



lazio pulse

eScience: Preliminary Analysis and Discussions

develops a dynamic ecosystem of public and private actors for improving Research and Innovation, based on the value and knowledge generated by cross-disciplinary Open Scientific Data to contribute to the national and international competitiveness of the Lazio Region by supporting growth of new businesses



laziopulse

Community Building Event - 7th of December 2016 at ESA-ESRIN - G. Mazzitelli



from technology transfer to an echo-system

economic impacts

technology transfer

social impacts

7/12/16 Community Building Event



eScience

provides open data,
infrastructures & knowhow
for research and innovation



eBusiness

creates innovation and value
from science through the
digital market



eSociety

defines the social needs and
provides the institutional
umbrella

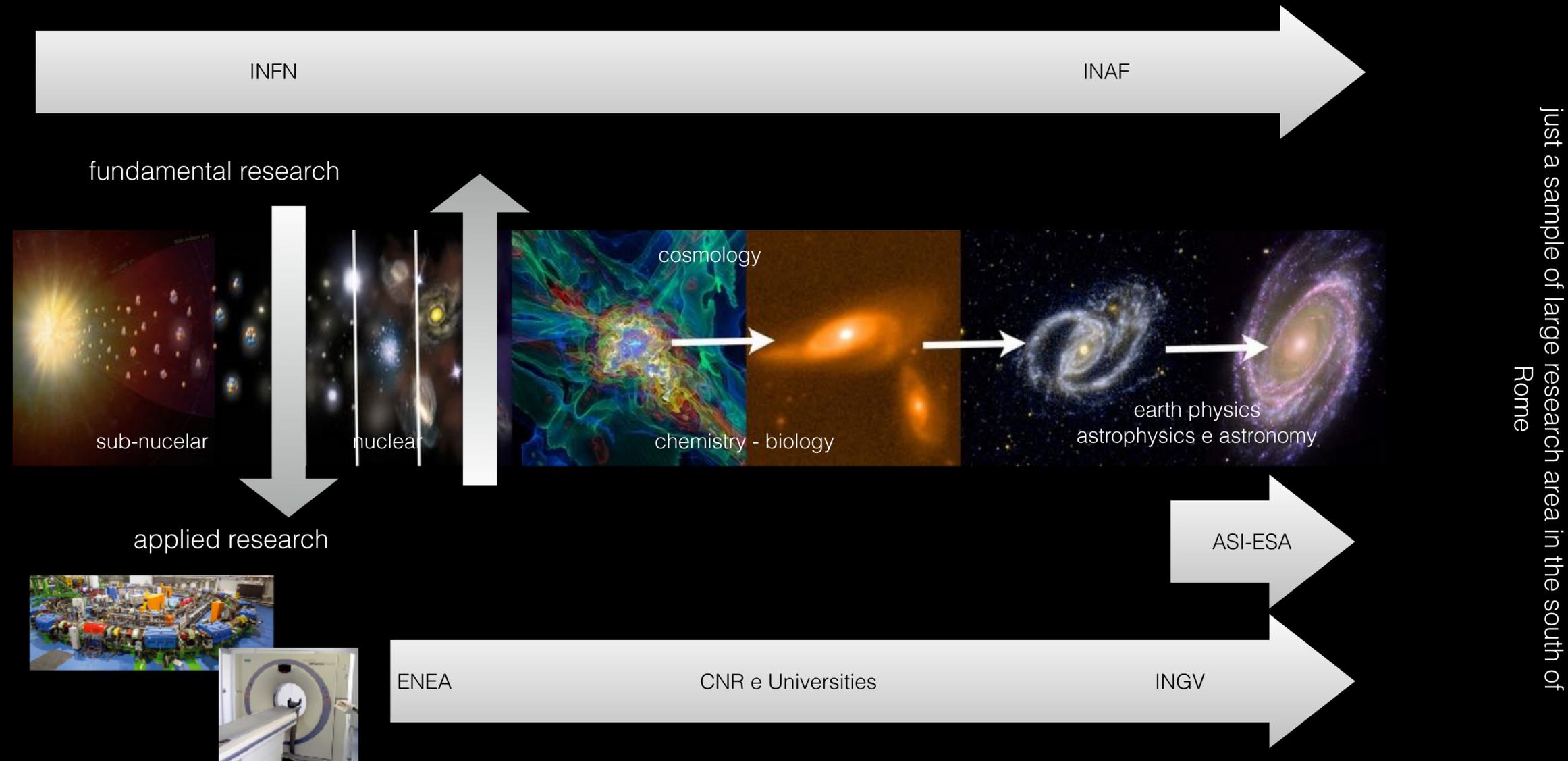


multi and inter
disciplinarity

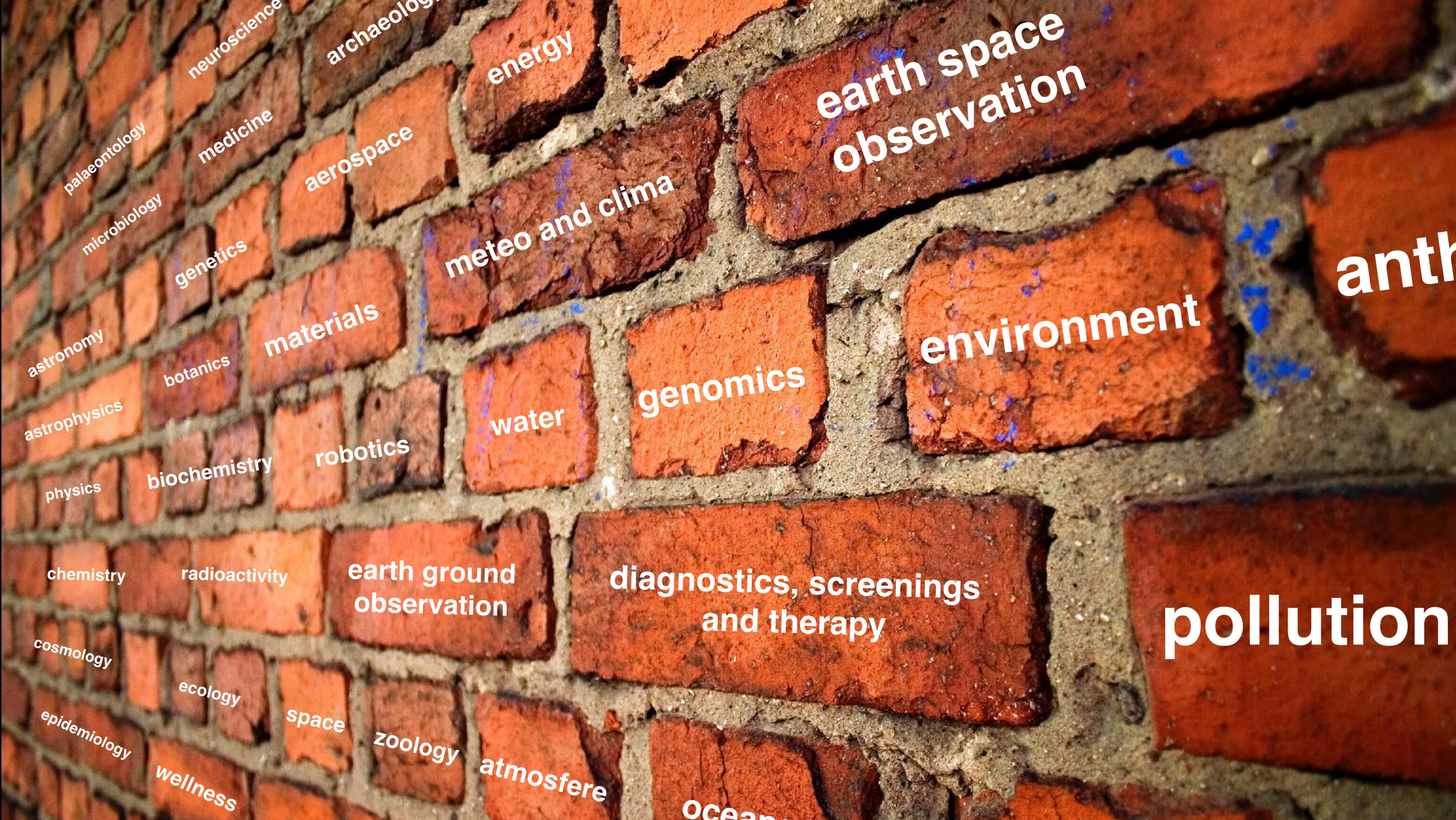
solutions for
the territory

science communication and dissemination

huge opportunity never deeply exploited



Lazio Region: 12 Universities, 4 University Centres of Excellence, 48 Institutions and Research Institutes, 218 Research Laboratories, 2 Scientific Park and 3 Technological Districts, 8,000 employees + 6,000 temporary job.



neuroscience

archaeology

energy

earth space
observation

palaeontology

medicine

aerospace

microbiology

genetics

meteo and clima

anth

astronomy

botanics

materials

environment

astrophysics

water

genomics

physics

biochemistry

robotics

earth ground
observation

diagnostics, screenings
and therapy

pollution

chemistry

radioactivity

cosmology

ecology

space

zoology

atmosfere

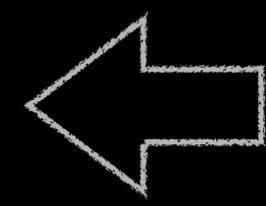
ocean

epidemiology

wellness

science, business & societal challenges

	Transport	Comms	Energy	Agricultural	Production
Fourth industrial revolution	Networks of autonomous vehicles	Neuro-communication	Distributed energy systems	Fully automated farming synthetic meat	Distributed manufacturing, ubiquitous robots
Third industrial revolution	Satellite-guided navigation, digital transport	Internet, mobile data, video, digital and social media	Alternative energy systems	Precision farming systems	Outsourced production systems, digital production and consumption
Second industrial revolution	Oil-powered shipping, road systems, commercial airline	Radio, telephone networks, television, air mail, mass market books	Oil production, gas turbines, electricity system	Artificial fertilizer, mechanized farming, cold chain	Scientific management, mass production systems
First industrial revolution	Steam-power, rail networks, new navigation aids and sea routes	Organized postal networks, newspapers, widespread printing	Coal and coal mining, heat engine and steam power	Increasingly capital-intensive, scale farming, global supply chains	Factory production, first scaled automation
Pre-industrial revolution	Sail-powered shipping	Ad-hoc, private communication networks	Biomass, water, animal and air power	Domesticated farming, small-scale agriculture	Artisanal manufacturing

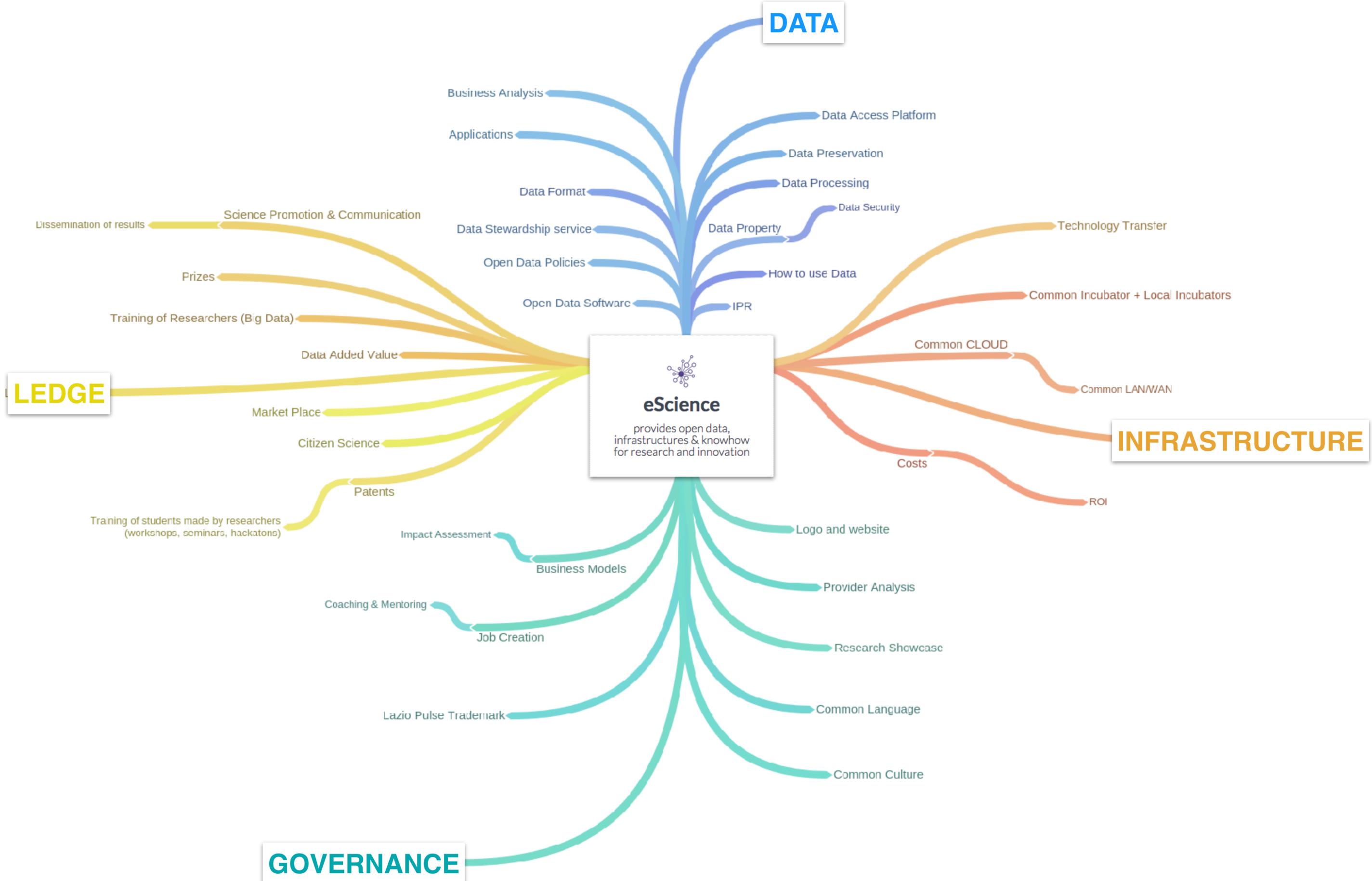


4IR Innovation Framework:

1. Systems, not technologies
2. Empowering, not determining
3. By design, not by default
4. Values as a feature, not a bug

Nicholas Davis, World Economic Forum





DATA



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provides open data,
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the bricks

data interoperability:

- data scouting
- from data to open data - how to?
- access policy?
- IP regulation?

The image shows a screenshot of the GOV.UK website page titled "Open data" from the Government Service Design Manual. The page includes a search bar, a navigation menu, and a list of contents. The main content area discusses the importance of open data for service performance and user experience. Overlaid on the right side of the screenshot is a poster for the "EUDAT USER FORUM 2016", which is part of the "RDA" (Research Data Alliance) initiative. The poster mentions the dates "26-27 September 2016" and the location "Radisson Blu Hotel, Krakow, Poland". The poster also features the EUDAT logo and a network diagram.

DATA



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Information requested

Owner/owner group

Institution/s

IP (if any) - copy left?

Sensitive information (if any)

Data macro sector

(EO, environmental, health, etc)

Data description

Raw data format

Metadata information (if any)

Data knowledge (today applications)

Data knowhow (skills bring with data, skills needed to handle data, data mining, etc.)

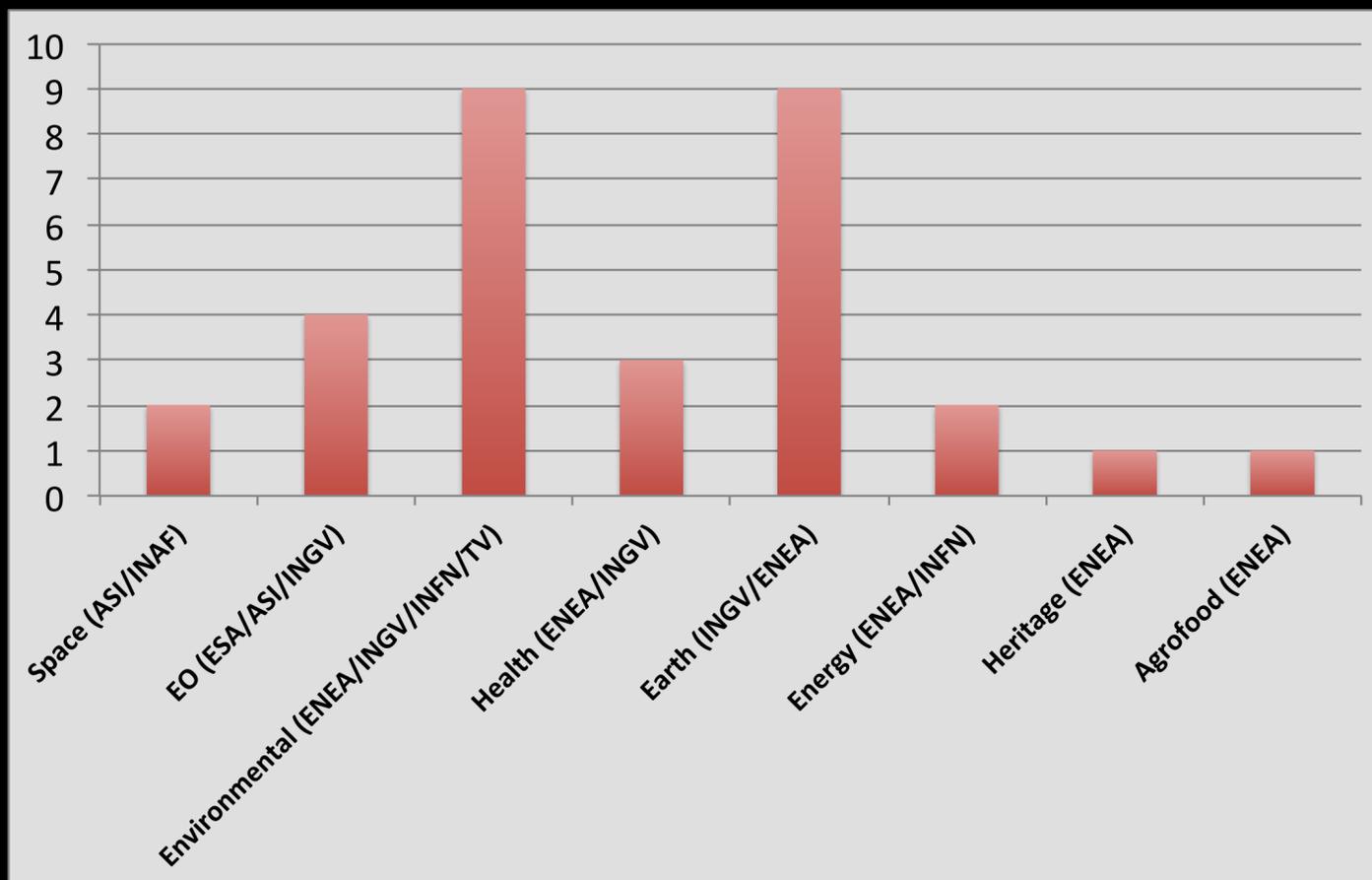


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- **ENEA sample:**

- Mortality data. National , regional and municipal level from 1980, regional and provincial level from 1969. Raw data of ISTAT. Data sharing: to be defined.
- Collection of data on solar radiation for the entire Italian territory. Data sharing: to be defined.
- Datasets on various historical and artistic buildings, objects collected with a variety of technologies. Data sharing to be defined on a case by case basis (partial copyright).

- ...

- **ESA sample:**

- Environment, Health, Biodiversity, Maritime Security, Land Use. Data coverage: global. Data sharing: open

- ...

- etc, etc...

start before you think you are ready

INFRASTRUCTURE



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platform interoperability:

- infrastructures scouting
- eScience “cloud”
- access policy

Bimodal IT = Marathon Runners + Sprinters. Deeply Different, Both Essential

	Mode 1		Mode 2	
Think Marathon Runner	Reliability	Goal	Agility	Think Sprinter
	Price for performance	Value	Revenue, brand, customer experience	
	Waterfall, V-Model, high-ceremony IID	Approach	Agile, kanban, low-ceremony IID	
	Plan-driven, approval-based	Governance	Empirical, continuous, process-based	
	Enterprise suppliers, long-term deals	Sourcing	Small, new vendors, short-term deals	
	Good at conventional process, projects	Talent	Good at new and uncertain projects	
	IT-centric, removed from customer	Culture	Business-centric, close to customer	
	Long (months)	Cycle Times	Short (days, weeks)	

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Gartner

Implementazione multisite di un datacenter OpenStack
altamente affidabile e scalabile basato su LXC

Lazio Pulse

INFN - LNF - 7 Giugno 2016

Alex Barchiesi, Alberto Colla, Fulvio Galeazzi

Gestione e condivisione dati Agenzia Spaziale Italiana

Note sintetiche di inquadramento
LAZIO Pulse, 23 maggio 2016

INFRASTRUCTURE



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D4SCIENCE
INFRASTRUCTURE



Introduction to
D4Science and its enabling platform **gCube**

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ISTI - CNR
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A. Manieri
ENG

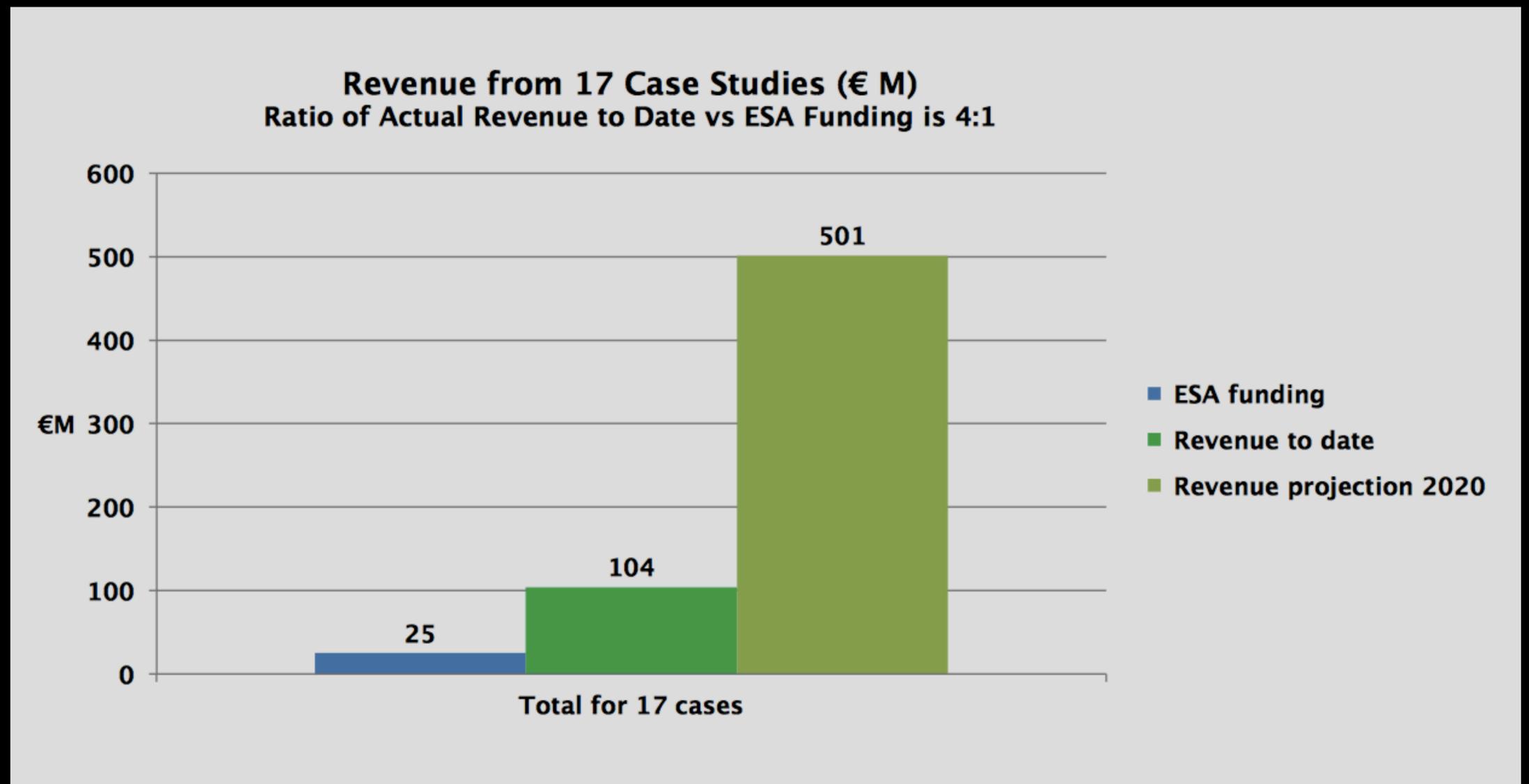
eScience (business)model

GOVERNANCE



eScience

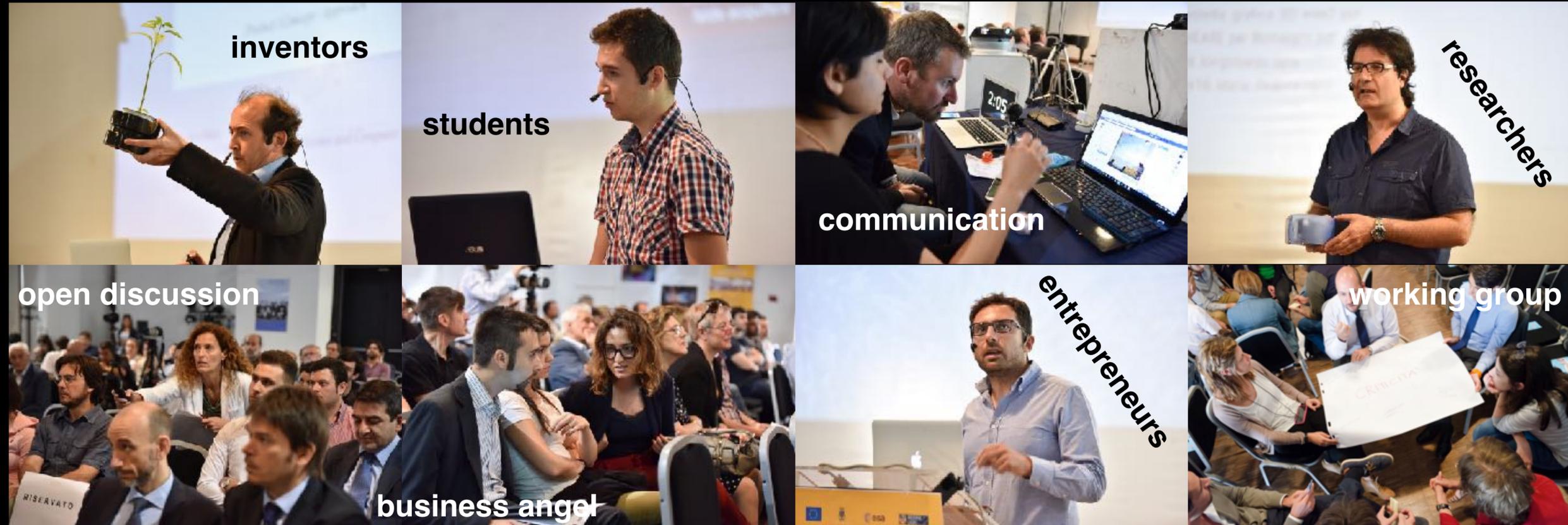
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Socio-economic impact of the ARTES Applications Programmes

WIRE - Workshop Industry, Research, Economy

5 minutes for your idea & ESA prize for best Idea, Communication, Innovation



LEDGE

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eBusiness

creates innovation and value from science through the digital market

eSociety

defines the social needs and provides the institutional umbrella

WIRE WIRE - WORKSHOP INDUSTRY, RESEARCH, ECONOMY

HOME COSA È WIRE16 IL COMITATO SCIENTIFICO GALLERY CONTATTI

FRASCATI SCIENZA PRESENTA

#WIRE16

16 Giugno 2016 Frascati | h 9-18

WIRE 16 - Workshop Impresa, Ricerca ed Economia. Ingresso GRATUITO, prenotazione obbligatoria

5 MINUTI PER LA TUA IDEA

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[7/12/16 Community Building Event](#)



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Thank you...

laziopulse.it