

INSTITUTIONAL DYNAMICS IN RESEARCH

PROCESSES OF CO-CREATION IN RESEARCH INFRASTRUCTURES

FRANCESCA MORSELLI,
DANS-KNAW, DARIAH-EU, UNIVERSITY OF VERONA

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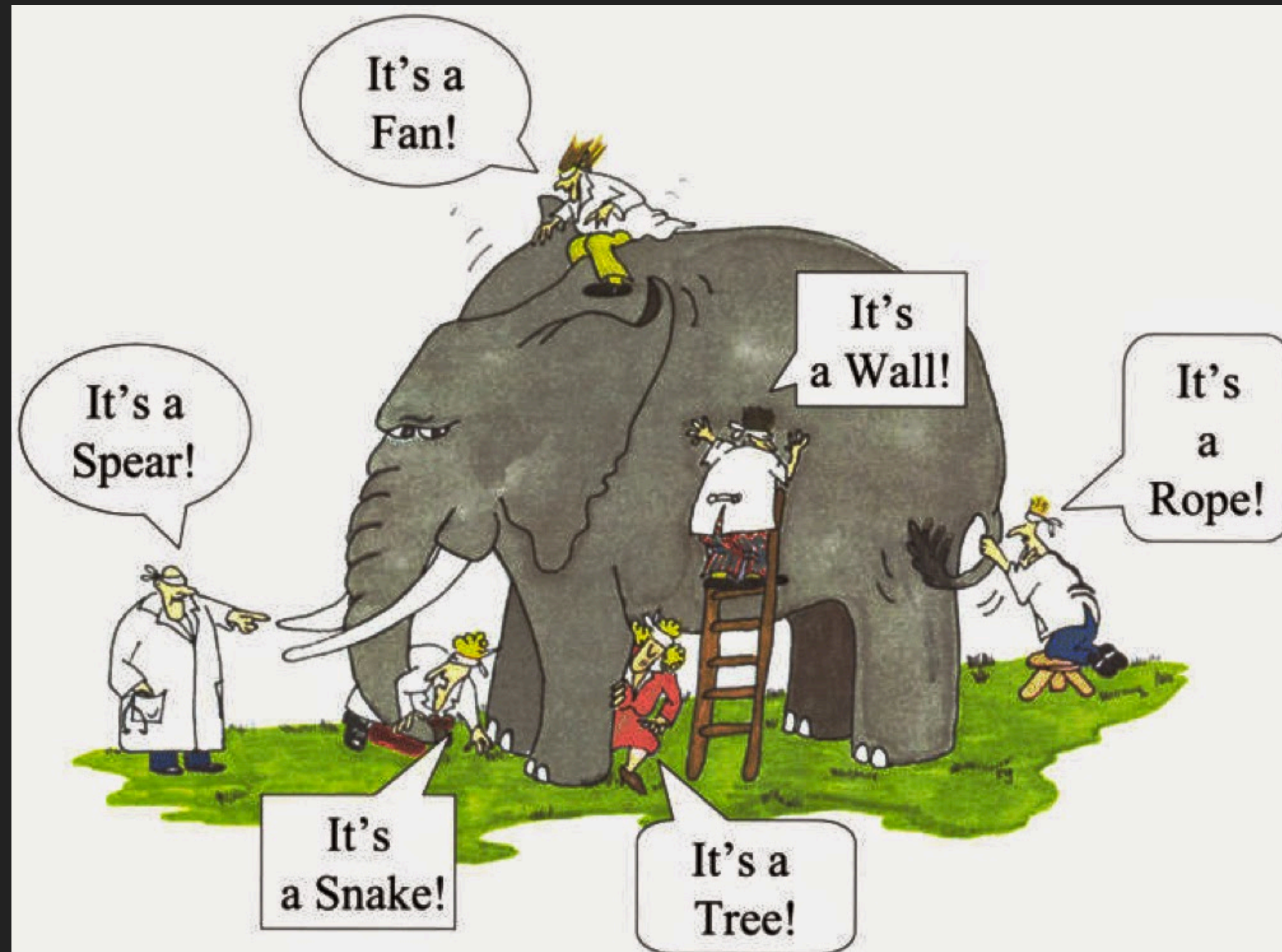
A FEW PREMISES

- ▶ this research takes shape in the context of my PhD and from the experience in my work as community coordinator for the RI DARIAH-EU
- ▶ This presentation doesn't present the outcome of this research, but the first steps. Your feedback is extremely appreciated!
- ▶ the disciplinary roots of this research can be found in STS, philosophy of science, humanities, social science...quite interdisciplinary!
- ▶ The content of this presentation is developed only in relation to my own research, opinions my own

RESEARCH INFRASTRUCTURES

- ▶ Infrastructure is a complex and slippery term. Studied from decades, it continues to evolve and be the research object of many studies (Hughes, 1993; Star&Ruhleder, 1996; Edwards et al., 2007; Bowker et al.,2009)
- ▶ In research, "infrastructure" points to the technical substratum that makes research possible, in terms of technical capacity (storage), information retrieval (archives, libraries) and capacity to connect research communities (Anderson, 2015; Edmond, 2015)
- ▶ Last but not least RI are also strategic instruments (see the ERICs) whose existence is possible by the strategic research agenda of the EC (Moskovko et al., 2019)

DIFFERENT MEANINGS FOR DIFFERENT STAKEHOLDERS



RESEARCH QUESTION

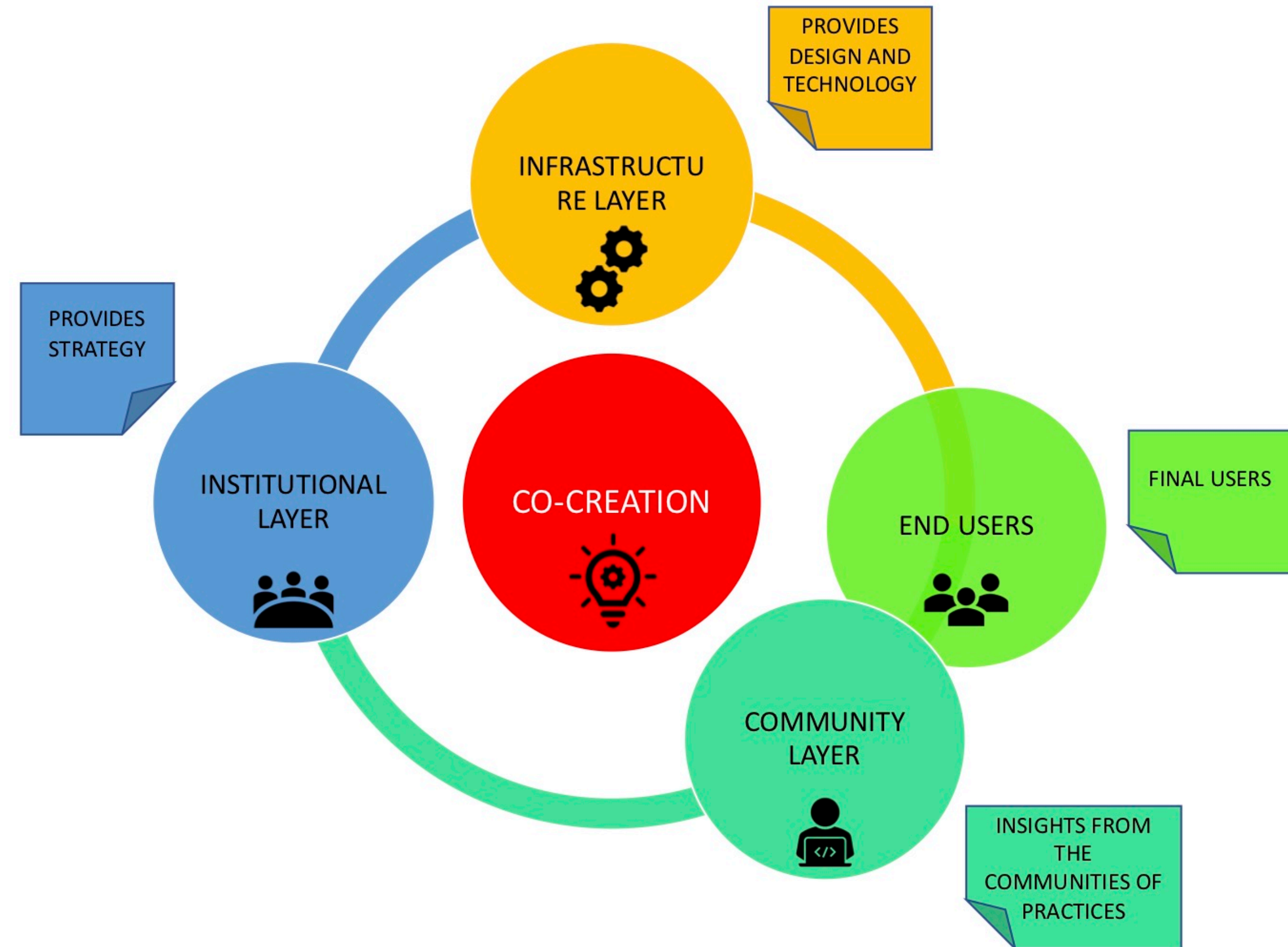
- ▶ It is true that RIs are in a supporting role to research, but we need to acknowledge that RIs are also **complex structures**, whose dynamics are created at the intersection of social, technical and political scenarios.
- ▶ Research Infrastructures are not just a bridge, they foster a **new kind of knowledge production -> Gap analysis**
- ▶ To **interrogate about inner dynamics of RI and their function inside and outside academia** is the core of my PHD research.

METHODOLOGY

- ▶ 2 main research strands:
 - ▶ Conceptual Framework: **Functional layers of Research Infrastructures**
 - ▶ Reflection on "**Collaboration**" and "**Co-creation**" in Research Infrastructures
- ▶ Case study of DARIAH-EU and its Working Groups

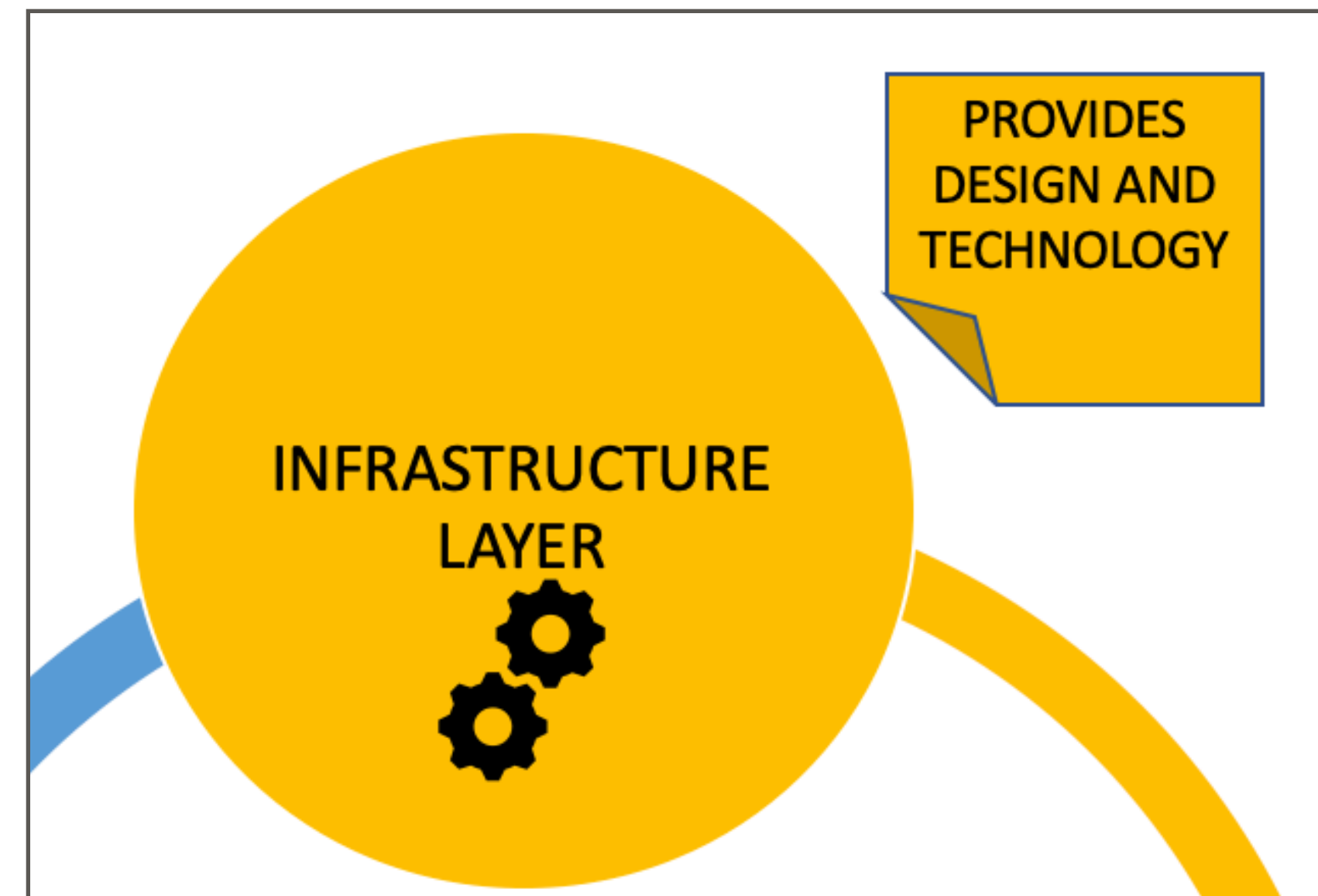
THE CONCEPTUAL FRAMEWORK

- ▶ INFRASTRUCTURAL LAYER
- ▶ INSTITUTIONAL LAYER
- ▶ COMMUNITY LAYER
- ▶ FINAL USERS



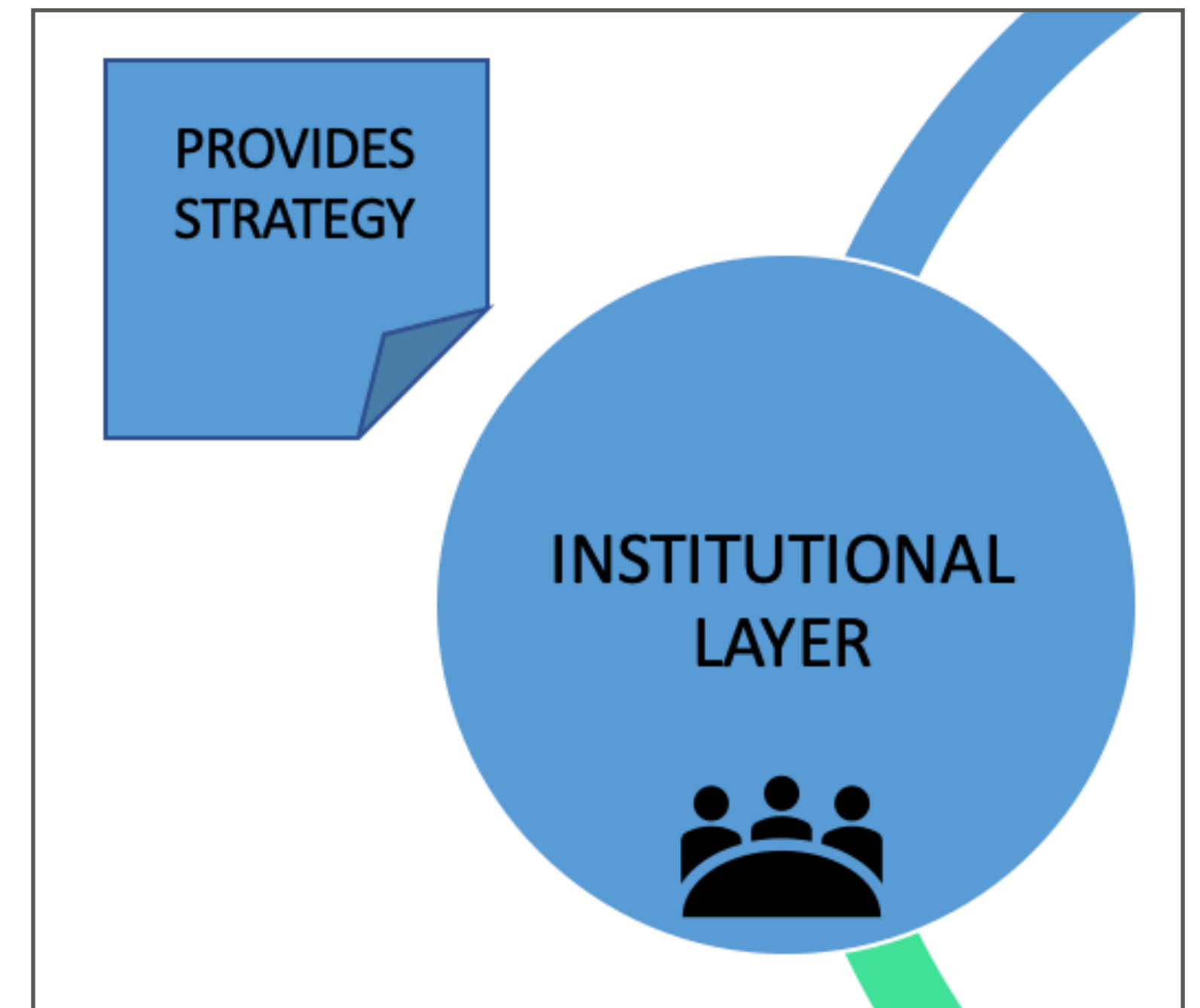
THE CONCEPTUAL FRAMEWORK

- ▶ INFRASTRUCTURAL LAYER
- ▶ Responsible for the design aspect of the RI and the development of the technology that supports it.
- ▶ It involves software architects, developers, research community for testing
- ▶ it includes technology and documentation



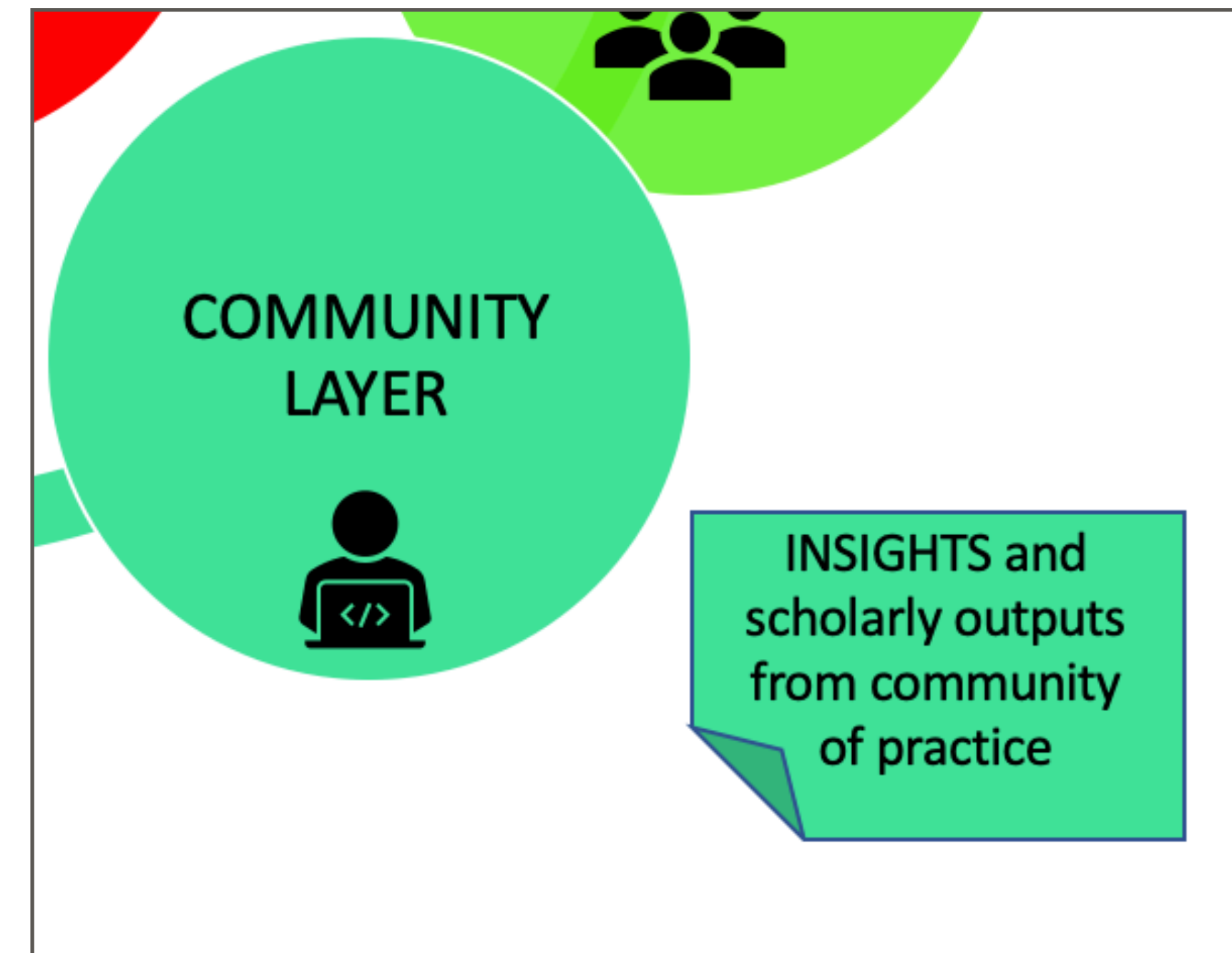
THE CONCEPTUAL FRAMEWORK

- ▶ INSTITUTIONAL LAYER: 3 main functions
- ▶ it develops the strategy for the RI
- ▶ makes the RI institutionally recognised
- ▶ ensures the accountability of the RI toward the EC



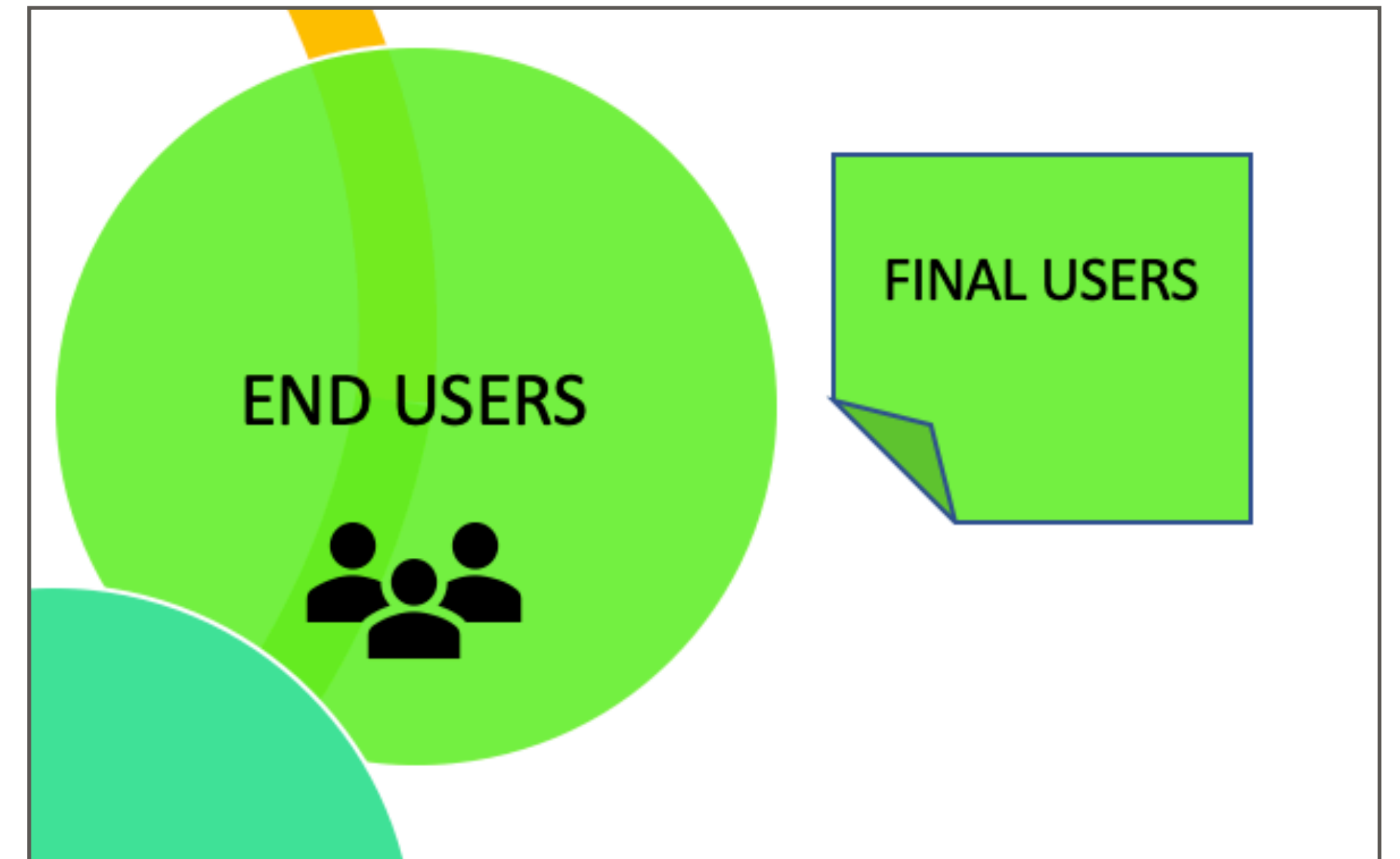
THE CONCEPTUAL FRAMEWORK

- ▶ COMMUNITY LAYER
- ▶ community of practices involved in the development of the RI (e.g. testers)
- ▶ producers of scholarly content
- ▶ strong ties with the local and institutional dimension



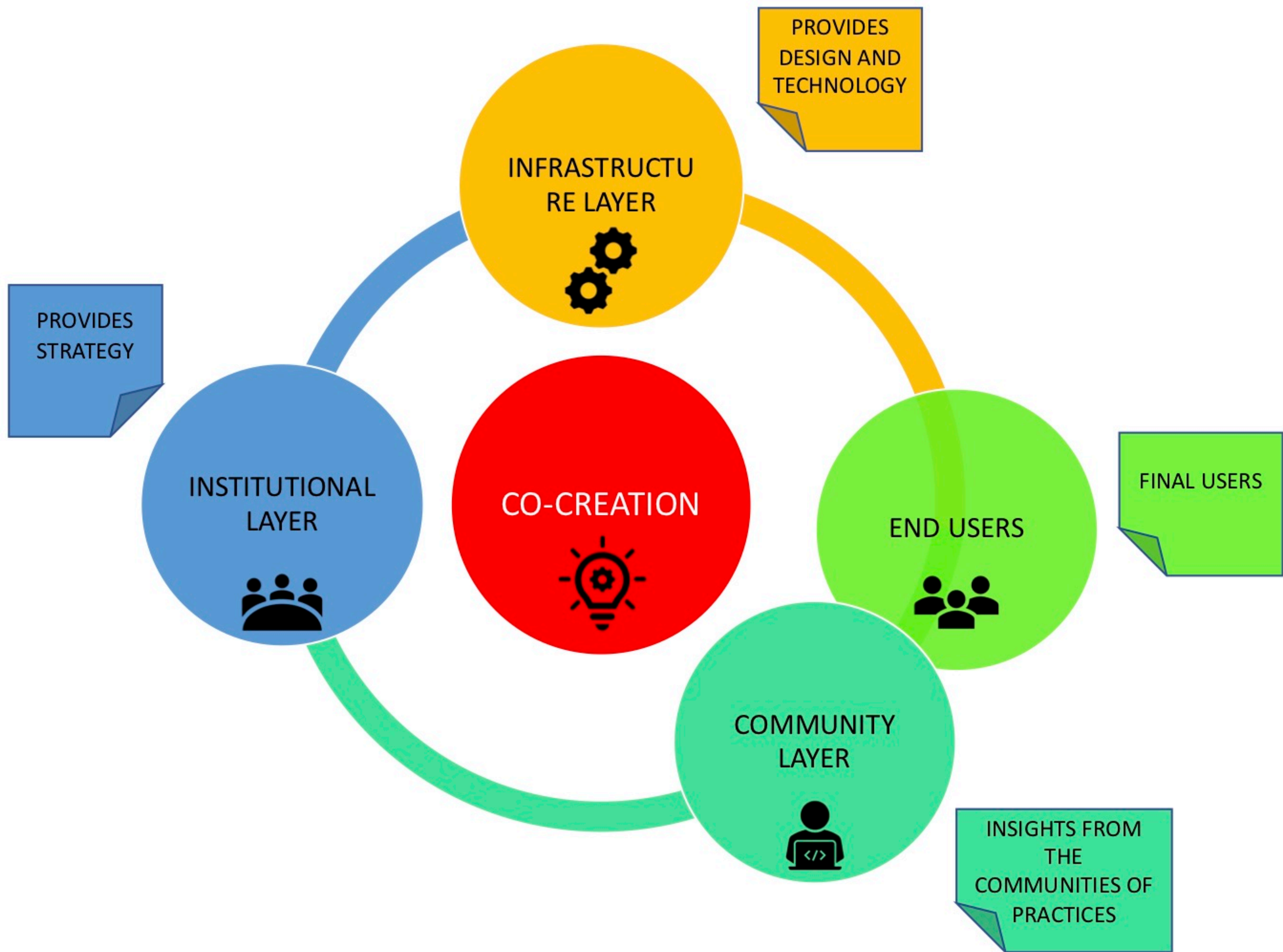
THE CONCEPTUAL FRAMEWORK

- ▶ FINAL USERS LAYER
- ▶ essential for the existence of the RI
- ▶ undergraduate/ researchers/ professors...
- ▶ overlap between community and users layers



INNOVATIVE ASPECTS OF THIS APPROACH

- ▶ Combine a number of approaches to recreate the complexity of the dynamics (Star&Ruhleder, 1996; Merz, 2006; Cetina, 2007; Ribes&Finholt, 2009; Alfonso et al., 2012; Karasti, 2018; Pipek, Wulf, 2009)
- ▶ It looks at the functions of the stakeholders → different stakeholders can have multiple functions
- ▶ This model can show the tensions in the model chosen by the RI - where does the focus lie? on which stakeholder?

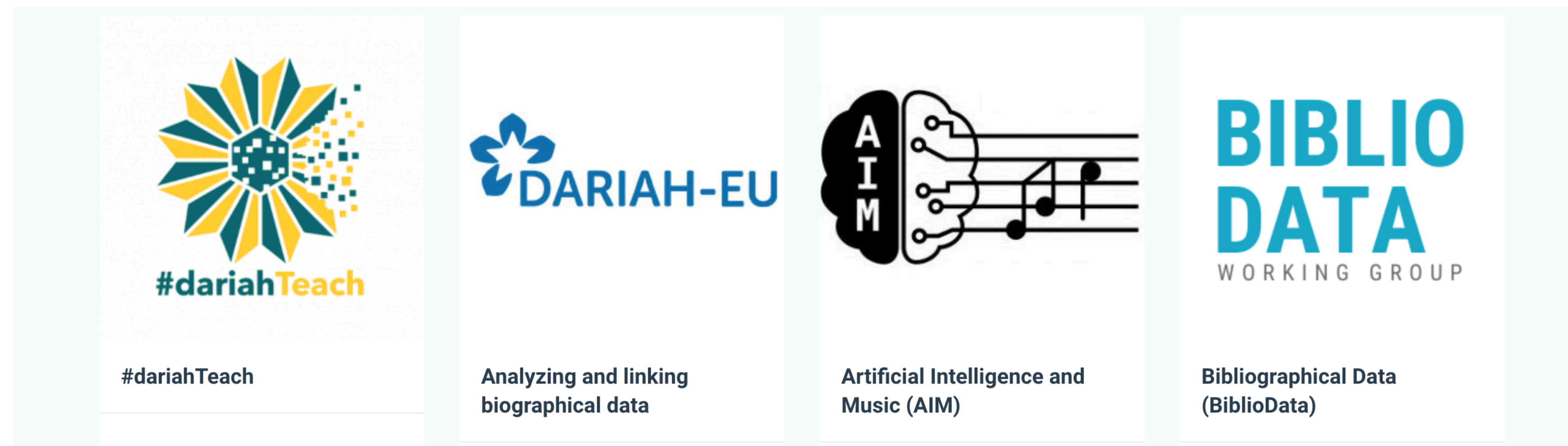


ROLE OF CO-CREATION IN RESEARCH INFRASTRUCTURES

- ▶ **Collaboration** between members in the same layer is facilitated by the fact that they share a **self-identity** and recognize themselves in a common set of values.
- ▶ **Co-creation** is of a different nature: here a collaborative synergy is sought between all the stakeholders and its final aim is that of creating a common "end-product" (scholarly outputs or policies and best practices)

DARIAH-EU AS A CASE STUDY

- ▶ Why DARIAH? it is a mature and well-established RI. One of the peculiarities of DARIAH are its Working Groups
- ▶ WGs are are grass-rooted, self-organised, collaborative groups of researchers and experts with roots in different existing communities of practice.



DARIAH-EU WORKING GROUPS

- ▶ they start from existing communities of practices (e.g. medievalists; bibliographic data; AI and music; ethics and DH; digital urban heritage)
- ▶ they create knowledge that is reused by the research infrastructure, a self-sustaining mechanism
- ▶ their governance is peculiar: their duration is unlimited in time BUT the Infrastructure can intervene if the group is not active; they have freedom to work/ research as wished BUT Was needs to show its activities; members are free to join or leave, but core group is stable. In short: they are independent but the RI gives them a framework to work
- ▶ Finally, being part of a WG is recognised positively by the community

DARIAH-EU WORKING GROUPS AND THEIR IMPACT

- ▶ Research communities call attention to recognize a more distributed, collaborative, co-creative way to create and to share new knowledge
- ▶ This behaviour can be retraced in the DARIAH Working Groups and in their need to create strong collaborations, even if built on lightweight institutional ties.

MY ZOTERO BIBLIOGRAPHY: [HTTPS://BIT.LY/2QEJOVF](https://bit.ly/2QEJOVF)

The screenshot displays the Zotero desktop application interface. On the left, a sidebar shows the library structure, including 'My Library' and 'Group Libraries' with a selected group 'Literature PhD Francesca Morselli'. The main pane shows a list of 111 items with columns for Title, Creator, Journal, and Date. A search bar at the top right indicates 'All Fields & Tags'. The bottom pane shows a list of tags such as '20th century', '1950-', 'academic culture', 'Anthropology', 'Archives', 'Bowker', 'Capitalism', 'case study', 'Chain Model of Innovation', 'citation', 'Civilization, Modern', 'co-creation', 'coding of interviews', 'COLLABORATION', 'collaboration', 'Collaborative design', 'community of practice', 'complementary science', 'Consortium', 'Constructing the field', 'content analysis', 'cooperation', 'costs of infrastructure', 'critical infrastructure', 'cultural innovation', 'Culture', 'Cyberinfrastructure', 'cyberinfrastructure', 'data search', 'design', 'Digital humanities', 'Dimensions of information infrastructure', 'distributed cognition', 'downstream issues', 'e-infrastructure', 'Ecology', 'epistemic trust', 'ERA', 'ERIC', 'ESFRI', 'ethnographic approach', 'ethnographic method', 'European Research Infrastructure Consortium', 'Experiments History'.

Title	Creator	Journal A...	Date A...
Understanding Infrastructure: D...			8/10/...
Understanding Infrastructure: D...			5/24/...
The Forum www.esfri.eu			8/27/...
Tesi Appignanesi.pdf			5/24/...
Symbolic Interactionism			3/30/...
Sociotechnical Studies of Cyberi...			5/24/...
Read "Fostering Integrity in Res...			1/2/2... D...
Networked research infrastru...			5/24/...
Home / Twitter			4/21/... Lib...
galison_trading_withthe_enemy...			12/18/...
From Shared Databases to Com...			5/24/...
DistributedCognition.pdf			1/19/...
Case Studies of e-Infrastructure...			5/24/...
2020 Workshop Report			7/28/... Lib...
'Discourse Coalitions and the In...			5/24/...
Content Analysis: A Flexible Me...			7/30/... O...
Towards knowledge societies: ...			3/29/...
Real Science: What It is, and Wh...	Ziman		3/28/...
Empirical Philosophy of Science	Wagenknecht et al.		7/31/... D...
A Social Epistemology of Resear...	Wagenknecht		3/28/...
If You Build It, Will We Come? L...	van Zundert		8/23/... Pu...
Our Cultural Commonwealth: T...	Unsworth		8/5/2... Ac...
Towards a Methodology for Dev...	Tranfield et al.		8/1/2... _e...
Sociomaterial Practices, Relatio...	Styhre		7/31/...
Steps Toward an Ecology of Infr...	Star and Ruhleder		11/20/...
The Ethnography of Infrastructure	Star		7/31/...
An Introduction to Science and ...	Sismondo		11/10/... Go...
Infrastructuring and Participato...	Simonsen et al.	Comput S...	8/11/...
How I Learned to Design and C...	Silvia E. Rabionet		7/30/... O...
Governance of EU research poli...	Ryan		8/21/... Nu...
Sociotechnical Studies of Cyberi...	Ribes and Lee	Compute...	10/20/...
The Long Now of Technology In...	Ribes and Finholt	J. AIS	1/15/...
Co-creating unique value with ...	Prahalad and Ramaswamy	Strategy ...	1/19/...
Riccardo Pozzo, Andrea Filippet...	Pozzo et al.		3/28/...
Infrastructuring: Toward an Inte...	Pipek and Wulf		10/20/...
Trading with the Enemy	Peter Galison		7/30/... O...
Infrastructuring as a Practice of...	Penuel		10/27/...
Scholarly information practices ...	Palmer et al.		5/28/... O...
Sociomaterial Practices: Explori...	Orlikowski	Organiza...	7/31/...
Social innovation as a trigger fo...	Moulaert and Mehmood		6/7/2...
Who Is ERIC? The Politics and Ju...	Moskovko et al.	J. Contem...	8/21/... Pla...
Embedding Digital Infrastructur...	Merz		11/9/... D...
"Why Do Humans Reason? Argu...	Mercier and Sperber		3/28/...

THANKS! QUESTIONS?

francesca.morselli@dans.knaw.nl