Webinar *The role of universities in fostering high quality citizen science* UNICA network of universities from the Capitals of Europe Thursday, 24 September 2020

### Citizen science:

opening science, learning with society, sharing knowledge for democracy and sustainability

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### What's new about citizen science?



# Citizen Science is not a new thing ... what is new is the way we look at it



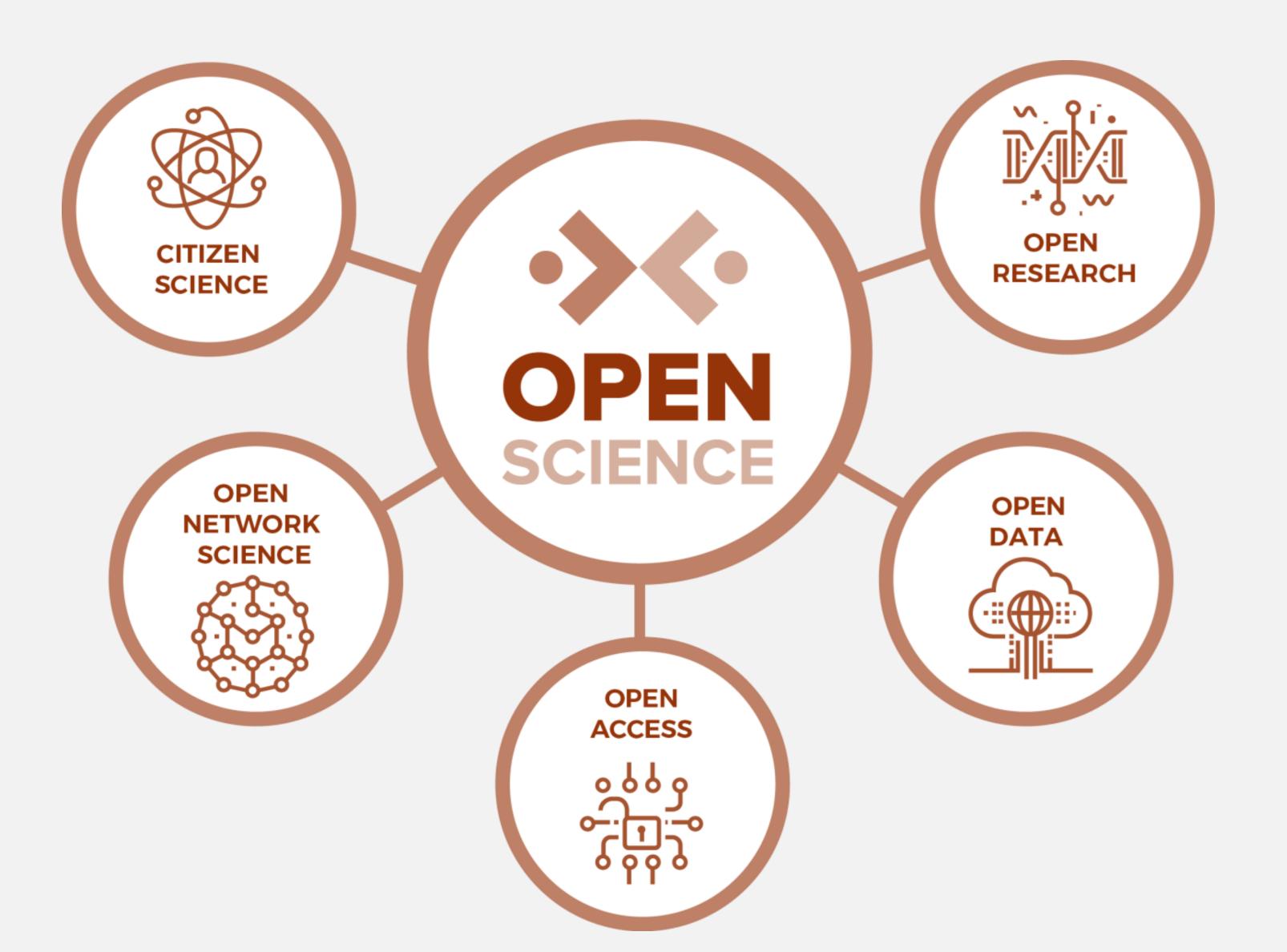
The approach and attention that the scientific and, above all, academic community, and policy makers, among other actors, increasingly grant to citizen science means in some way that the trust, transparency and relevance of science increase when carried out in relation to society and above all, they perceive the ability to stimulate <u>involvement as a way of bringing communities together</u>, creating environments conducive to social, scientific, economic and cultural innovation.



There is a growing recognition that the ability to develop research and the knowledge share, which results from it, is fundamental to social development and to strengthen policies based in scientific evidence.

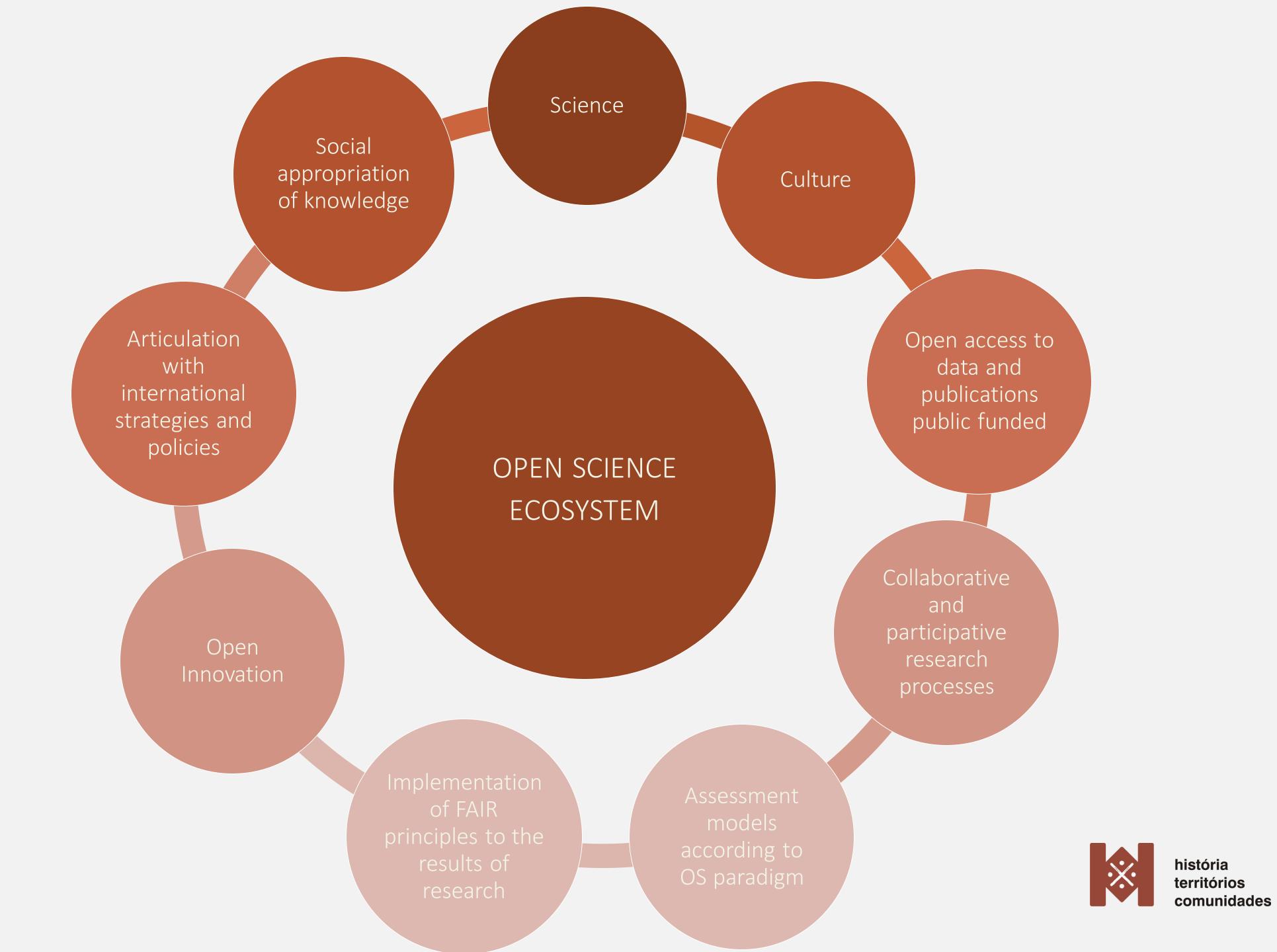


Open science make scientific research, data and dissemination accessible to all levels of an inquiring society.





### Open science



**Stephen Hawking** hopes that giving free access to his early work will inspire others, not just to think and learn but to share research.

"By making my PhD thesis open access, I hope to inspire people around the world to look up at the stars and not down at their feet; to wonder about our place in the universe and to try and make sense of the cosmos.



#### SCIENCE AND SOCIETY

Knowledge gains value when it is shared and disseminated, when it is created collaboratively between science and society.

#### Citizenship

Scientific citizenship and civic citizenship
Citizen-scientist and scientist-citizen

02

#### Co-creation

Effective involvement of society / citizens in the knowledge creation process.

03

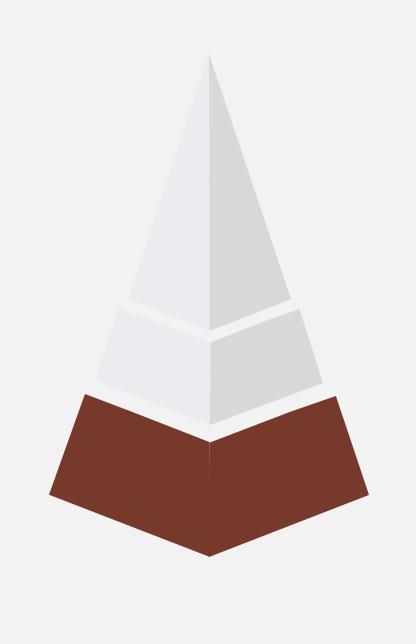
#### Appropriation

Effective integration of knowledge in society and the economy.

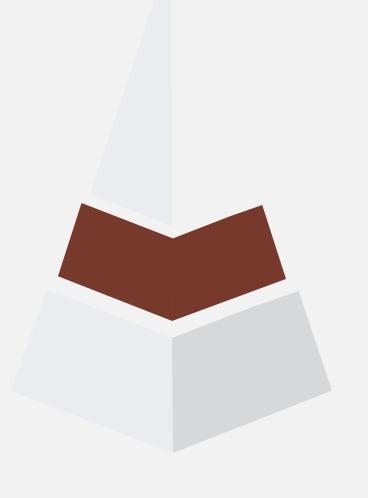
Knowledge-based society.



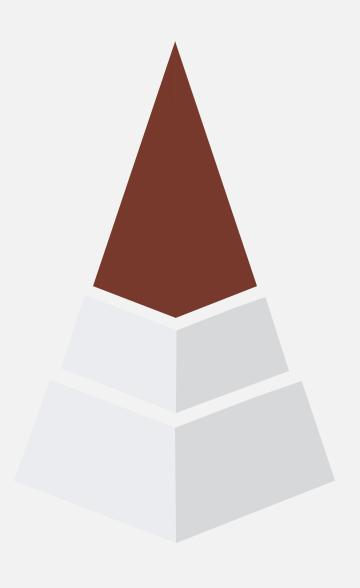
# Collaborative knowledge



Access











### Concepts





### Paradigm of citizen involvement in science



**01**Citizens as passive

Citizens as passive "Public understanding of science";

02

"Public understanding of engagement; science"; Crowdsourcing; Literacy Consultative processes

03

Responsible research and Innovation;
Citizen Science;
Participated Science;
Community basis

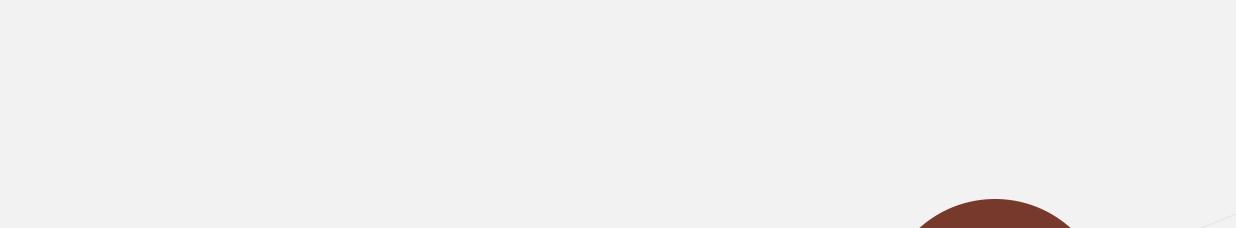
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Appropriation of Knowledge; Science with and for society

05



# Levels / models of participation







### Participation

Problem definition and data collection

Oriented to society's challenges

#### Collaboration

The entire scientific process, including analysis and interpretation



#### **Passive**

""Citizens-sensors" / crowdsourcing

Low cognitive stimulation

Information enrichment across platforms ("distributed intelligence)

Interpretation



### Some concerns

Conceptual instability

Everything is Citizen Science
Self perception
Scientific recognition
Scarce theoretical
development

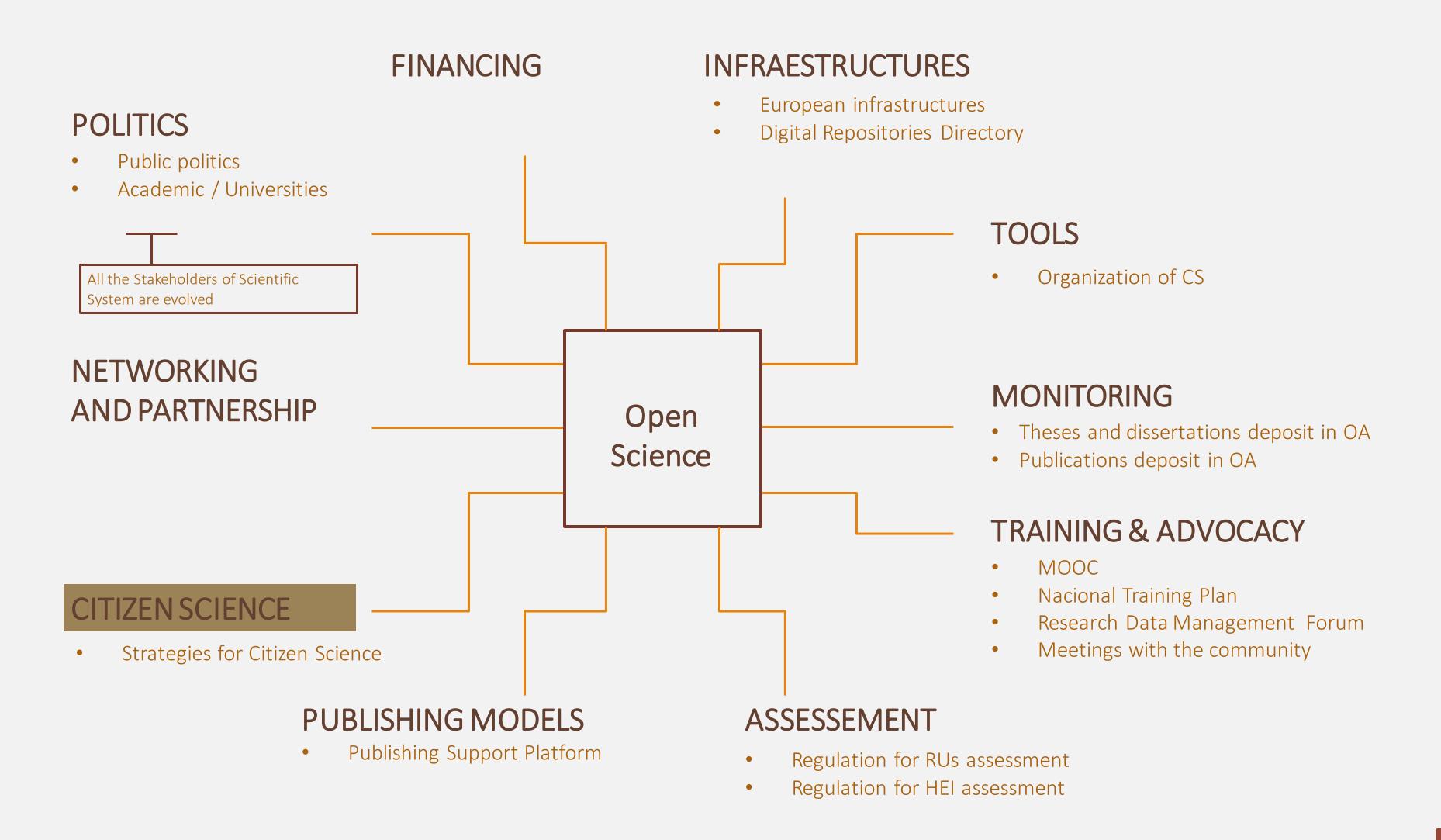
Instrumentalization of citizens

Information / data providers
Low intellectual / cognitive
stimulation
Intellectual property
Qualifications / skills gap

Research data management

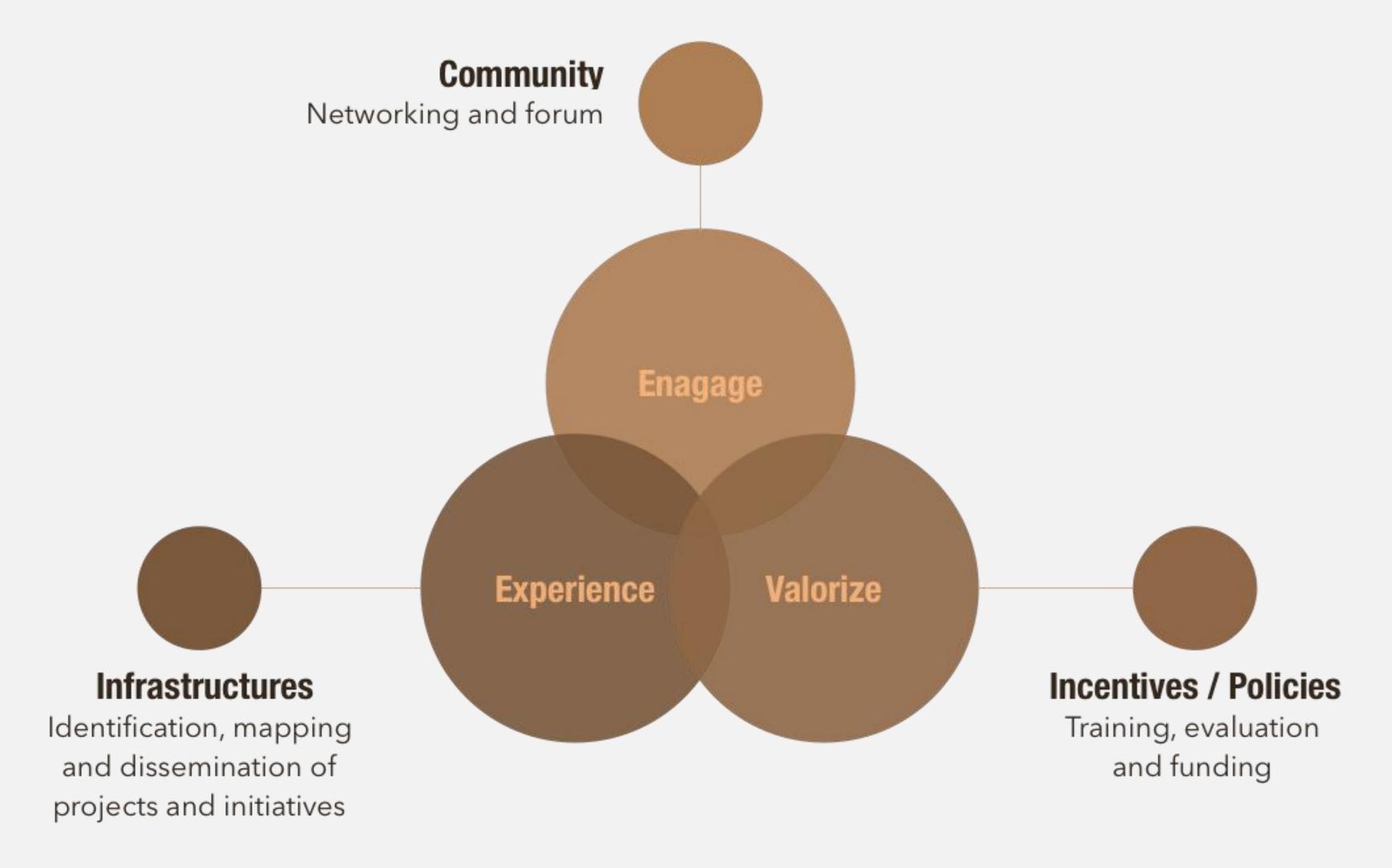
Interoperability
Semantics
Transparency
Reproducibility
Preservation







### Citizen science





### Thank you

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