

Ricgraph

Research in context graph

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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

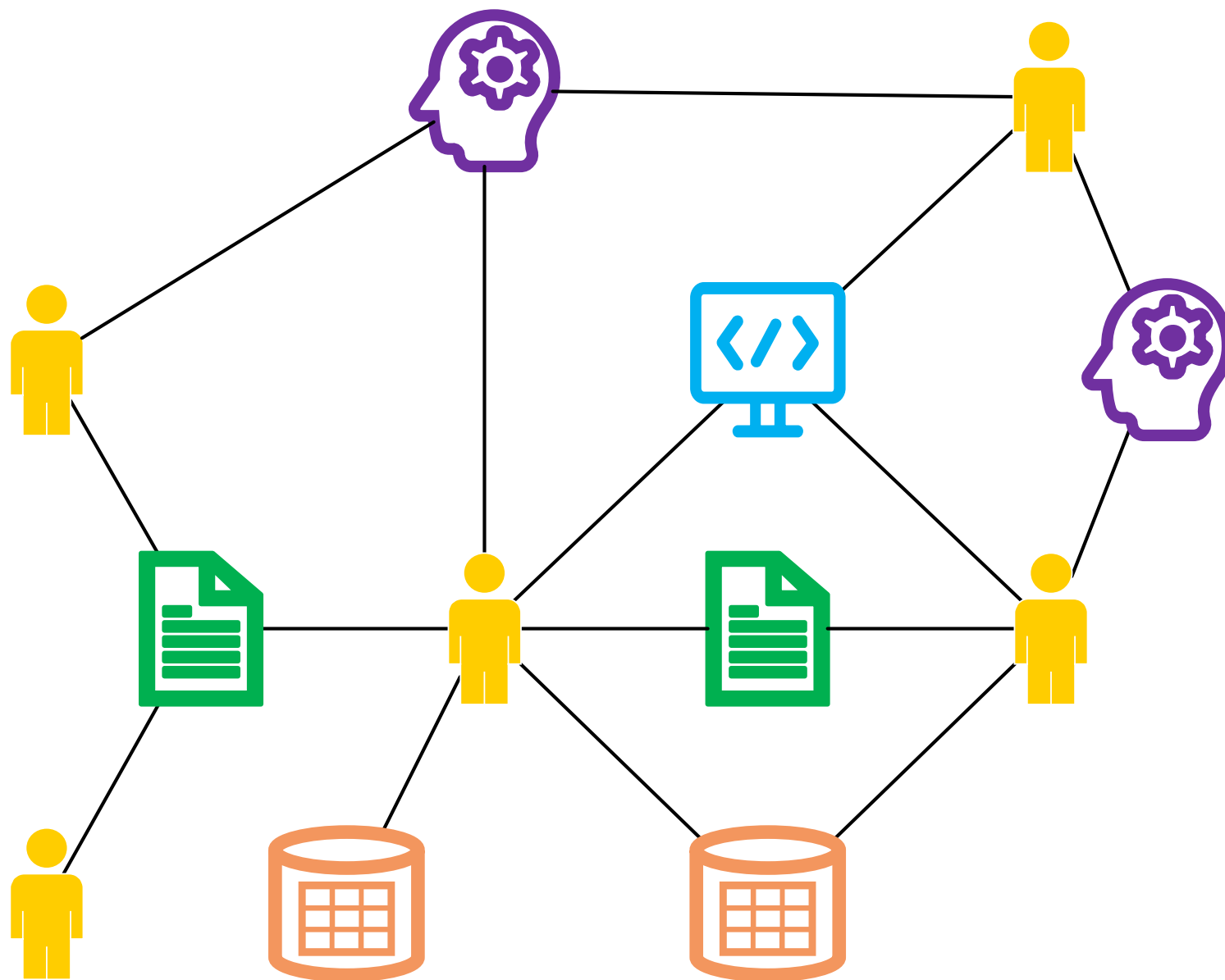
Item = person, organization, article, book, dataset, software, ...



What if...

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

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What if... we can harvest any source we'd like?

We can collect information that is:

- from multiple organizations
- of specific interest (and not more)
- only visible in our own organization
- not harvested by other sources

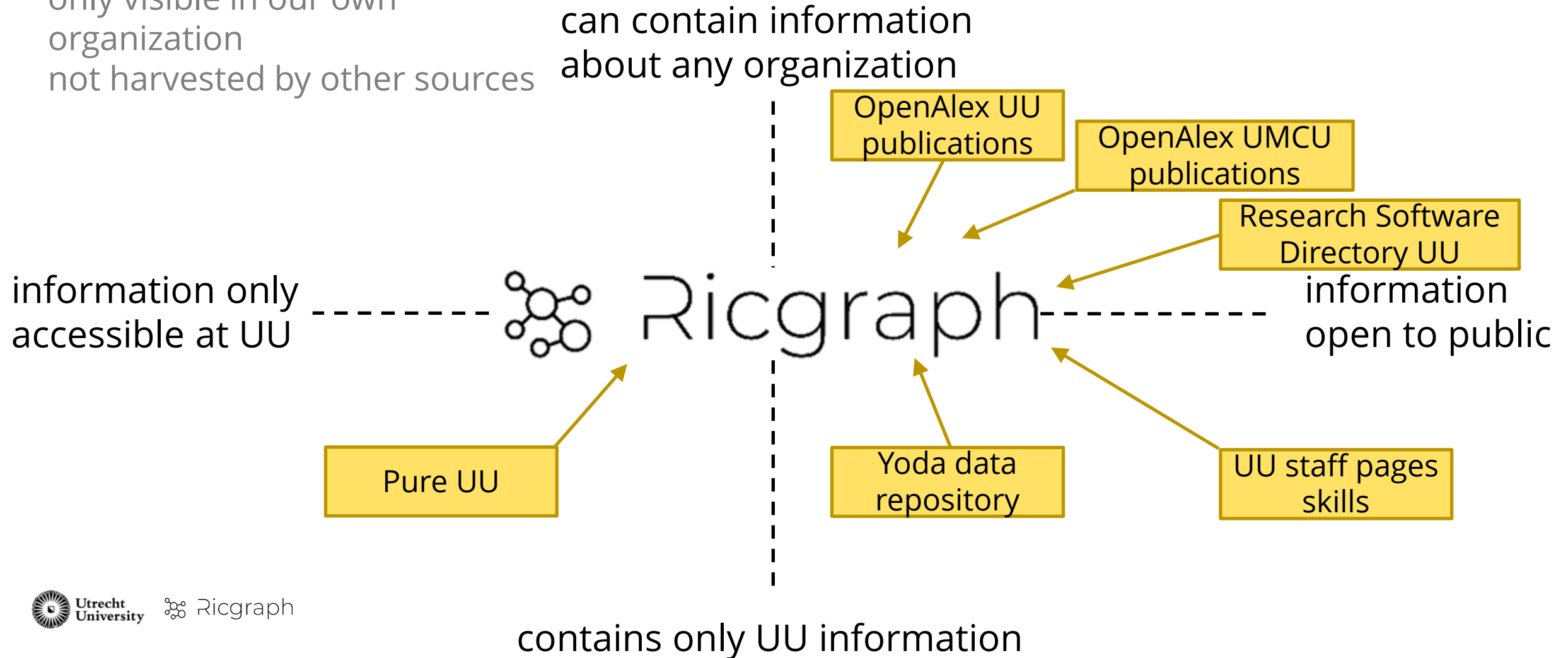
Sources = Pure, Yoda data repository, Research Software Directory, OpenAlex,
UU staff pages, Zenodo, GitHub, NWO grant application system, Scopus,
OpenAIRE, ...

What if...

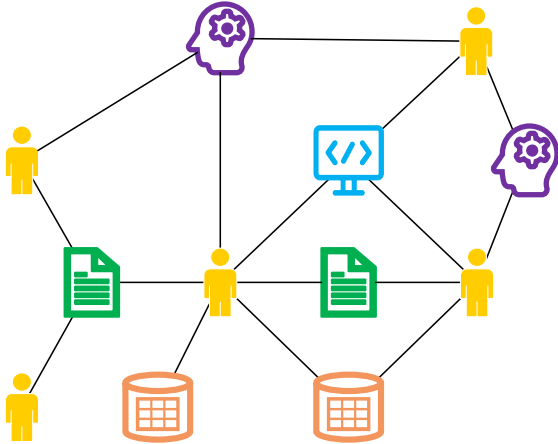
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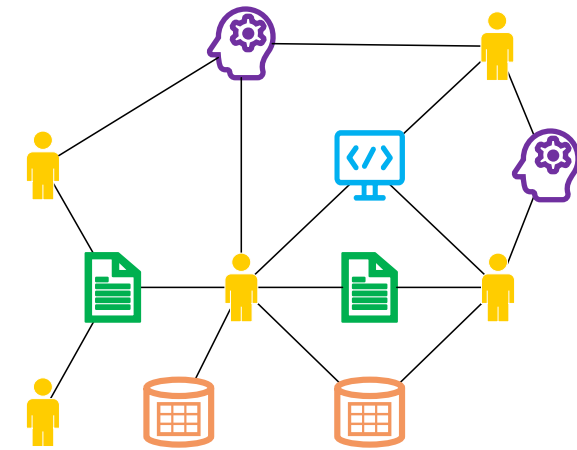


Information in typical sources



	persons	sub orgs	research outputs			
			pubs	data sets	software	other
OpenAlex	√		√	√		
Pure	√	√	√	√	√	√
Research Software Directory	√				√	
UU staff pages	√					√
Yoda	√			√		

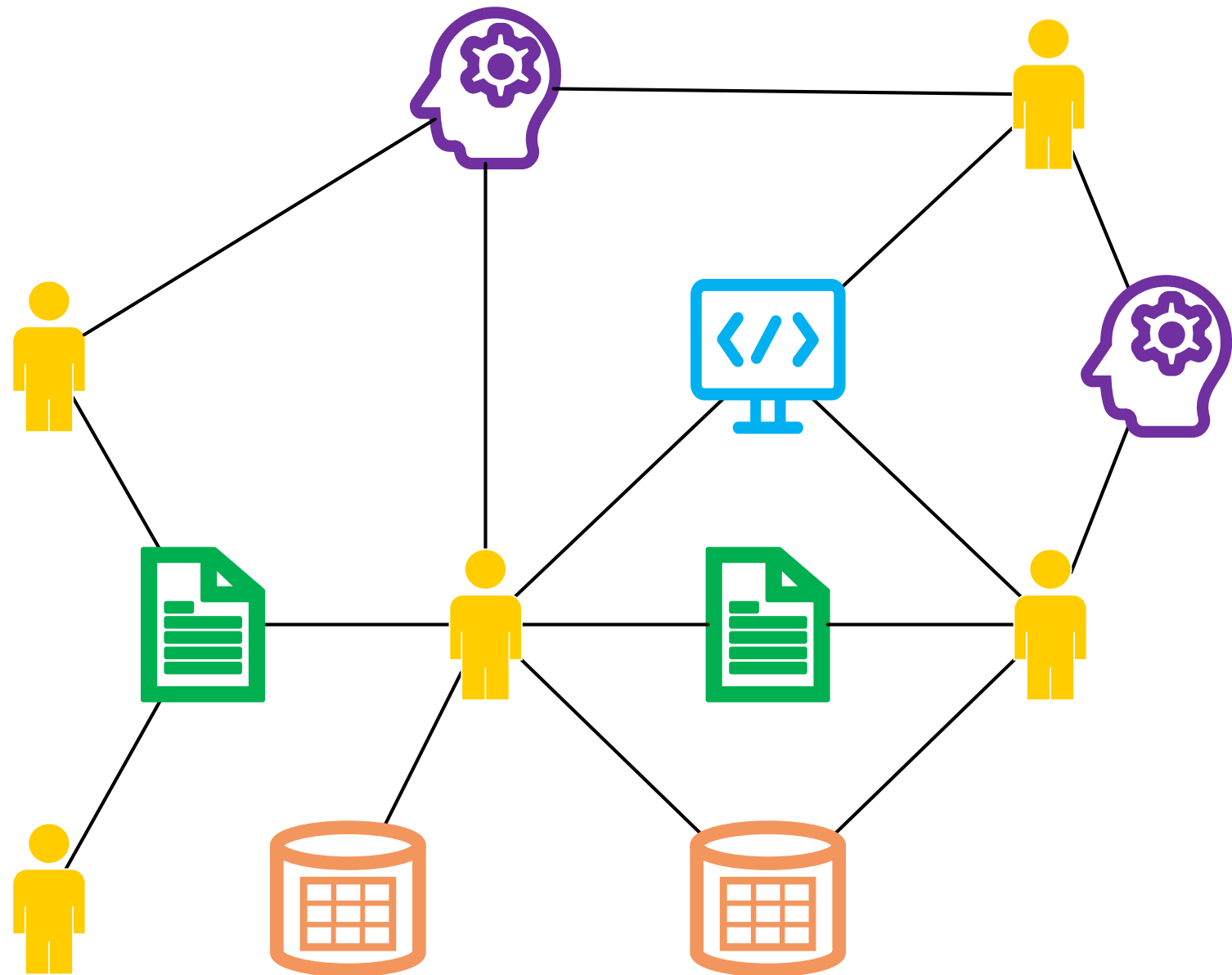
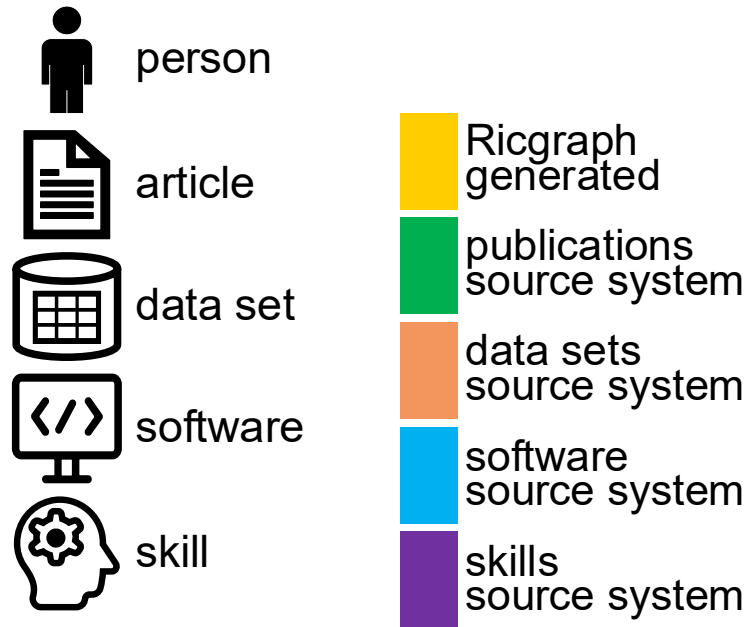
What is Ricgraph - Research in context graph?



- Ricgraph can store **many types of items** in a single graph
- It harvests **multiple source systems** into a single graph
- Ricgraph **facilitates reasoning** because it infers new relations between items
- Ricgraph Explorer is the **exploration tool**
- Ricgraph has a **REST API**, to programmatically get items
- Ricgraph **can be tailored** for an application area

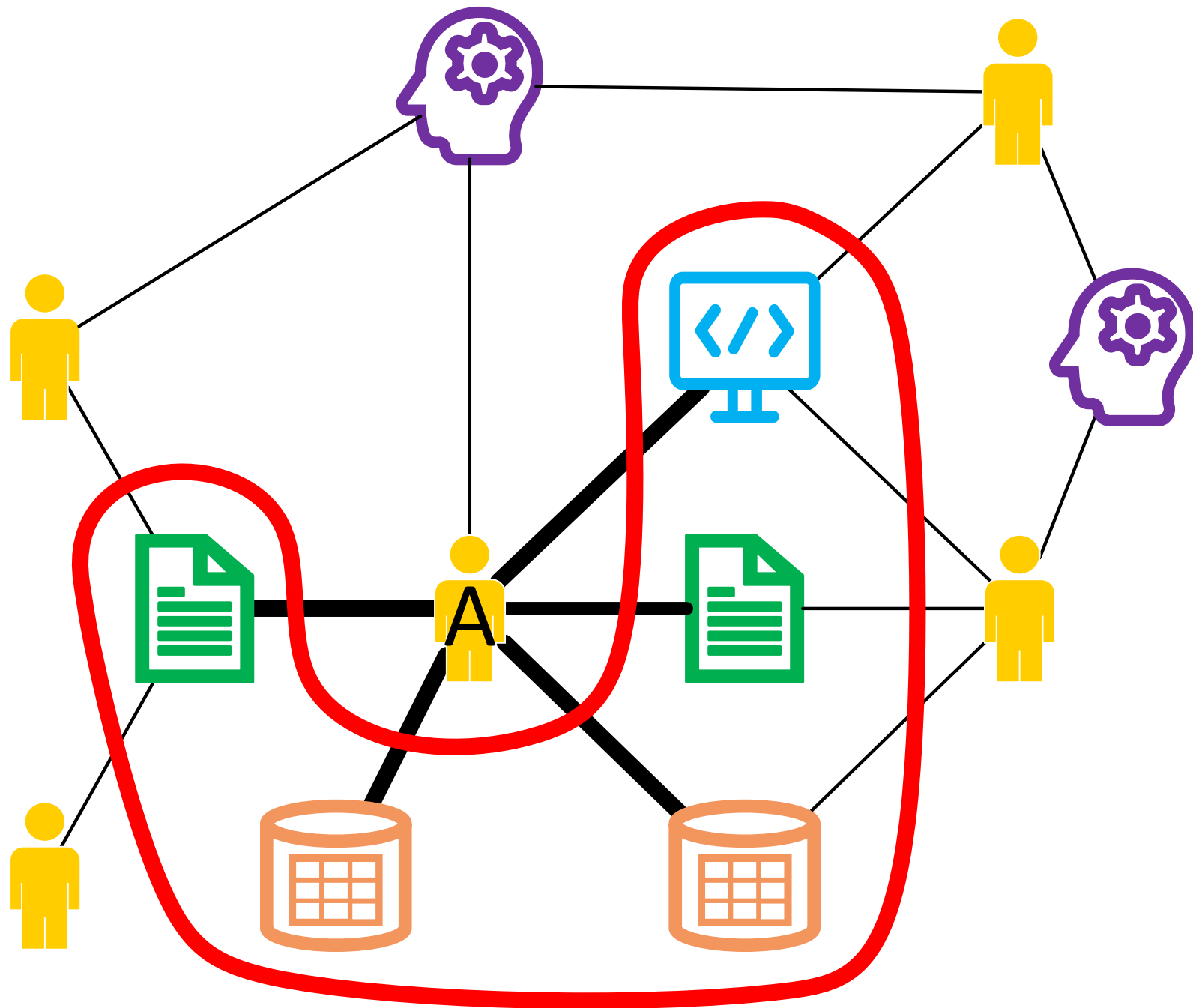
What is Ricgraph?

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



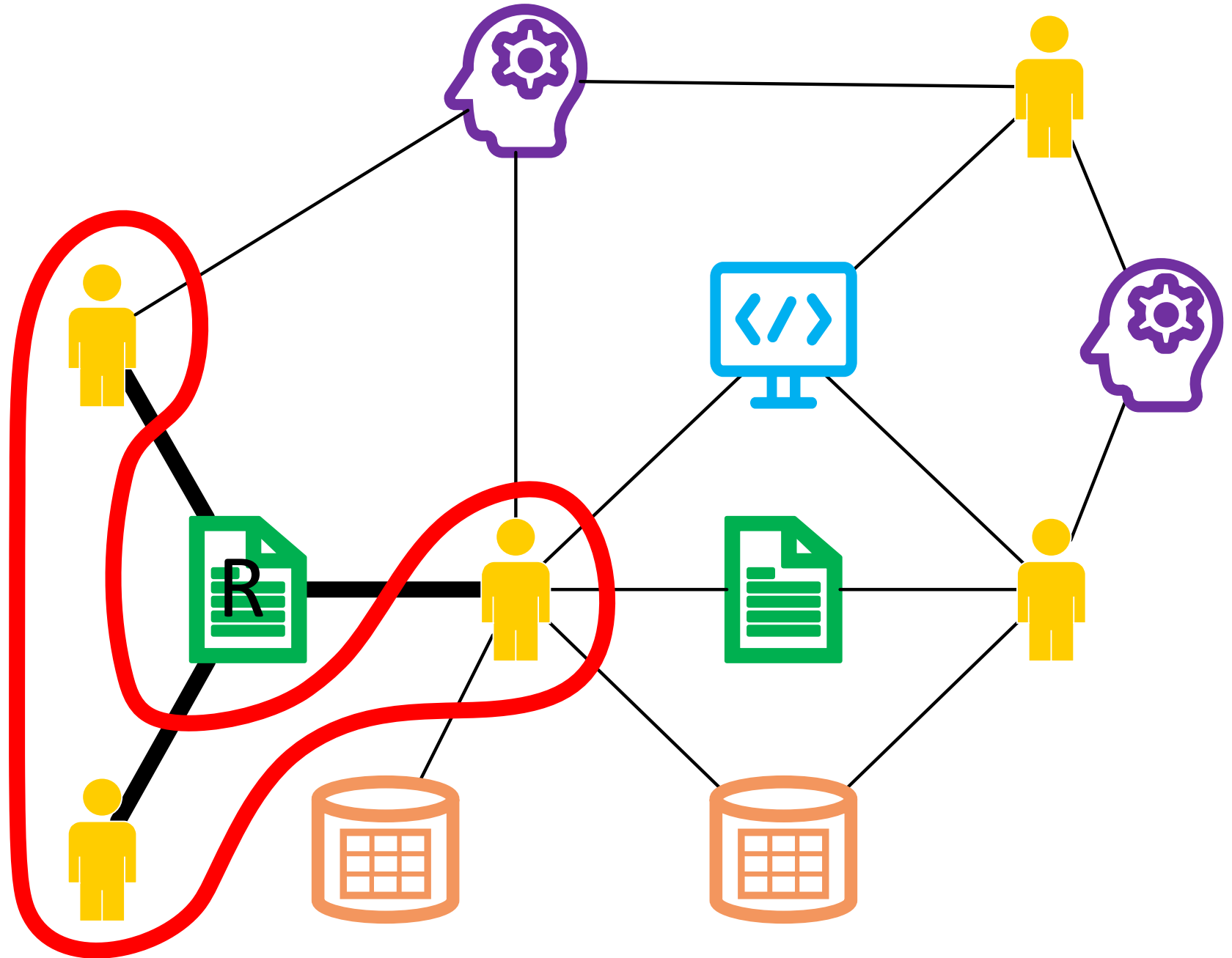
What can Ricgraph do?

What are the research outputs of person A?



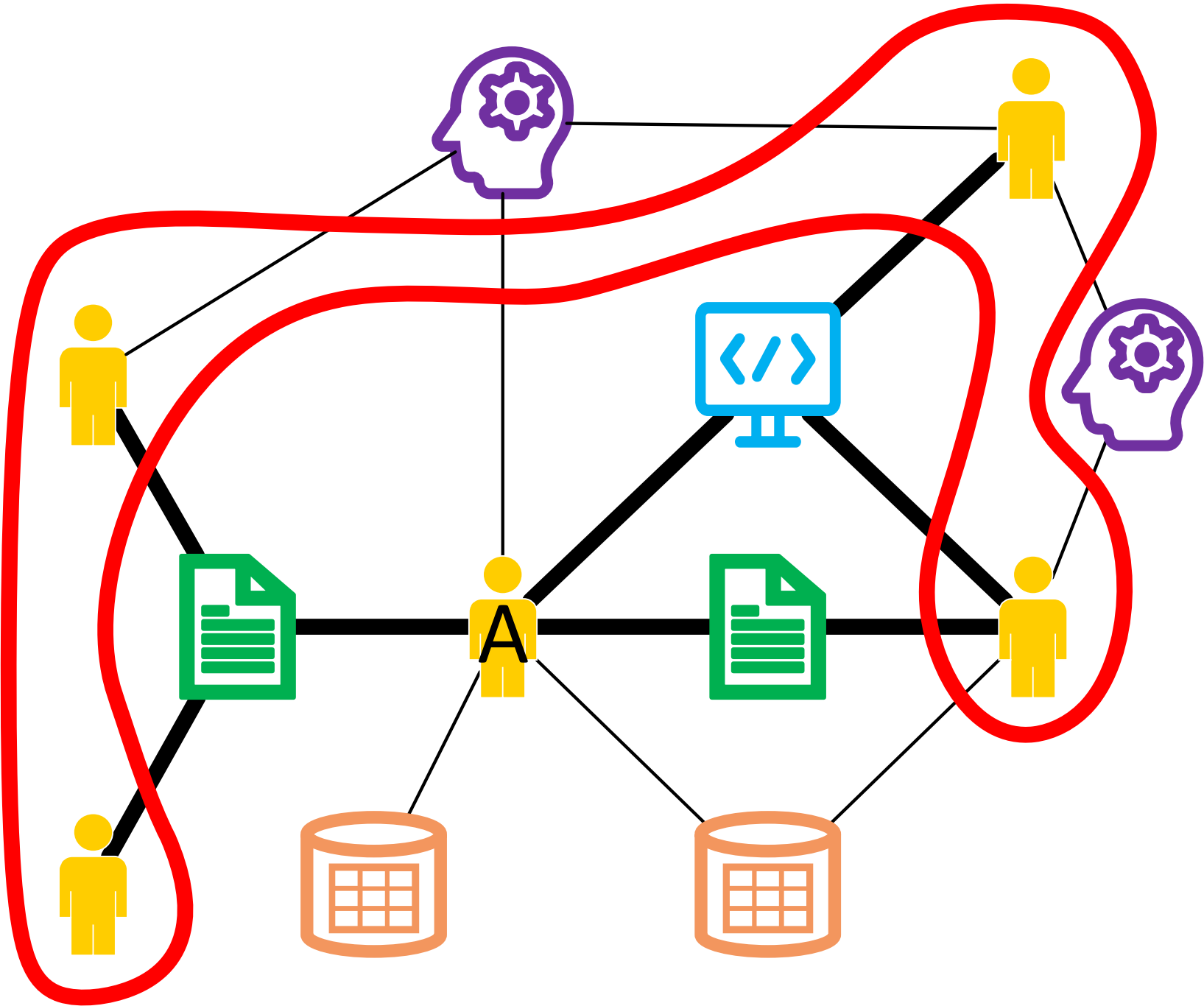
What can Ricgraph do?

Who has contributed to research output R?



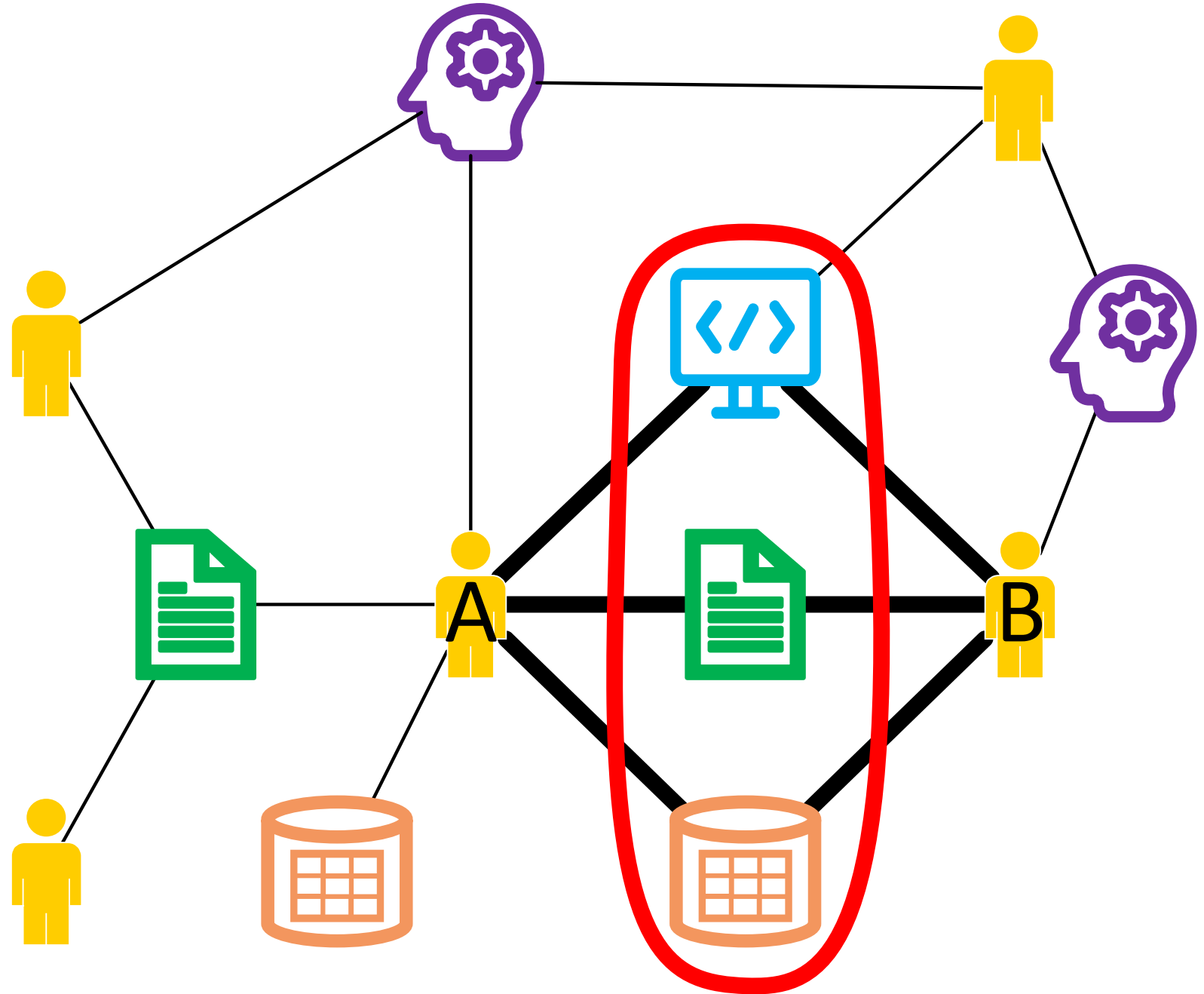
What can Ricgraph do?

With whom has person A worked?



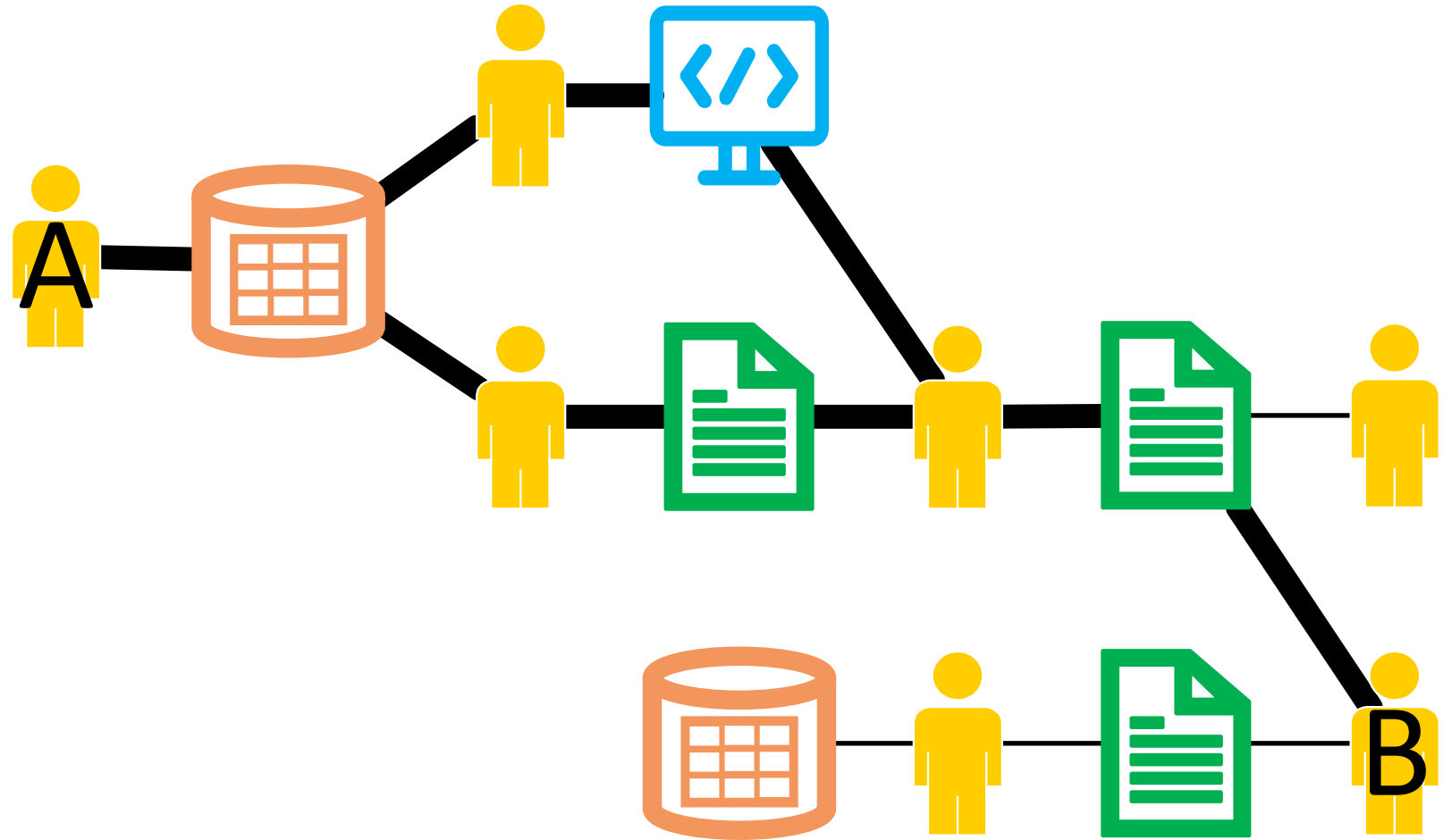
What can Ricgraph do?

What research outputs have person A and person B in common?



What can Ricgraph do?

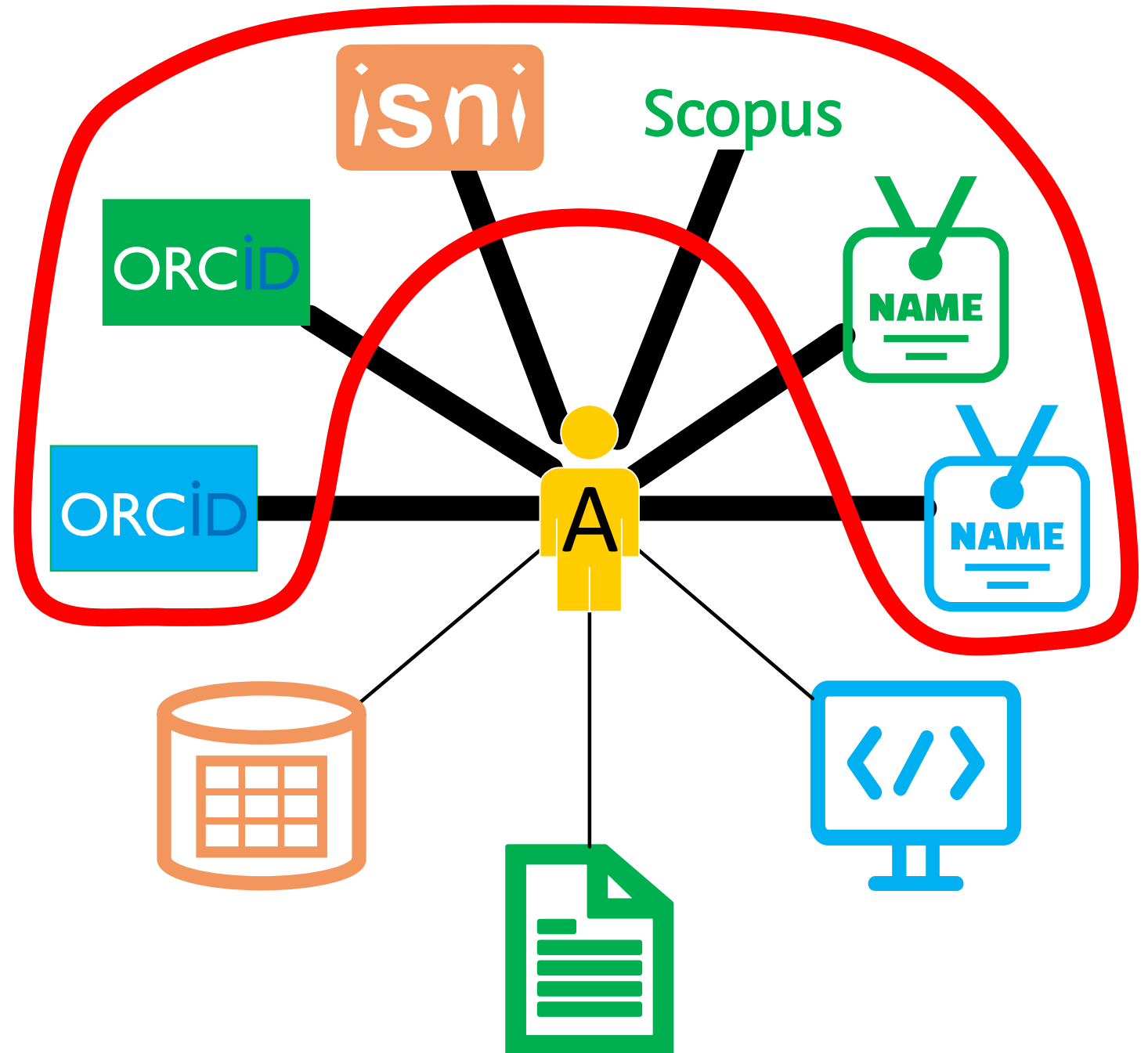
How are persons A and B related?



What can Ricgraph do?

What identifiers does person A have?

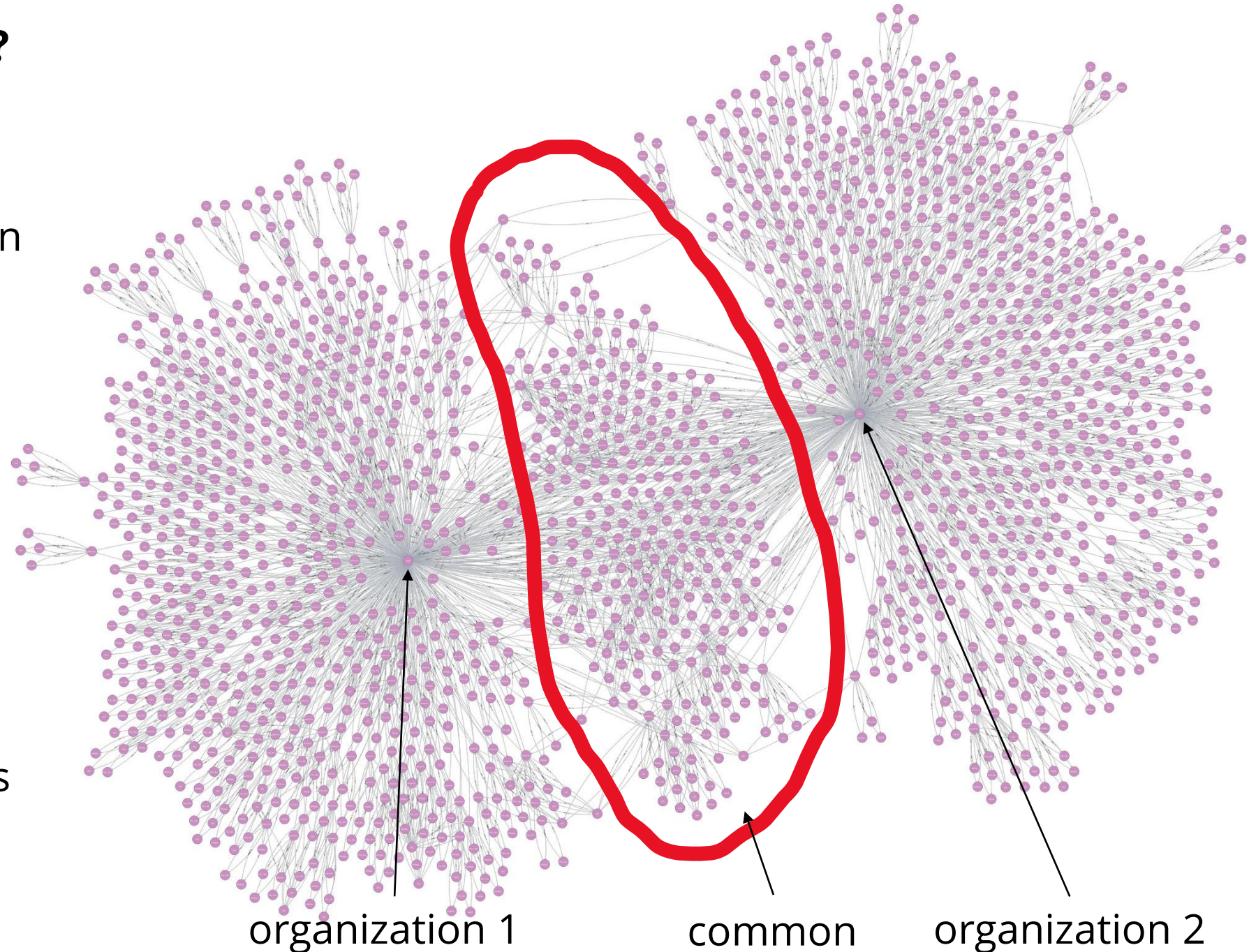
Identifier = ORCID, ISNI, SCOPUS_ID, email, name, GitHub, Twitter, ...



What can Ricgraph do?

What is common between organization 1 and organization 2?
(e.g. persons, data sets)

If you have an organization structure in one of your source systems, you can also do this for sub-organizations

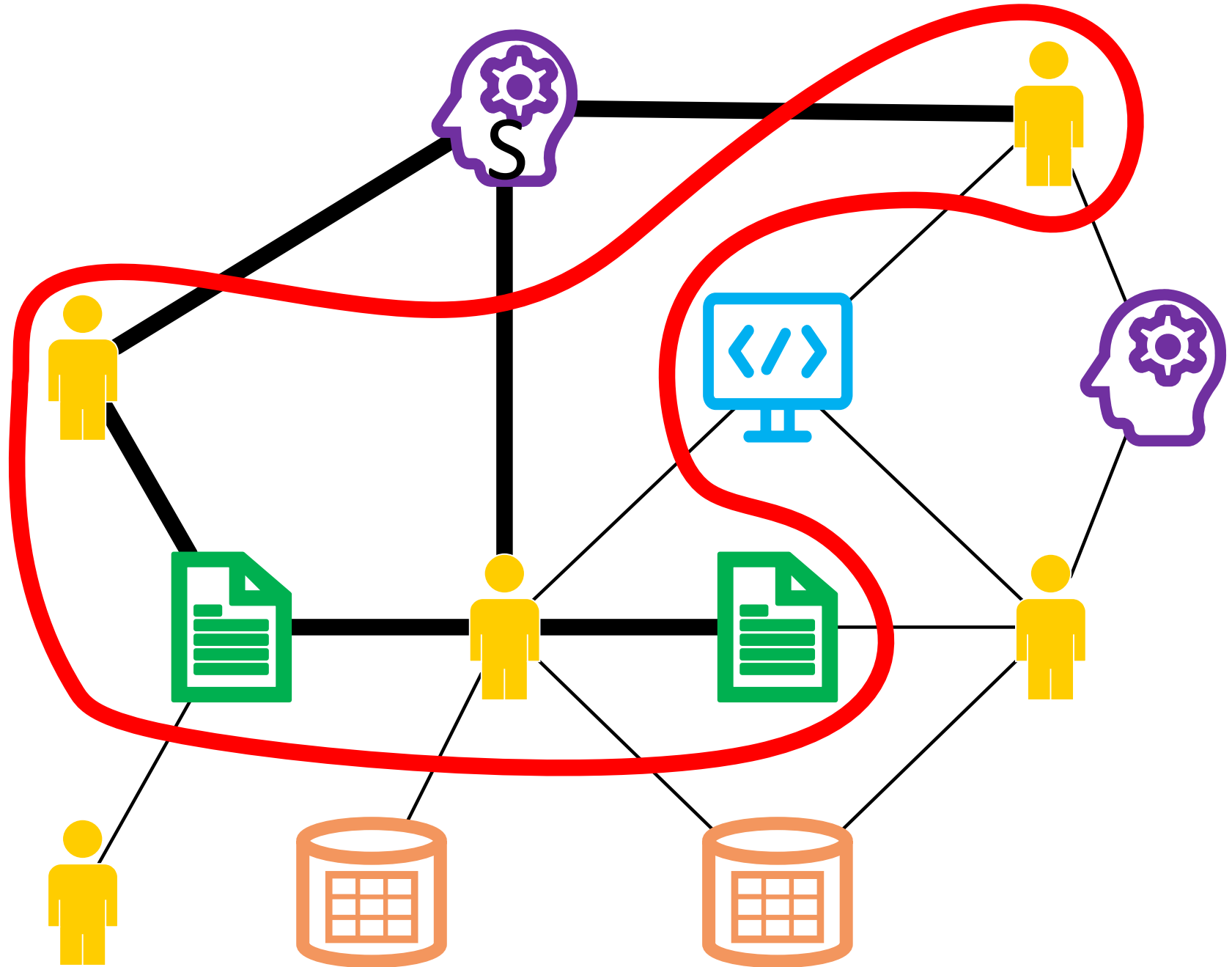


What can Ricgraph do?

Use case

As a journalist, I want to find researchers with skill S and their publications, so that I can interview them for a newspaper article

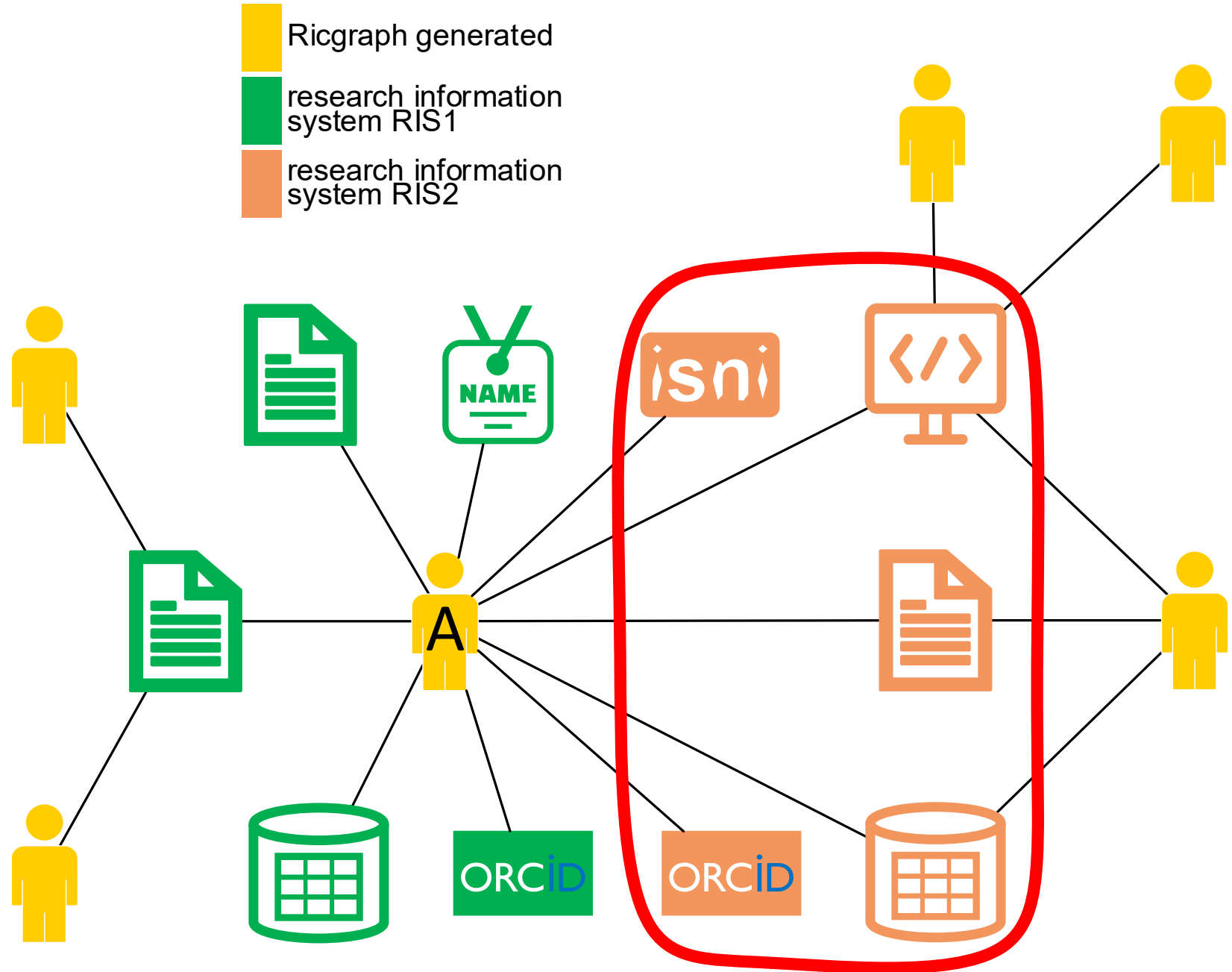
Example skill: climate change, stem cells



What can Ricgraph do?

Use case

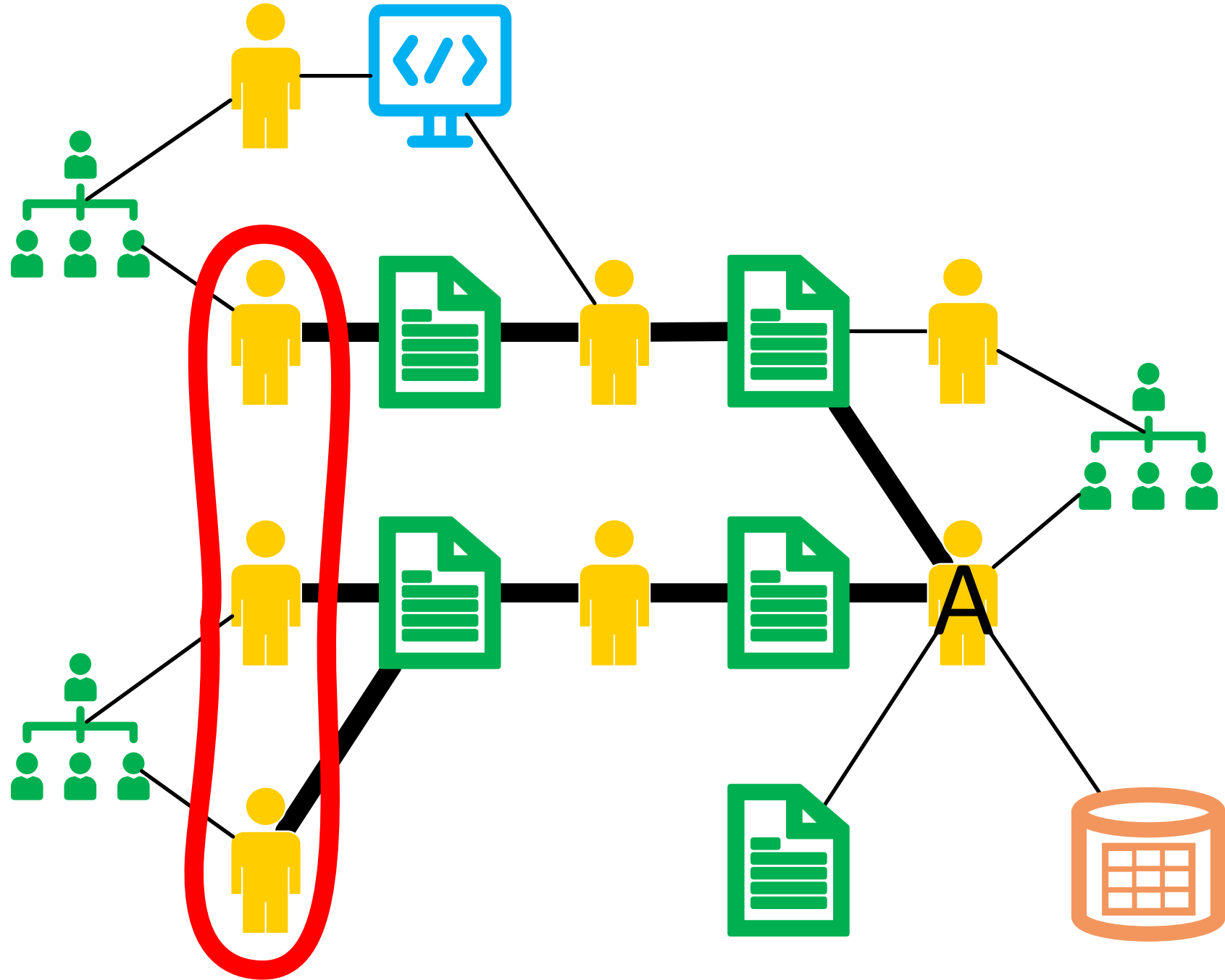
As a librarian, for researcher A, I want to enrich my local research information system RIS1 with identities and research results that are in other systems but not in ours, so that we have a more complete view of research at our university



What can Ricgraph do?

Use case

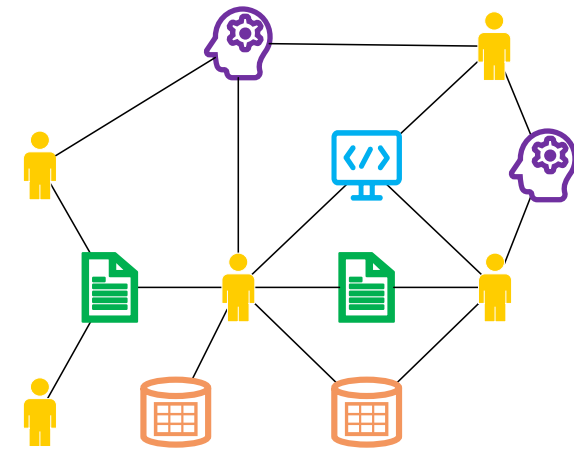
As researcher A, I want to find researchers from other universities that have co-authored publications written by the co-authors of my own publications, so that I can read their publications to find out if we share common research interests



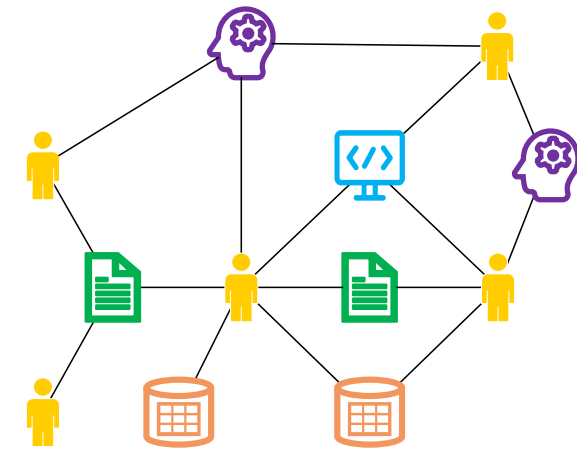
Some lessons learned

- Without identifiers we are nowhere
- We need to be able to resolve any identifier to any other
- I think only one preferred identifier will not work
- A graph is the way to go! 😊

You can install and use Ricgraph yourself!



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>

More information, presentations, demos, install workshops:



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shaping tomorrow