# Industrial Innovation in Transition

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IIT Industrial Innovation in Transition

Aalto University · The University of Manchester · zabala innovation consulting · University of Twente. · JOANNEUM RESEARCH

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# Sample

| Country | Interviews conducted | Interviews in analysis |
|---|---|---|
| AT | 75 | 100 % |
| CZ | 75 | 100 % |
| DE | 50 | 100 % |
| EE | 80 | 100 % |
| ES | 90 | 100 % |
| FI | 69 | 100 % |
| IE | 44 | 100 % |
| IT | 45 | 100 % |
| NL | 48 | 100 % |
| PT | 25 | 100 % |
| UK | 93 | 100 % |
| Total | 694 | |

+ 10 case studies and 400 web survey responses

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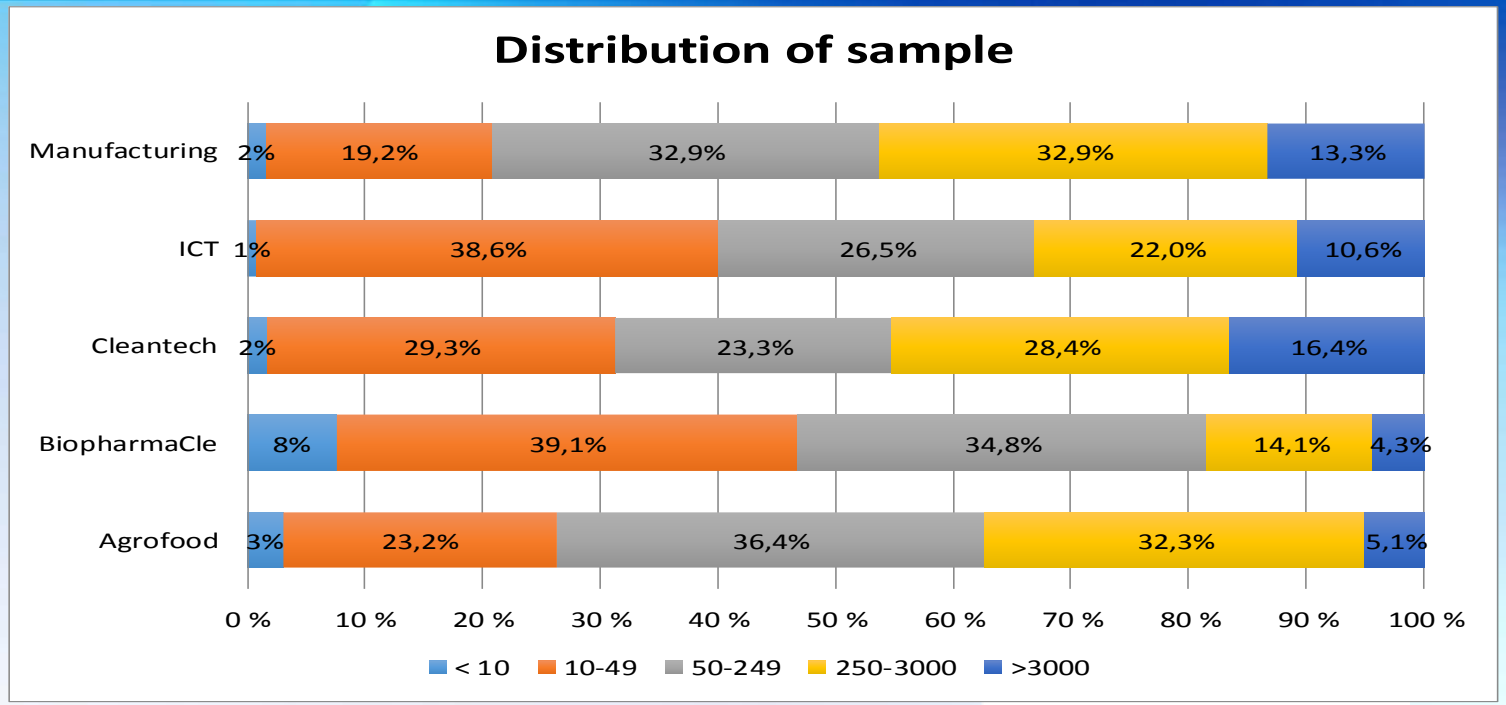
# Company size




Size: # of employees

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# Industry Sectors

| Sectors | | |
|---|---|---|
| | Frequency | Percent |
| Agri-food | 99 | 14.3 |
| Biopharma | 92 | 13.3 |
| Clean technologies | 116 | 16.7 |
| ICT | 132 | 19.0 |
| Manufacturing | 255 | 36.7 |
| Total | 694 | 100.0 |

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# Industrial Innovation in Transition

- Ecosystem game
- New Tools for Innovation Management
- Open Innovation
- Innovation Management and Practice
- Absorptive capacity of firms
- Policy conclusions

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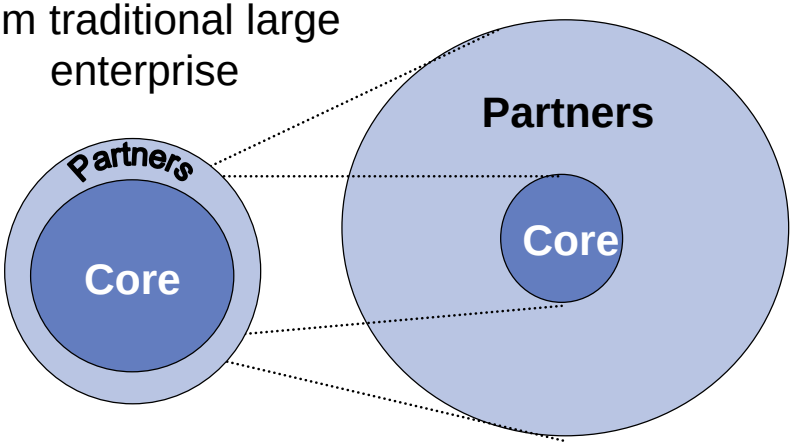
# Innovation Ecosystem

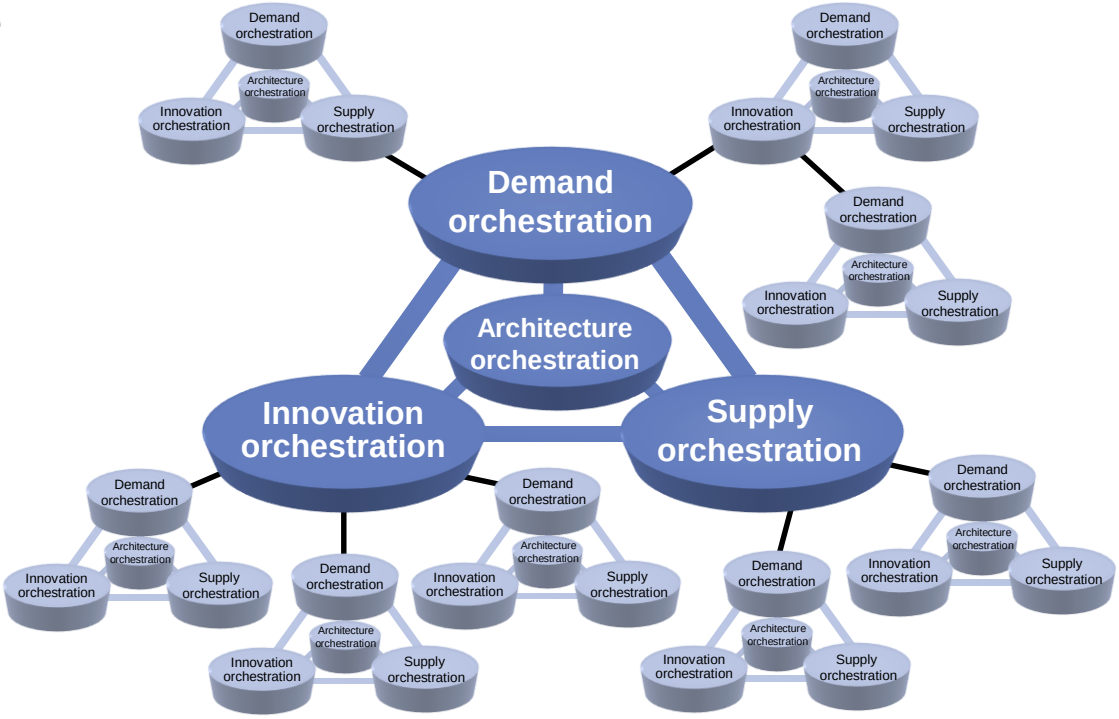
## enable new ways of knowledge creation and utilization

From traditional large enterprise

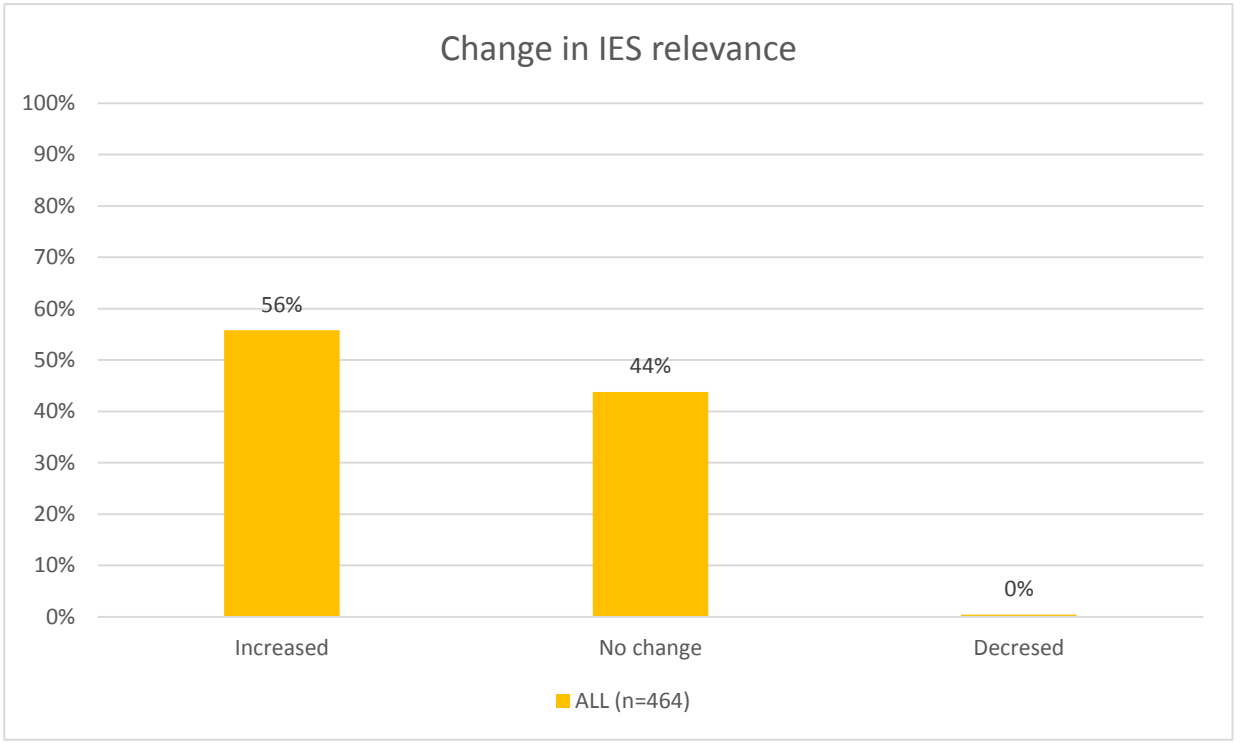
to extended enterprise




with orchestration capability



# Innovation ecosystems – an embedded approach?




## Change in relevance of innovation ecosystems in the last 5-10 years

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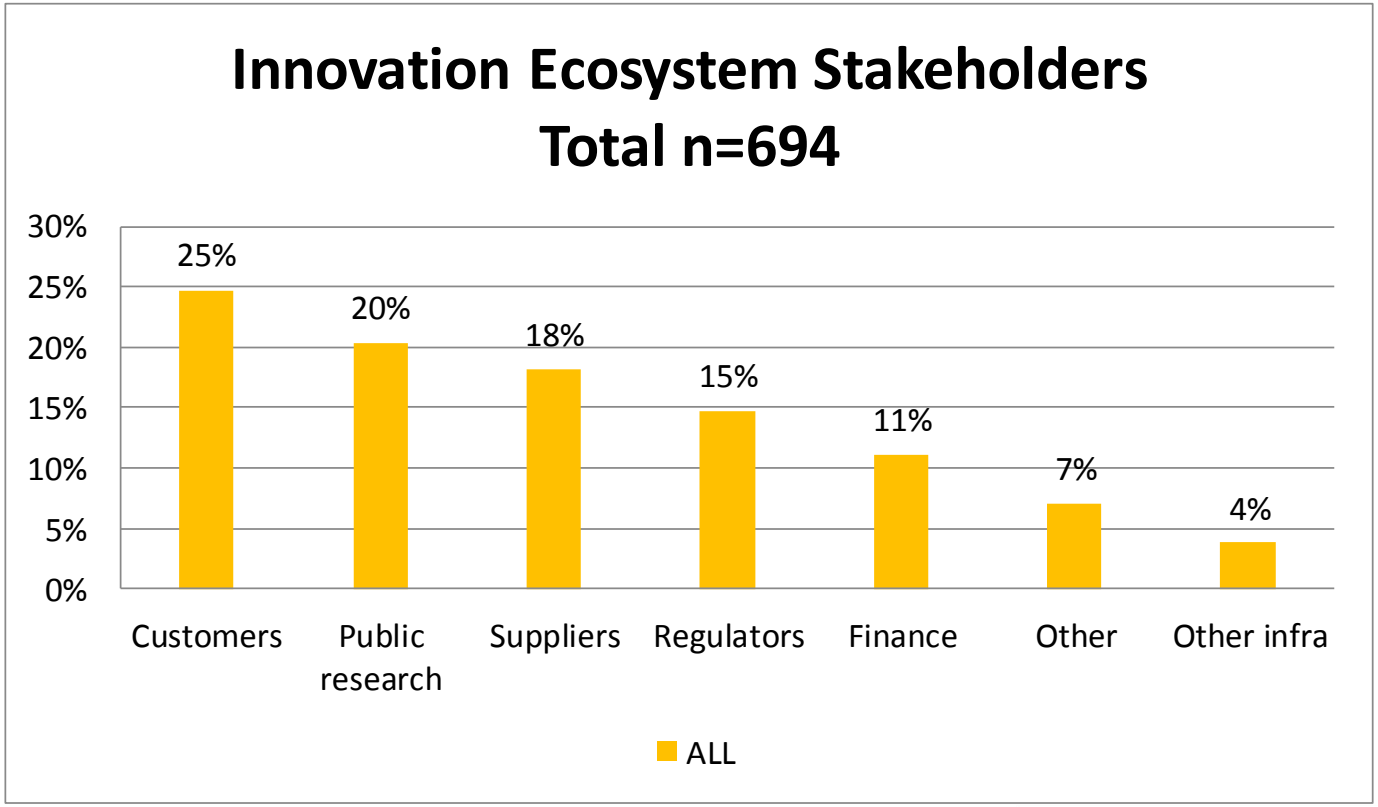
# IES Stakeholders




- Customers have the highest importance for companies.
- Interestingly they are followed by PRB (interaction with knowledge providers is rated high).

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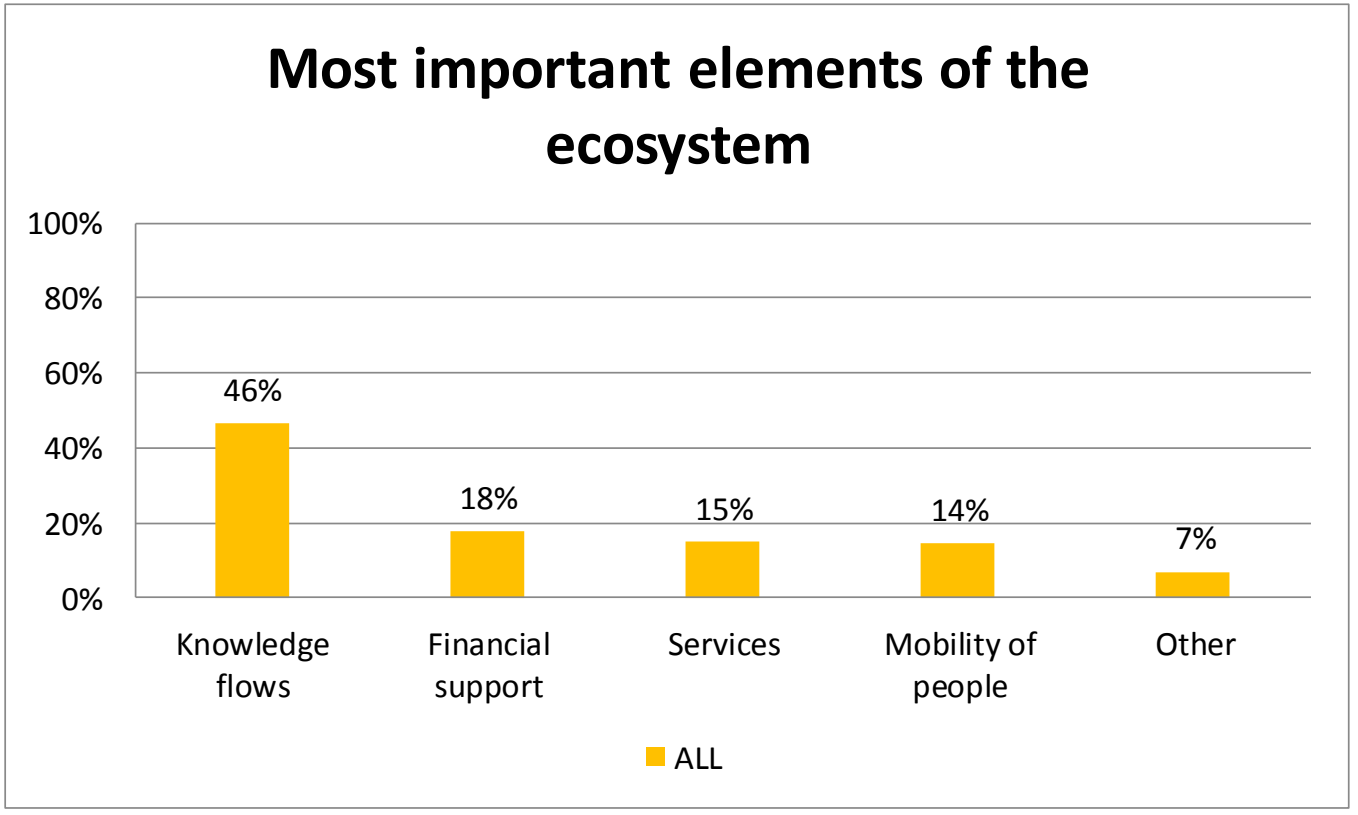
# IES interactions: Most important elements




Knowledge flows are central for companies (reinforces the result of public research bodies being crucial for companies).

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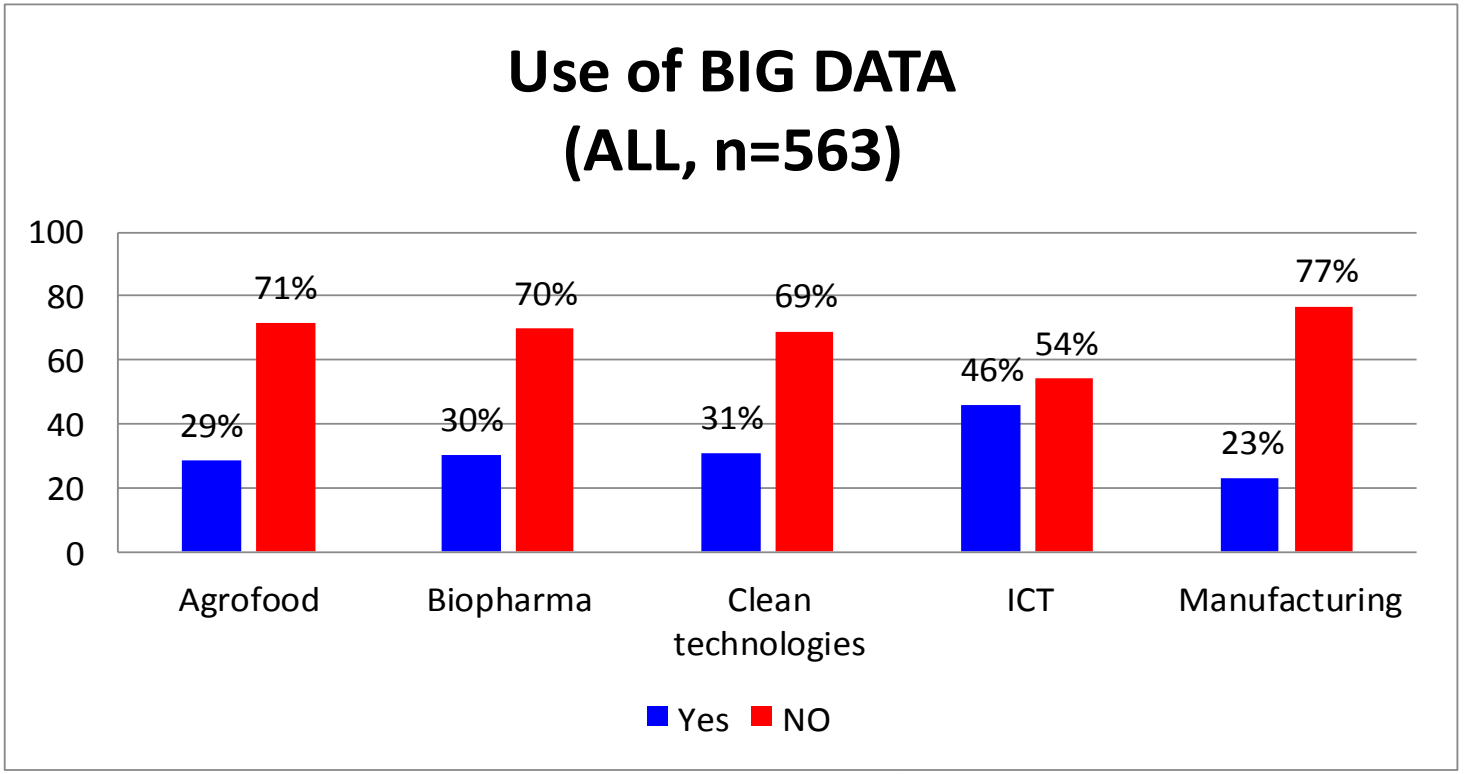
# Big Data usage in Innovation; Industry Sectors

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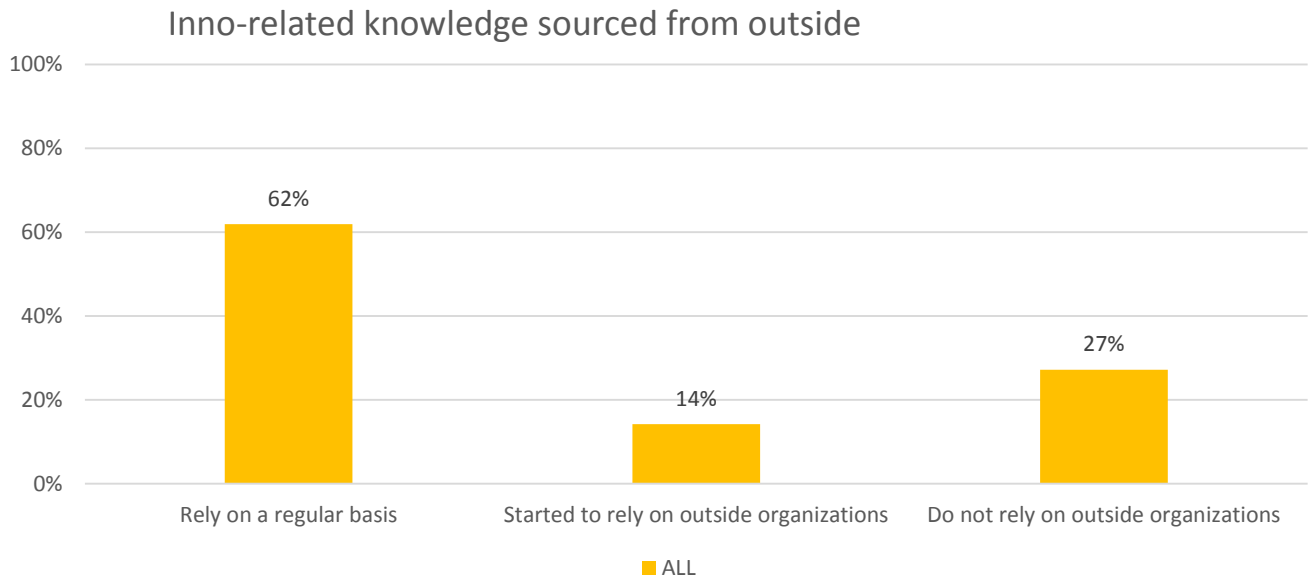
# IES interactions: OI-activities




- All, N = 566
- 76 % of the companies indicated that they engage in OI-activities.

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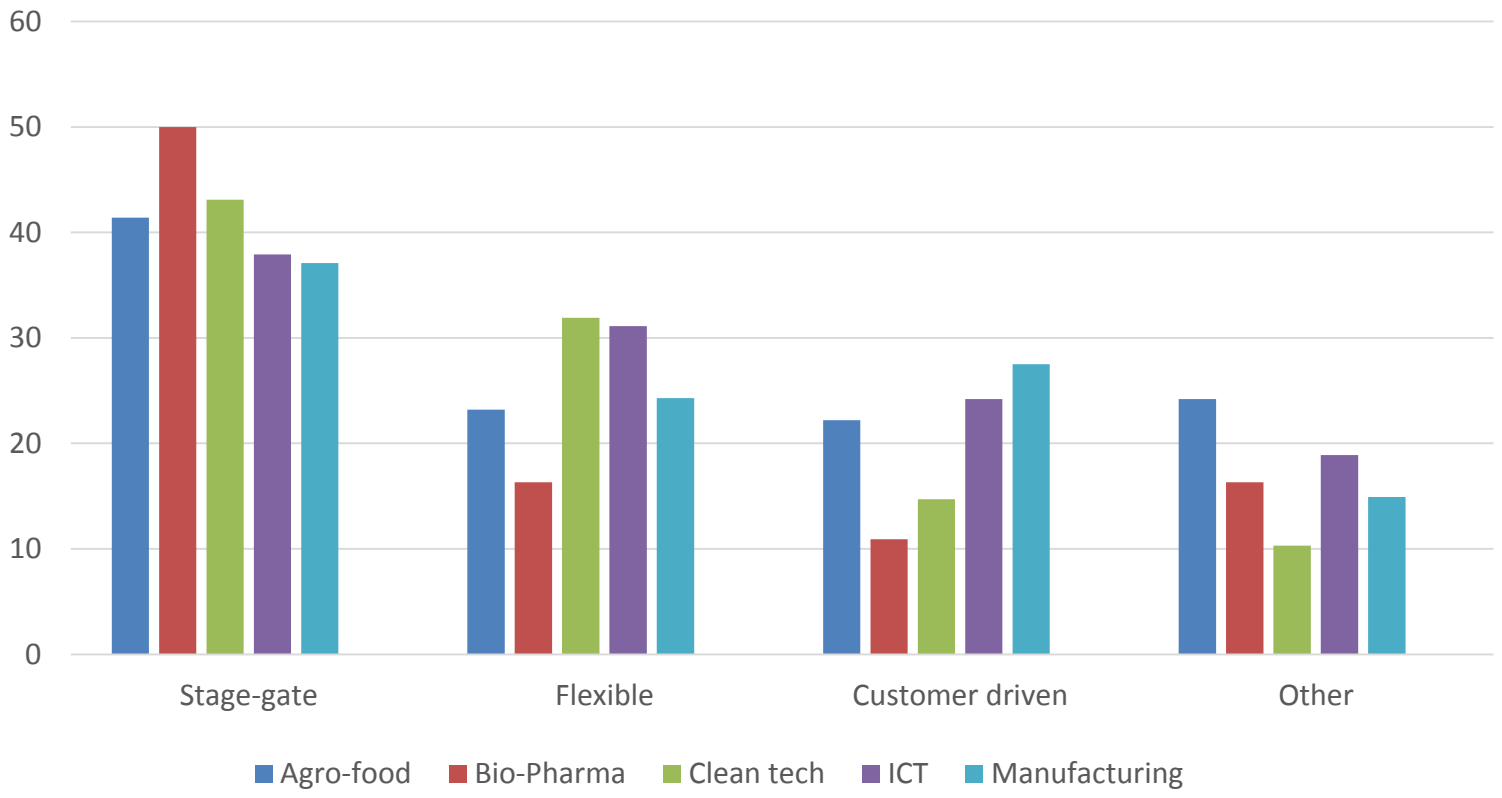
# Innovation management and practice

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# Innovation management and practice

- State-gate model dominates
- Still most initiatives cost driven
- Top management has decisive role
- Dedicated central innovation committee
- Innovation knowledge sourced outside more important, but often difficult to absorb
- Changes in innovation management practice still in progress (customer involvement, business incubators, independent innovation units, web-enabled innovation platforms, etc.)

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# Good Practice Guide

## Innovation management: Learning from the experiences of European companies

- **Innovation Ecosystem** (IES) – characterised by the interdependence of innovation actors for flows of knowledge, finance, people and services.
- **New tools** - new innovation models and tools for innovation.
- **Open Innovation** - opening-up of innovation processes to allow ideas, new technologies or feedback from external partners to flow into the company.
- **Future environment** / new ideas – the need of mapping the future environment of the company.
- **Innovation process and management** – how to organize the innovation process.

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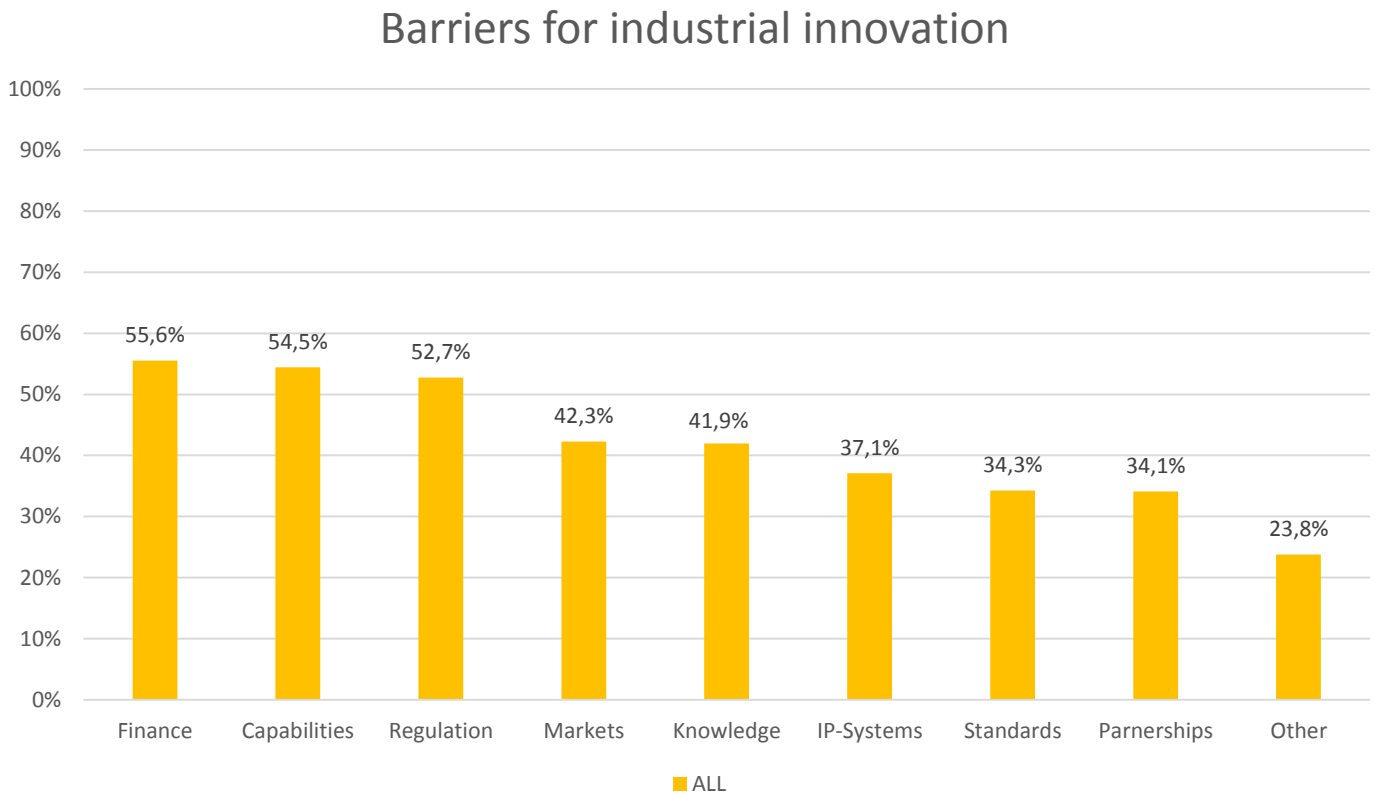
# Absorptive Capacity of firms

- Personal motivation and incentives
- Enabling management system
- Efficient use of web tools
- Extensive collaboration with external partners
- Stimulating corporate culture
- Creative and innovation oriented people

# Open Innovation/Knowledge Sharing

- Complementary competence and excellence
- Genuine commitment for knowledge sharing/trust
- Collaboration platforms/joint campus presence
- Mobility of research personnel
- R&D/recruitment/education all involved
- Transparent management and collaboration rules
- Fair rules for IPR ownership and use
- Reformed reward and incentive systems

# Public policy plays an important role




Includes only “yes”-answers, multiple choices were allowed.

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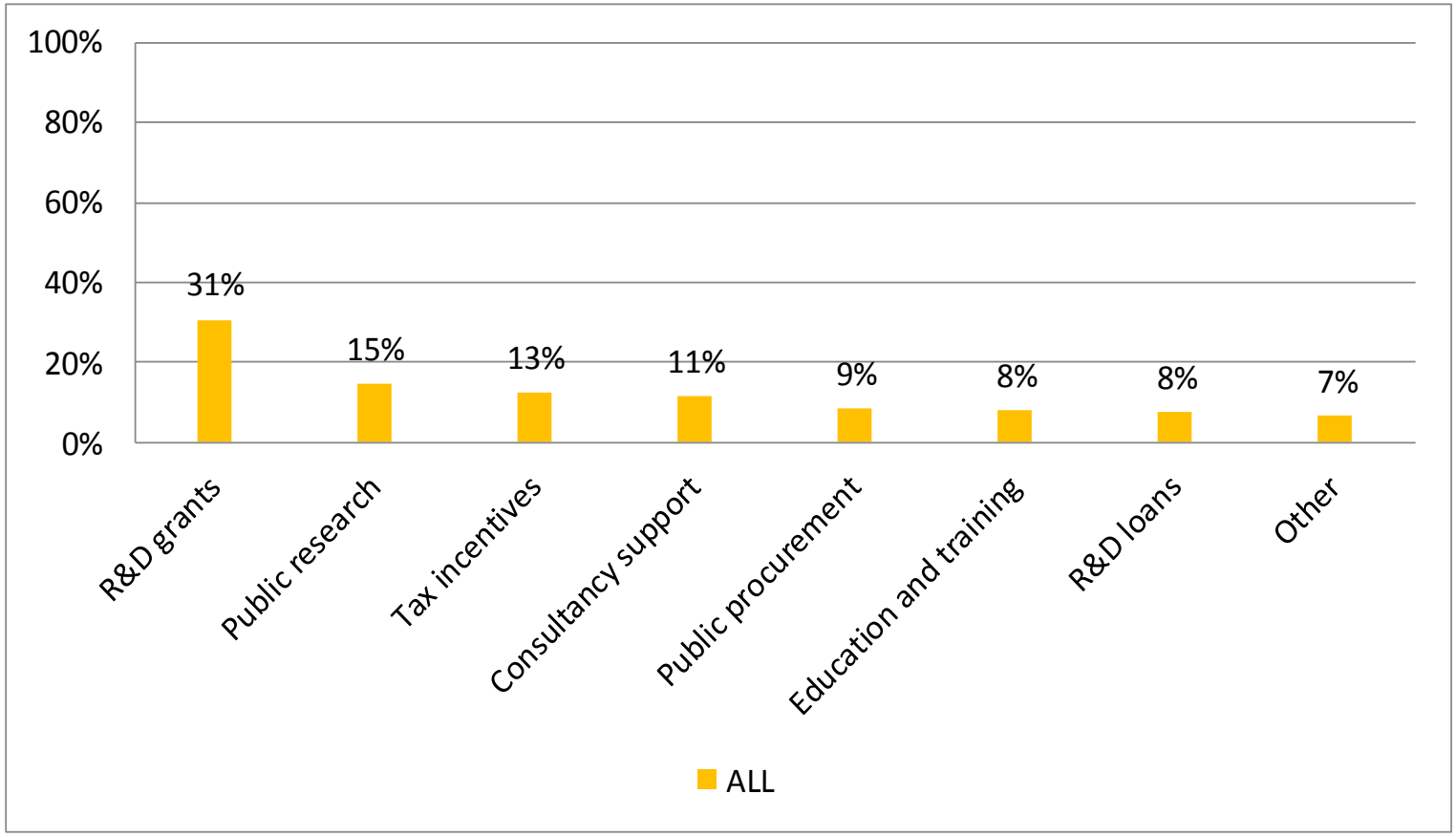
# Initiatives for innovation

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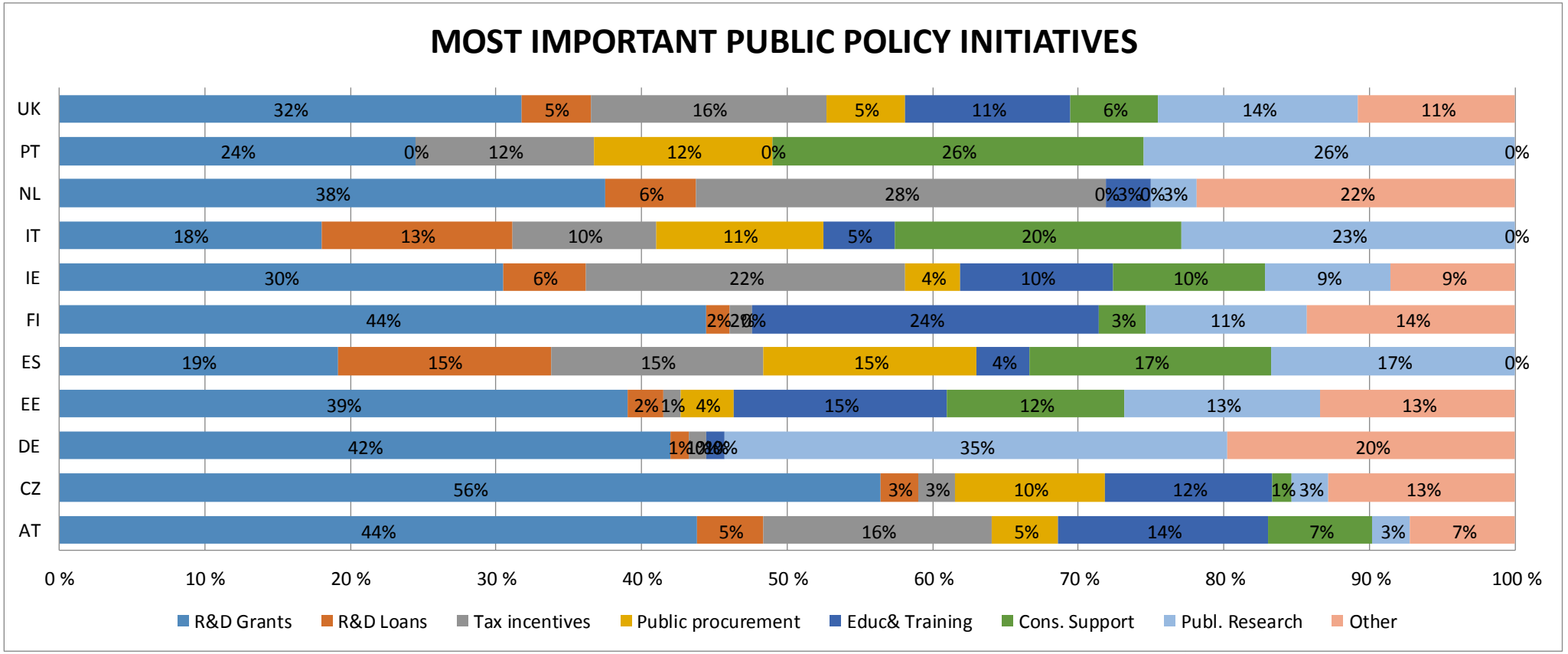
# Policy initiatives by countries

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# Most frequently mentioned policy gaps

- Global trade difficulties.
- Difficulties in knowledge transfer from research sector.
- Bureaucracy and complexity in policy support.
- Lack of coordination and consistency over time in policy environment.
- Insufficient seed, venture and growth funding.
- Insufficient skilled people and development of talent/capabilities.
- Systemic bias/difficulties for small firms.
- Regulation around innovation (seen both as barrier and positive factor).
- Need for more demonstrators, pre-commercial procurement, procurement of innovation.
- Insufficient grant funding available.

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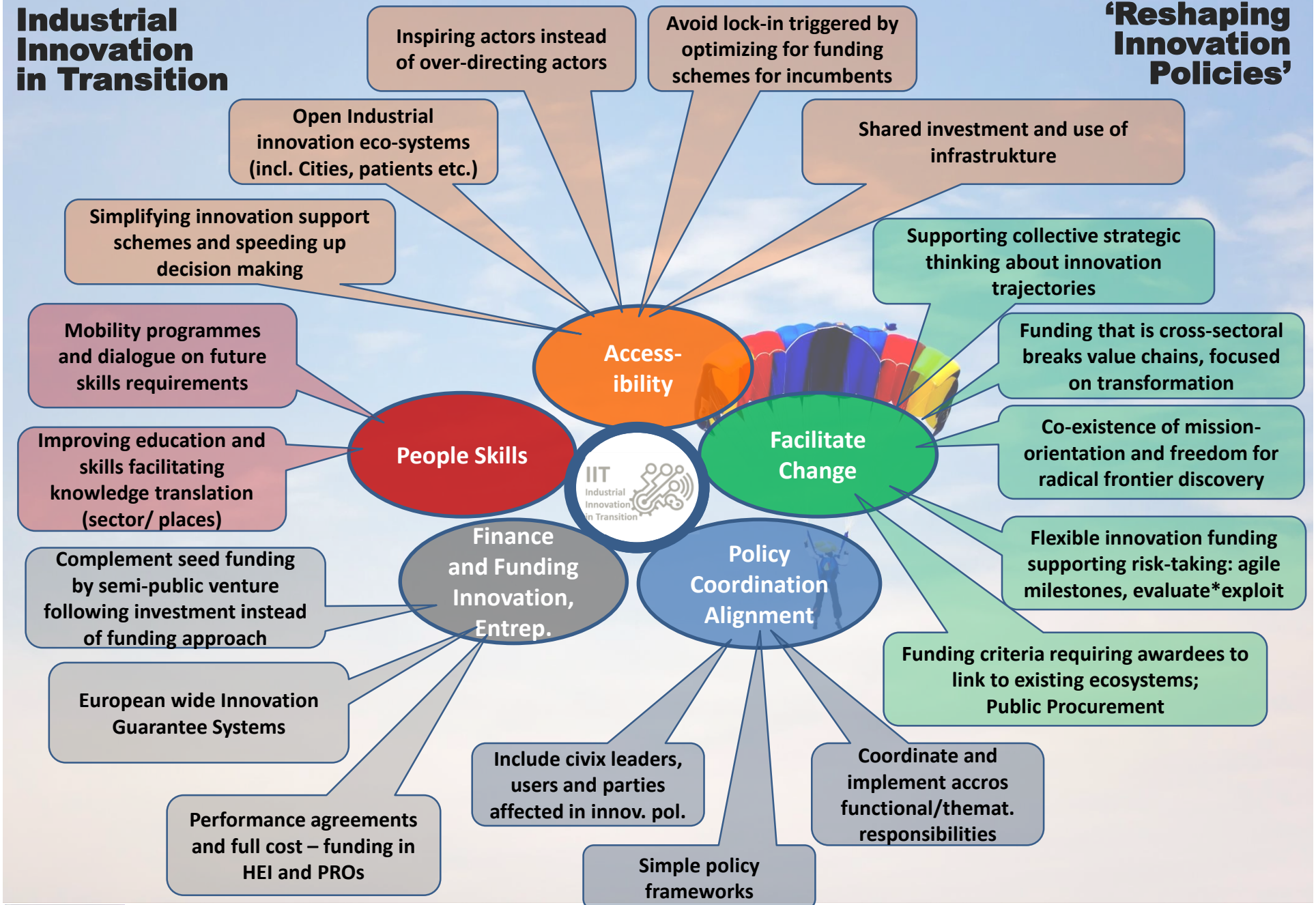
## 'Reshaping Innovation Policies'

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# Thank you

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