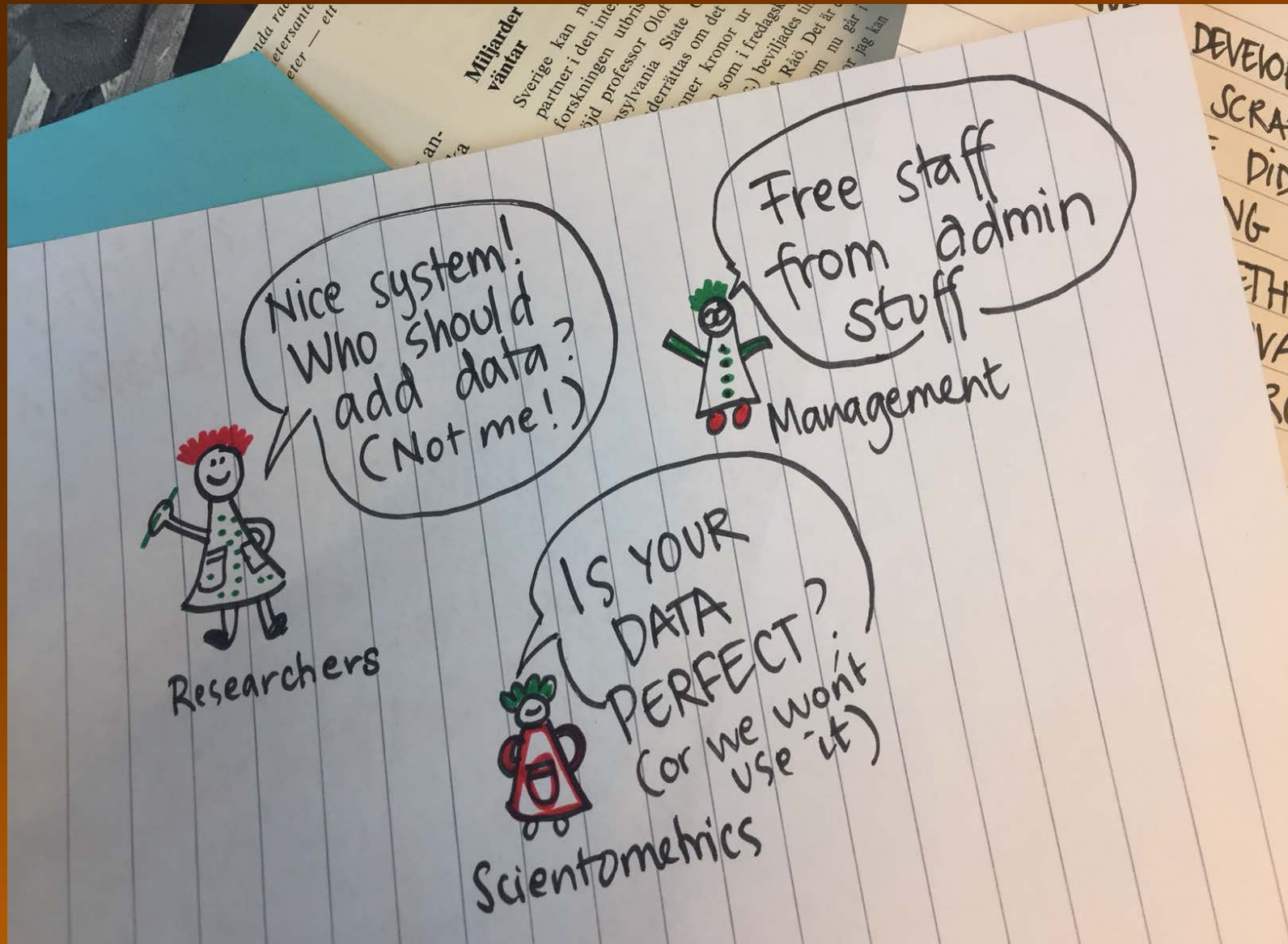
# Librarians' perspective

- Publication oriented
- Integrations with ORCID
- A way to use altmetrics
- Interoperability with national data providers, discovery systems, OPACs
- Advanced search end-user interfaces

# Researchers' perspective

- Visualize all our collaborations, e.g. with the industry
- Save our time
- Support scientometric analyses
- Integration with Google Scholar, ResearchGate etc.

# Administration perspectives



**Was there a system for  
these needs?**

**Not at that time!**

**What did you do?**

**We started from scratch,  
doing one thing at a time.**

**How did it go?**  
**I'll tell you now!**

# Release roadmap 2013-

2014

Studies

Needs/UX  
Inspiration

2015

Collaborations

Project database

Persons

2016

Visualisations

2017

Theses

Semi-automated  
classification

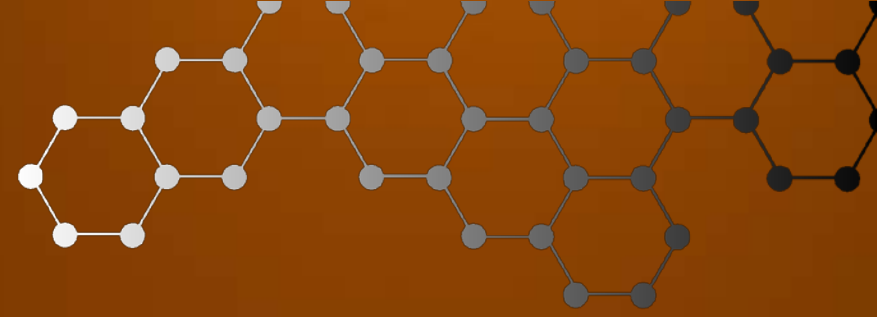
2018

Institutional repository

Research data  
? Activities?  
Impact stories/cases

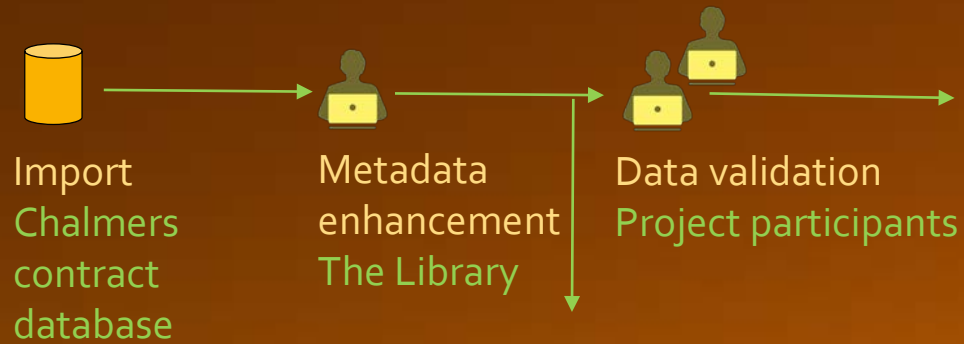
2019

research.chalmers.se



# Projects

- Visualising project information, cooperations and collaborations.
- Work flow



Visible for staff.

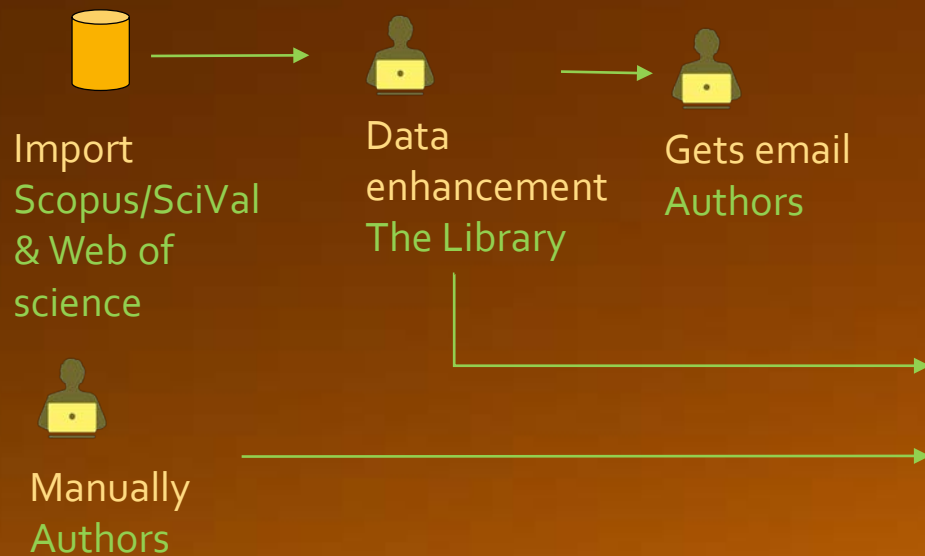


Once validated visible on the web and via API:s etc.

\* [research.chalmers.se](https://research.chalmers.se) contains ~3 000 projects (2018-06-08)

# Publications

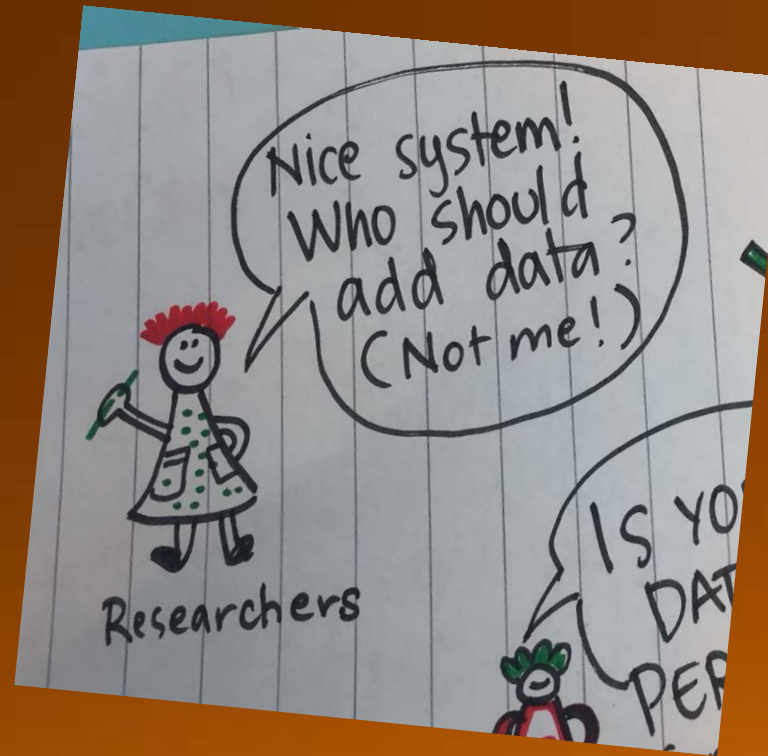
- Visualising co-authoring and collaborations, loads of identifiers.
- Work flow



Visible on the web  
and via API:s etc

\* [research.chalmers.se](http://research.chalmers.se) contains  
~60 000 publications (2018-06-08)

# User needs



# Data in and out

- Automatic import of publications from Scopus and Web of Science
- Prefilled forms for local authors (based on ISBN-orders)
- Automatic classification, based on abstract and publication channel, based on a text mining tool and data learning
- Projects come in from contractual database (Eko), initially also from Cordis and SweCris
- Person data from staff database and ORCID.org
- Data is exported to CMS, reference systems, the web (Google, Baidu, Yandex, etc), metrics database etc.

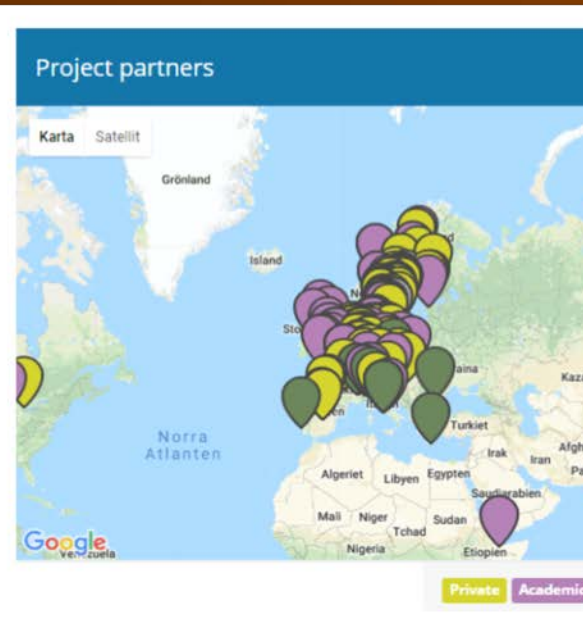
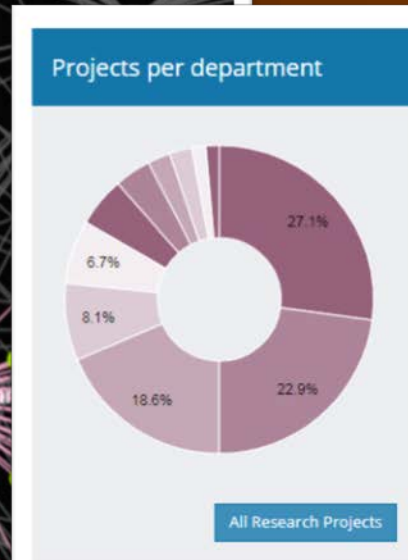
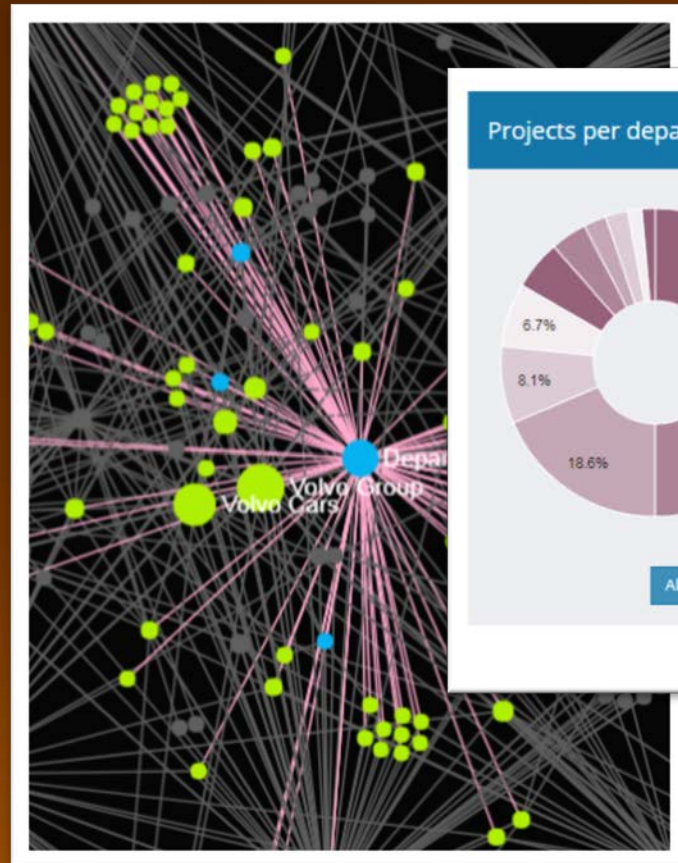
# User needs



# Helping administrators

- Automatic classification of publications
- Automatic ISBN-ordering
- Tools for mergeing and administering duplicates
- Easy-to-use interfaces
- Less metadata fields than before

# User reactions



## CHALMERS RESEARCH (T)

### RESEARCH INFORMATION

In research.chalmers.se you find information about research at Chalmers, projects, persons and publications. You can filter your search by organisation, funder, geographical data, people and collaborations.

FIND CHALMERS RESEARCH

Projects, publications, persons, organisations... Search

#### RESEARCH PUBLICATIONS

Researchers at Chalmers publish their results in a number of scientific journals, in the press and at conferences.

All Research Publications

#### RESEARCH PROJECTS

Researchers at Chalmers work in projects that explore everything from more effective wind turbines to super heavy black holes in space.

All Research Projects

#### SUSTAINABLE DEVELOPMENT

Chalmers is a pioneer in regards to how a university can take on work with and take responsibility for sustainable development.

Sustainable Development

#### Research in Departments

- Architecture and Civil Engineering
- Biology and Biological Engineering
- Chemistry and Chemical Engineering
- Communication and Learning in Science
- Computer Science and Engineering
- Electrical Engineering
- Industrial and Materials Engineering
- Mathematical Sciences
- Mechanics and Maritime Sciences
- Microtechnology and Nanoscience (MNC)
- Physics
- Space, Earth and Environment
- Technology Management and Economics

#### Research within Areas of Advance

- Building Futures
- Energy
- Information and Communication Technology
- Life Sciences and Engineering
- Materials Science
- Nanoscience and Nanotechnology 2010-2017
- Production
- Transport

#### International cooperation

World Search

How to build  
your ins  
research  
administr

Jessica Lindholm a  
Chalmers University

06-08

BEFORE:

"I set aside a day and  
warn my colleagues  
before adding this  
years' publications"

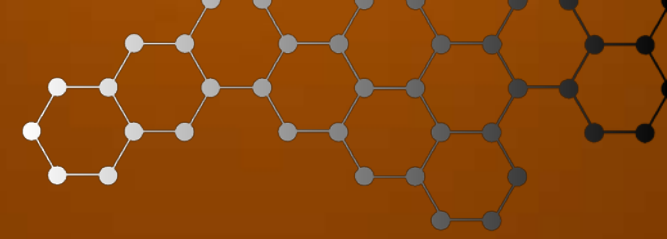
NOW:

Research is "the first  
administrative system,  
which is fun to use".

"This is a goldmine."

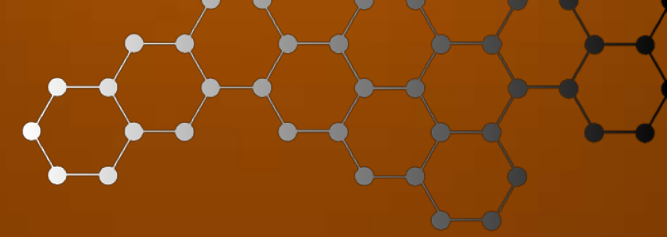
"A leap forward in  
usability"

# Lessons learned



- ✓ Let the developers choose the technology
- ✓ Talk to the users about what they need and show them stuff
- ✓ Do not plan years ahead, solve what is needed and creates value for the users now
- ✓ Work in iterations, i.e. release small things often
- ✓ Prioritise - do one thing at a time
- ✓ Dare to fail

# Lessons learned



- ✓ Prepare to adapt quickly to changes, since the world is moving fast
- ✓ Try your hypotheses with real users
- ✓ Requirements come to you as you develop
- ✓ Every busy researcher still seem to have 15 minutes for a meeting, when asked nicely.



Visit / use ↘

research.chalmers.se

RESEARCH-TEST.chalmers.se

### CHALMERS RESEARCH (T) RESEARCH INFORMATION

In research.chalmers.se you find information about research at Chalmers, projects, persons and publications. You can filter your search by organisation, funder, geographical data, people and collaborations.

FIND CHALMERS RESEARCH

Ask / email ↘

jessica.lindholm@chalmers.se

Open source software?  
Yes, when we are done.

Jessica Lindholm, Chalmers University of Technology  
EuroCRIS conference, June 13-16<sup>th</sup> 2018, Umeå, Sweden

