Ricgraph
Research in context graph

Presentation at Utrecht University
Pathways to Sustainability community managers
February 4, 2025

Rik D.T. Janssen
Utrecht University
r.d.t.janssen@uu.nl
0000-0001-9510-0802
www.ricgraph.eu

CC BY

Motivation

From our Pathways to Sustainability community, we would like to develop a tool that makes it easy to find both experts (inside and outside the university) and organizations by using keywords.

Can Ricgraph help with this?

Contents

- Ricgraph introduction
- Questions & demo Ricgraph
- Discussion Motivation

What if…
we look at research information as a network (graph)?

- We have relations between items
- Related items are neighbors
- We can “walk” from one item to another
- No duplicates

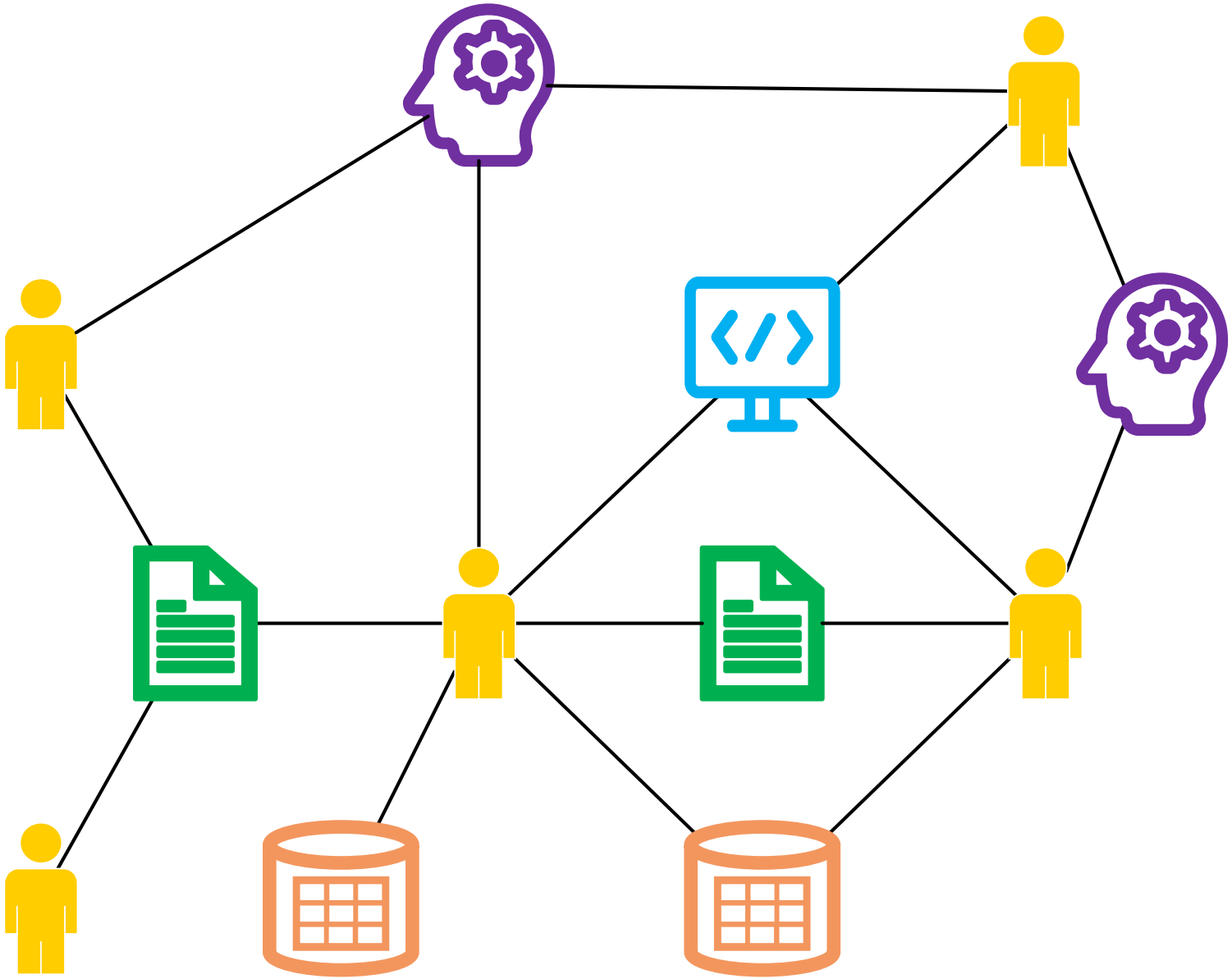
person

article

data set

software

skill



Utrecht University Ricgraph

What is Ricgraph?

- many types of items in a single graph
- multiple source systems
- facilitates reasoning: infers new relations between items

person

article

data set

software

skill

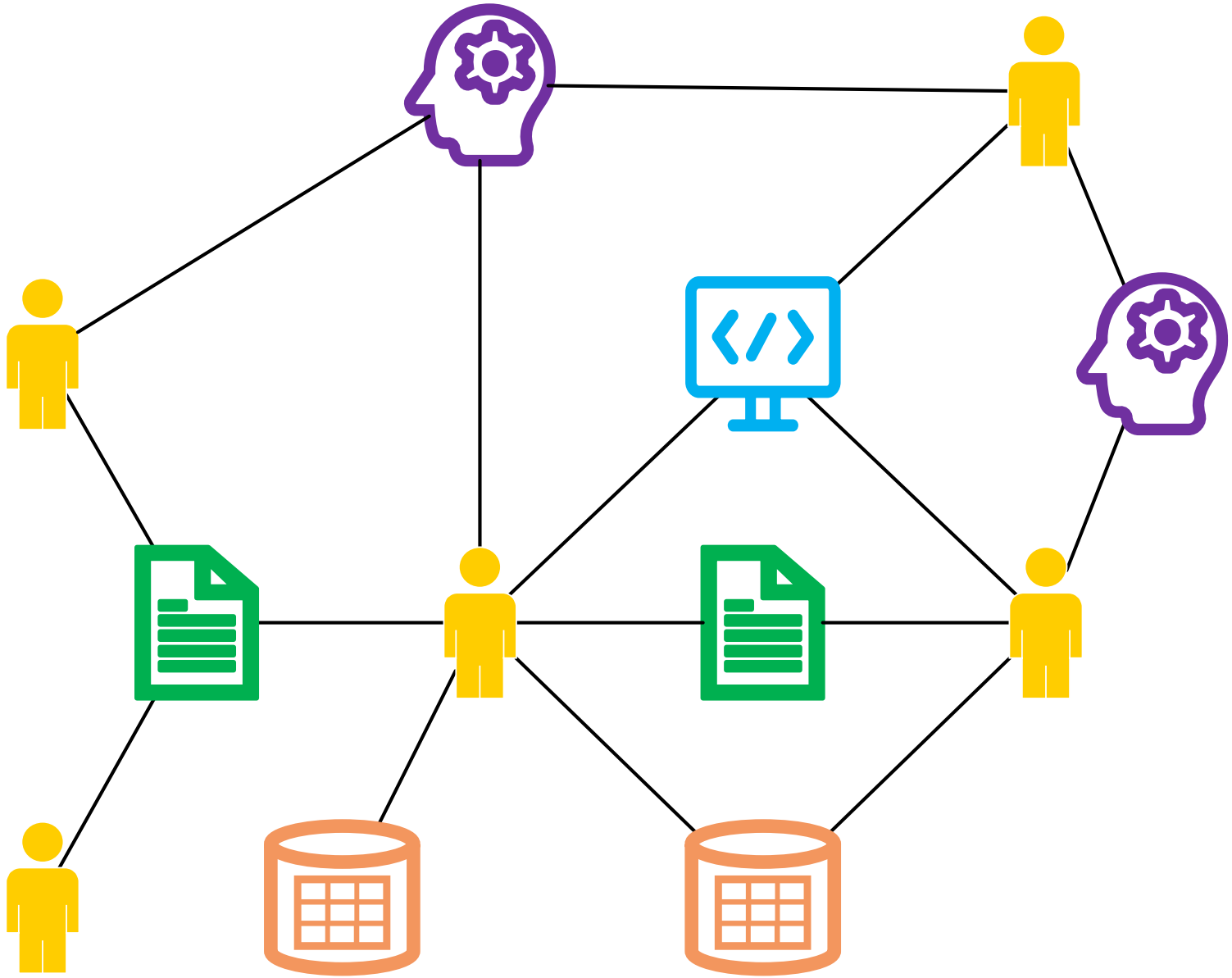
Ricgraph generated

publications source system

data sets source system

software source system

skills source system

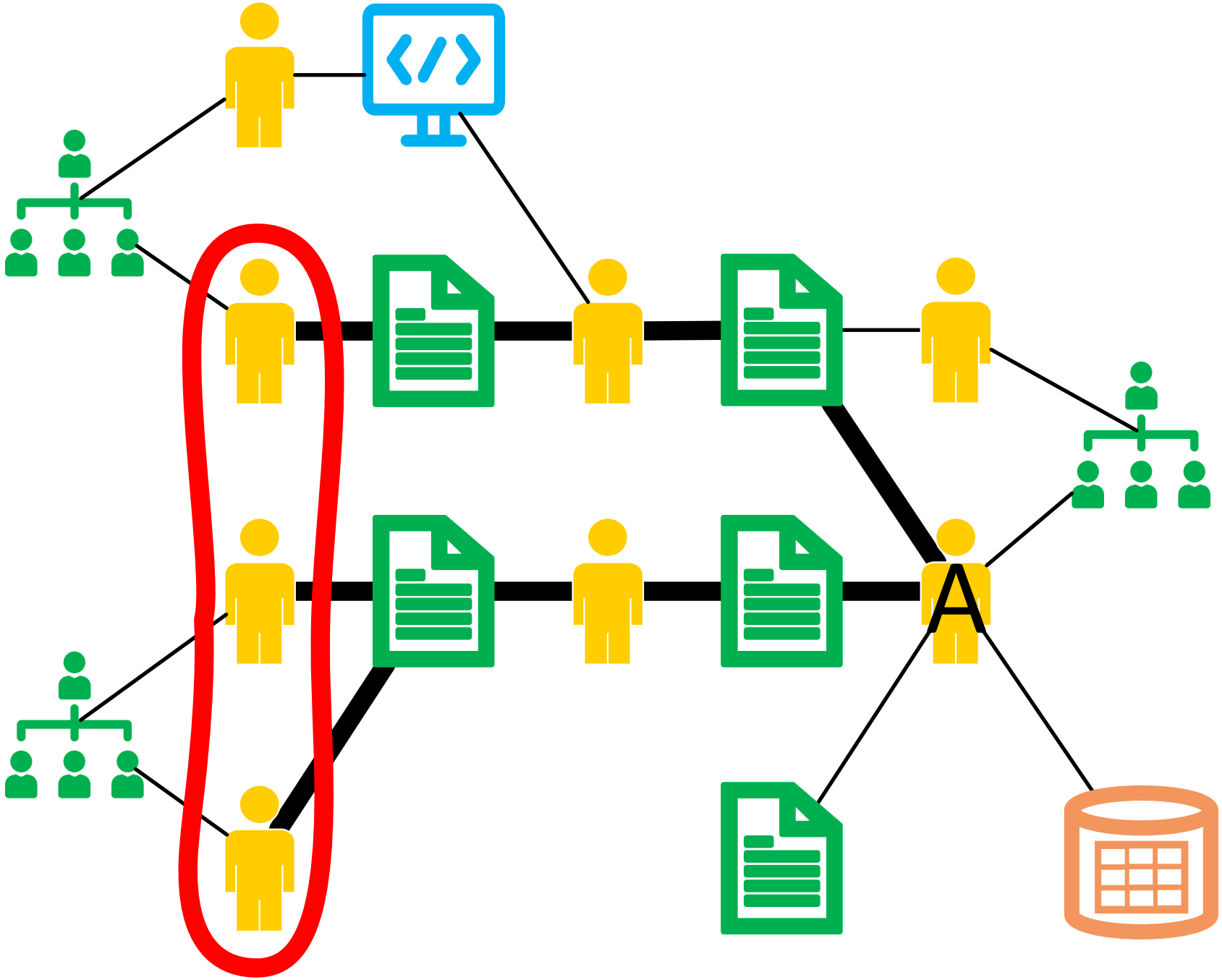


Utrecht University

Ricgraph

What can Ricgraph do?
Use case

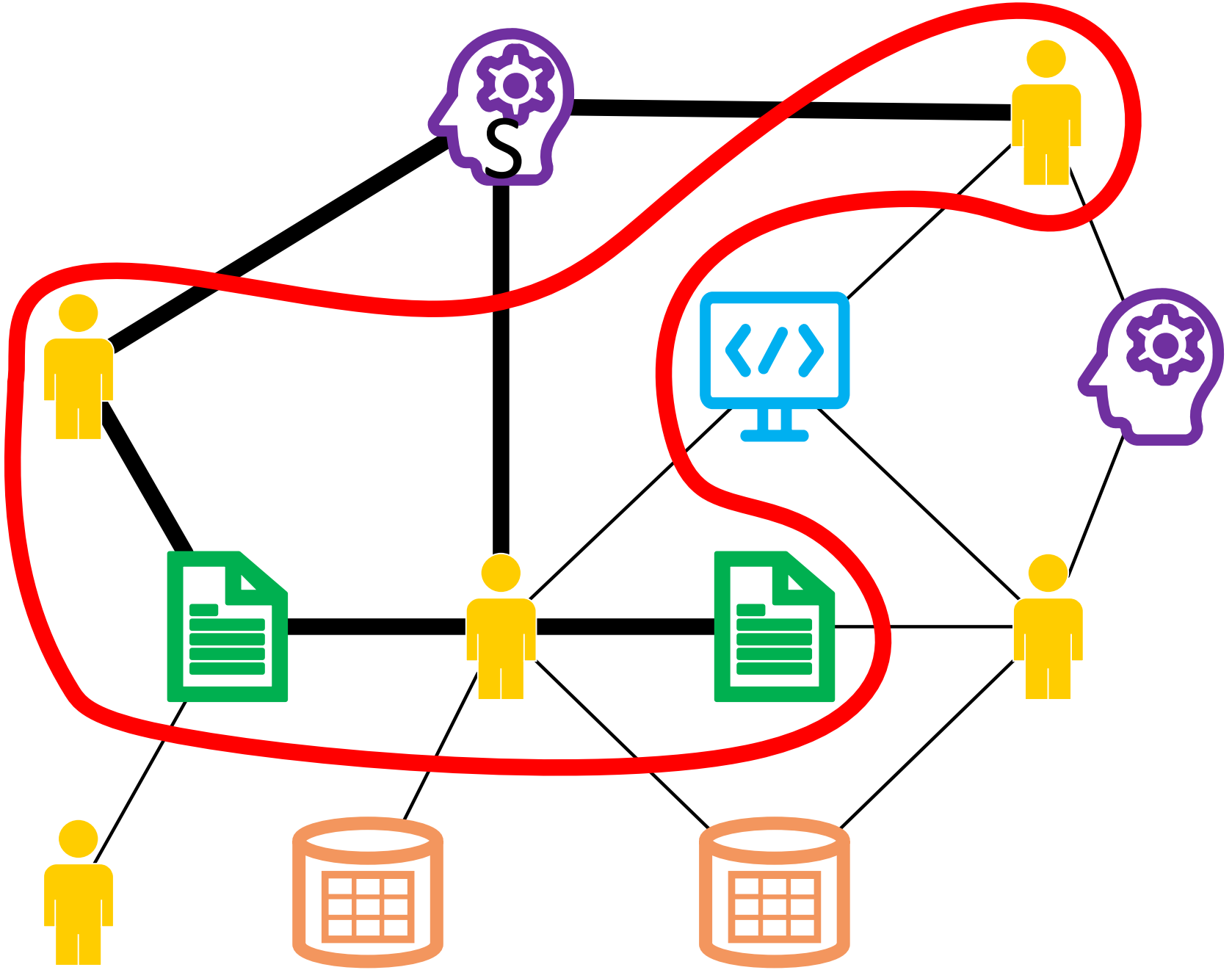
As researcher A, I want to find co-authors of my co-authors from other organizations, so that I can read their publications to find out if we share common research interests



What can Ricgraph do?
Use case

As a PtS community member, I want to find experts with skill S and their publications, so that I can contact them to ...

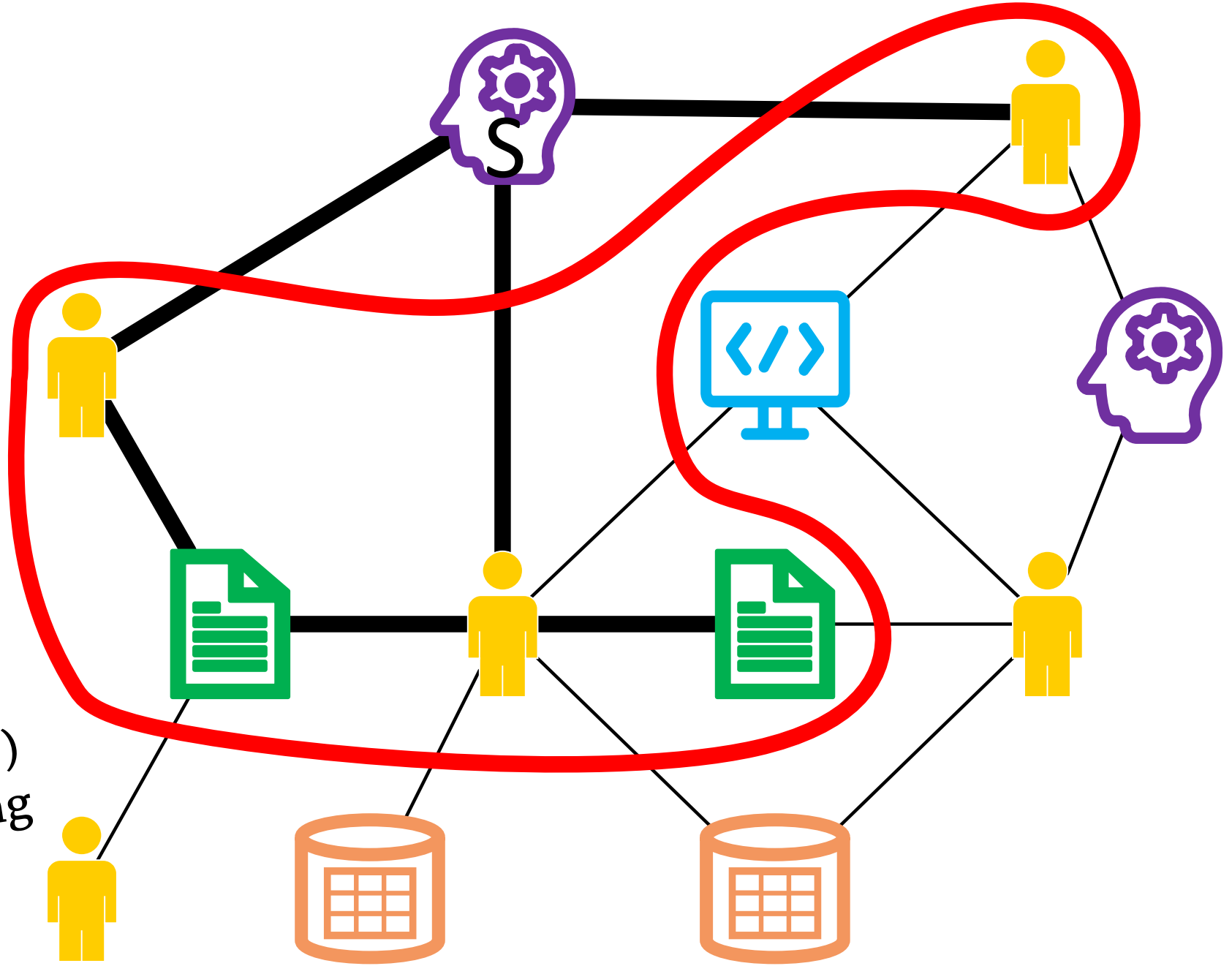
Example skill: climate dynamics, data analysis

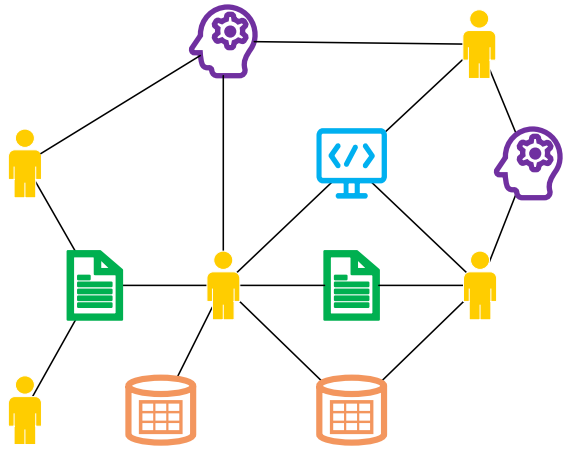


What can Ricgraph do?
Use case

As a PtS community member, I want to find experts with skill S and their publications, so that I can contact them to ...

From our Pathways to Sustainability community, we would like to develop a tool that makes it easy to find both experts (inside and outside the university) and organizations by using keywords.





Questions?
Demo

Screenshot from Utrecht University profile page

Areas of expertise

Oceanography
Numerical Modelling
Ocean Circulation
Climate Dynamics

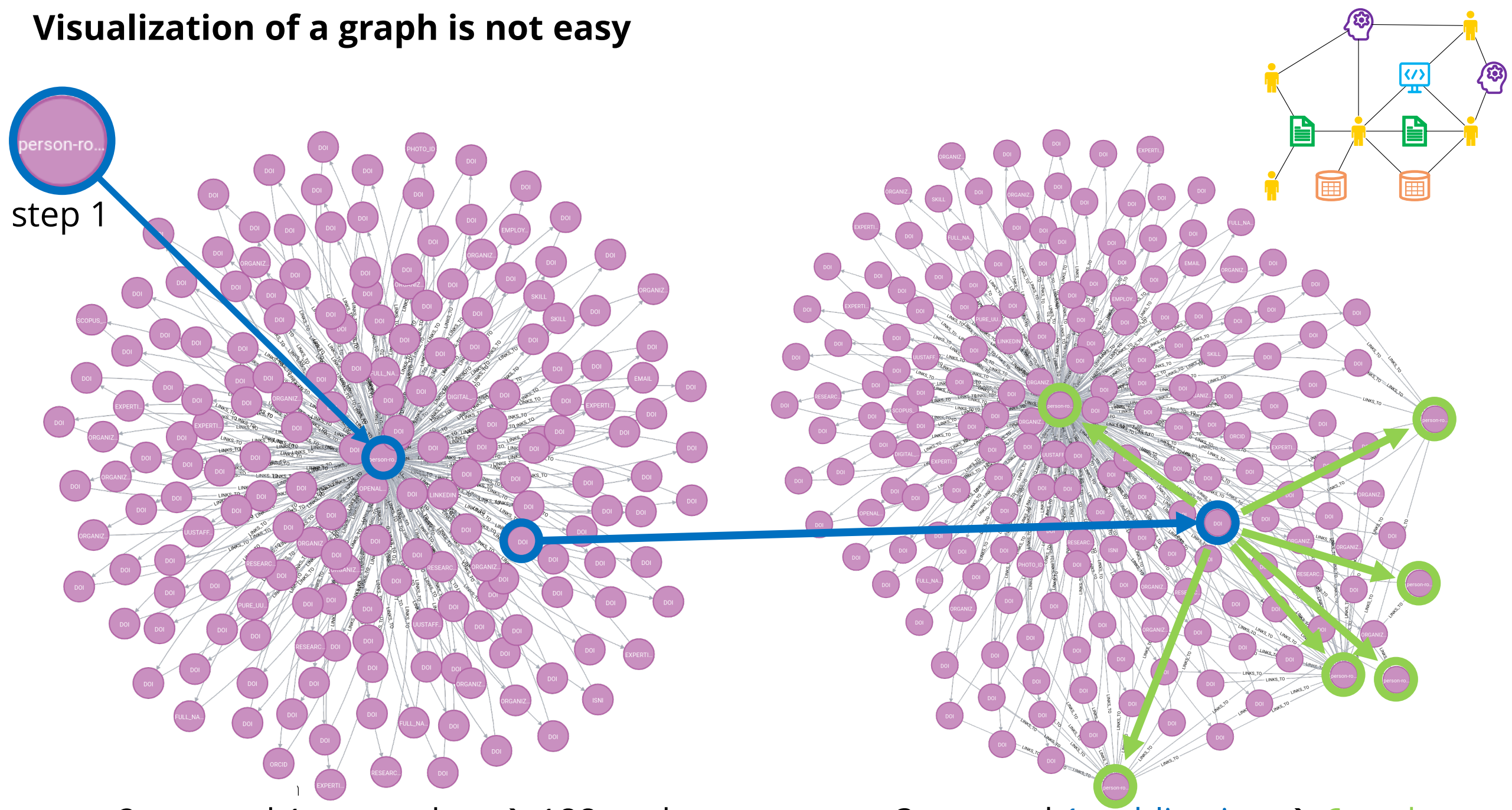
Skills

Science Communication
Teaching
Data Analysis
Project Management

Research areas

Pathways to Sustainability (PtS)
PtS - Sustainable Ocean

Visualization of a graph is not easy

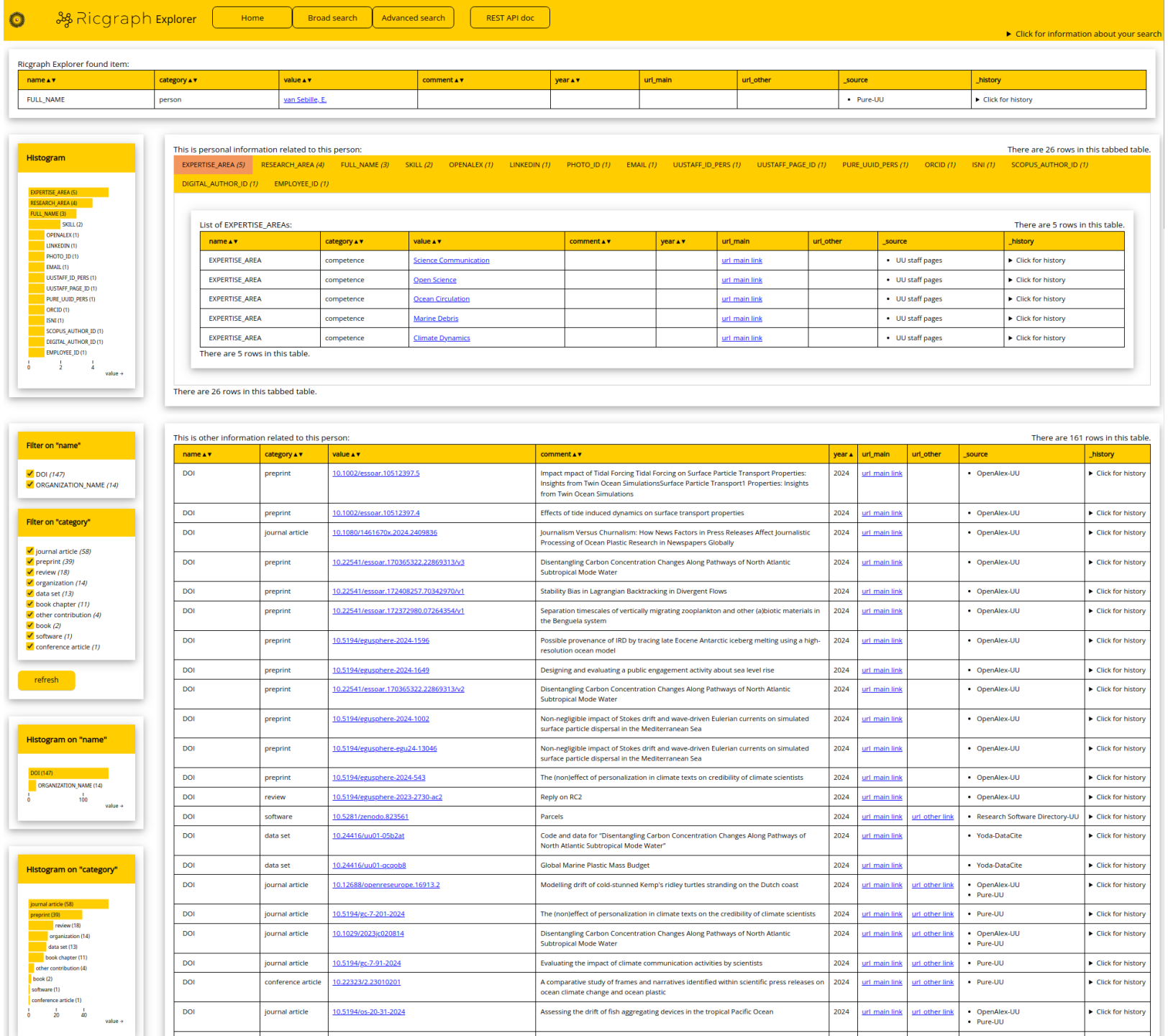


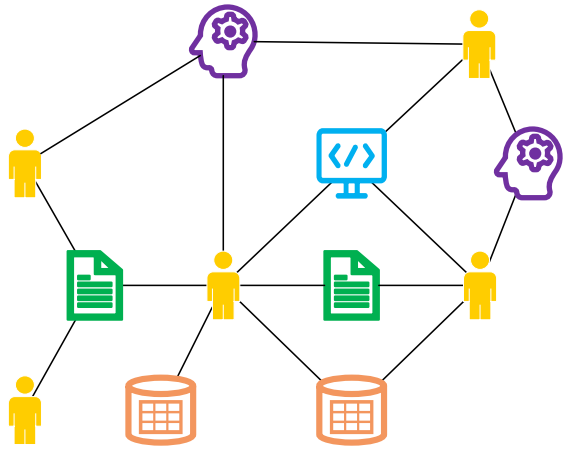
Visualization approach chosen in Ricgraph Explorer

Can be modified depending on your use case

step 2: expand researcher
→ 188 nodes

Utrecht University Ricgraph





Links

- Website: www.ricgraph.eu
- Reference publication: Rik D.T. Janssen (2024). Ricgraph: A flexible and extensible graph to explore research in context from various systems. *SoftwareX*, 26(101736). https://doi.org/10.1016/j.softx.2024.101736
- GitHub (software, documentation and videos): https://github.com/UtrechtUniversity/ricgraph
- Zenodo: https://doi.org/10.5281/zenodo.7524314
- BackToPure: https://github.com/UtrechtUniversity/BackToPure

More information, presentations, demos, install workshops:

Rik D.T. Janssen, r.d.t.janssen@uu.nl

Utrecht University

Sharing science,
shaping tomorrow

Ricgraph