Regional innovation policy to support SMEs clusters in Tuscany

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http://www.poliinnovazione.unimore.it/

New Cluster Policies and Tools to Support Emerging Industries and System Innovation
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Emily Wise on **Clusters in regional innovation systems**

" It seems that clusters (or a certain segment of "mature platforms for collaboration") are becoming a more stable part of the innovation support infrastructure in certain geographies

- Is this type of long-term, collaborative platform and process management function needed/desirable?
- If so, what implications may this have on existing cluster programmes (and state aid rules)?
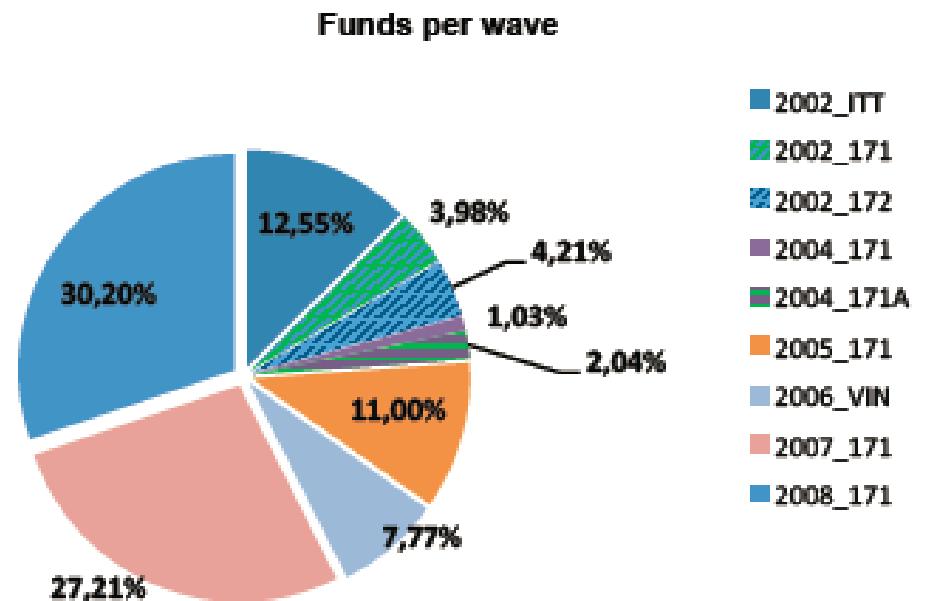
→evaluation issue
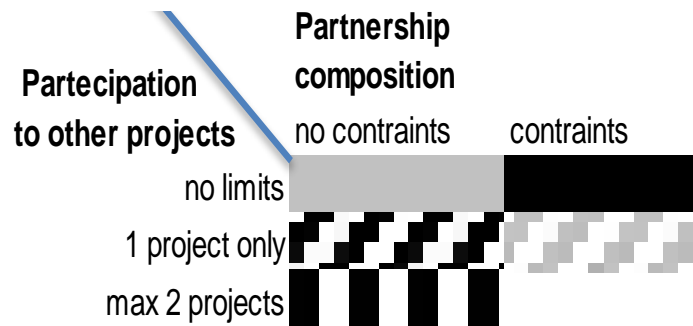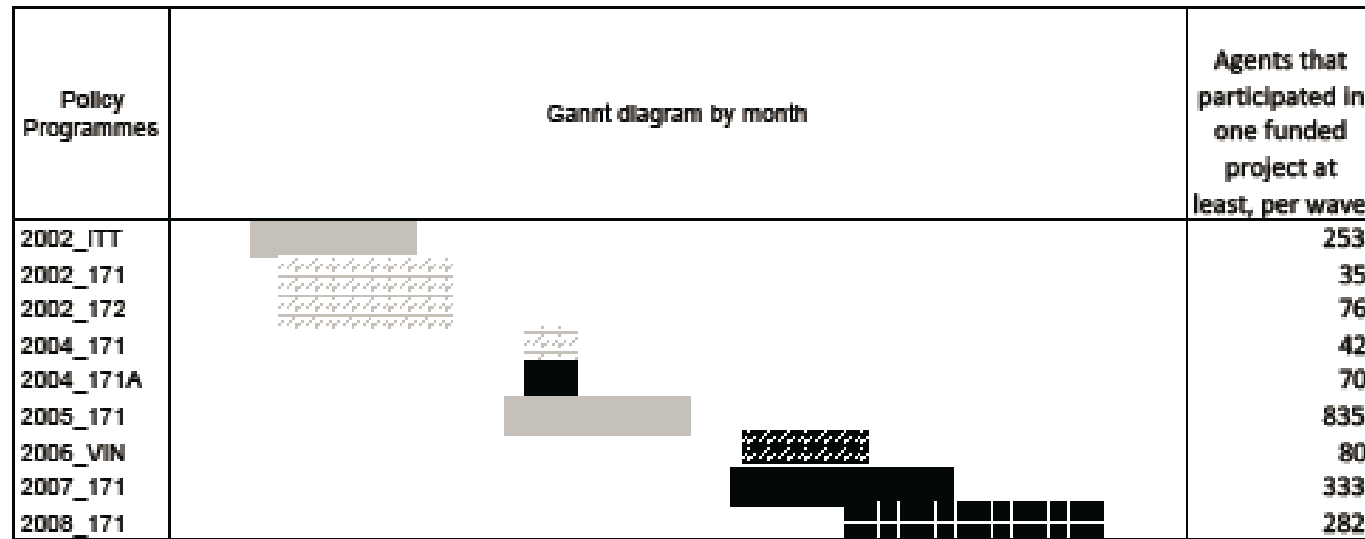
Case study:
Tuscany's innovation policies (2000-2013)

goal

    to strengthen the RIS, which included a large number of SMEs

    that had relatively few connections with universities and

    other regional research hubs

- 2000-2006: network policies

- 2011-2014: innovation poles

Tuscany's innovation network policies_2000-06

Policy Programmes	Gannt diagram by month	Agents that participated in one funded project at least, per wave
2002_ITT		253
2002_171		35
2002_172		76
2004_171		42
2004_171A		70
2005_171		835
2006_VIN		80
2007_171		333
2008_171		282

Partecipation to other projects

Partnership composition

no contraints   contraints

no limits

1 project only

max 2 projects

Funds per wave

- 2002_ITT
- 2002_171
- 2002_172
- 2004_171
- 2004_171A
- 2005_171
- 2006_VIN
- 2007_171
- 2008_171

12,55%
3,98%
4,21%
1,03%
2,04%
30,20%
11,00%
7,77%
27,21%

Tuscany's innovation network policies_2000-06

- *did they learn innovation networking?*

  Counterfactual analysis of the effects on beneficiaries:

  →positive effects

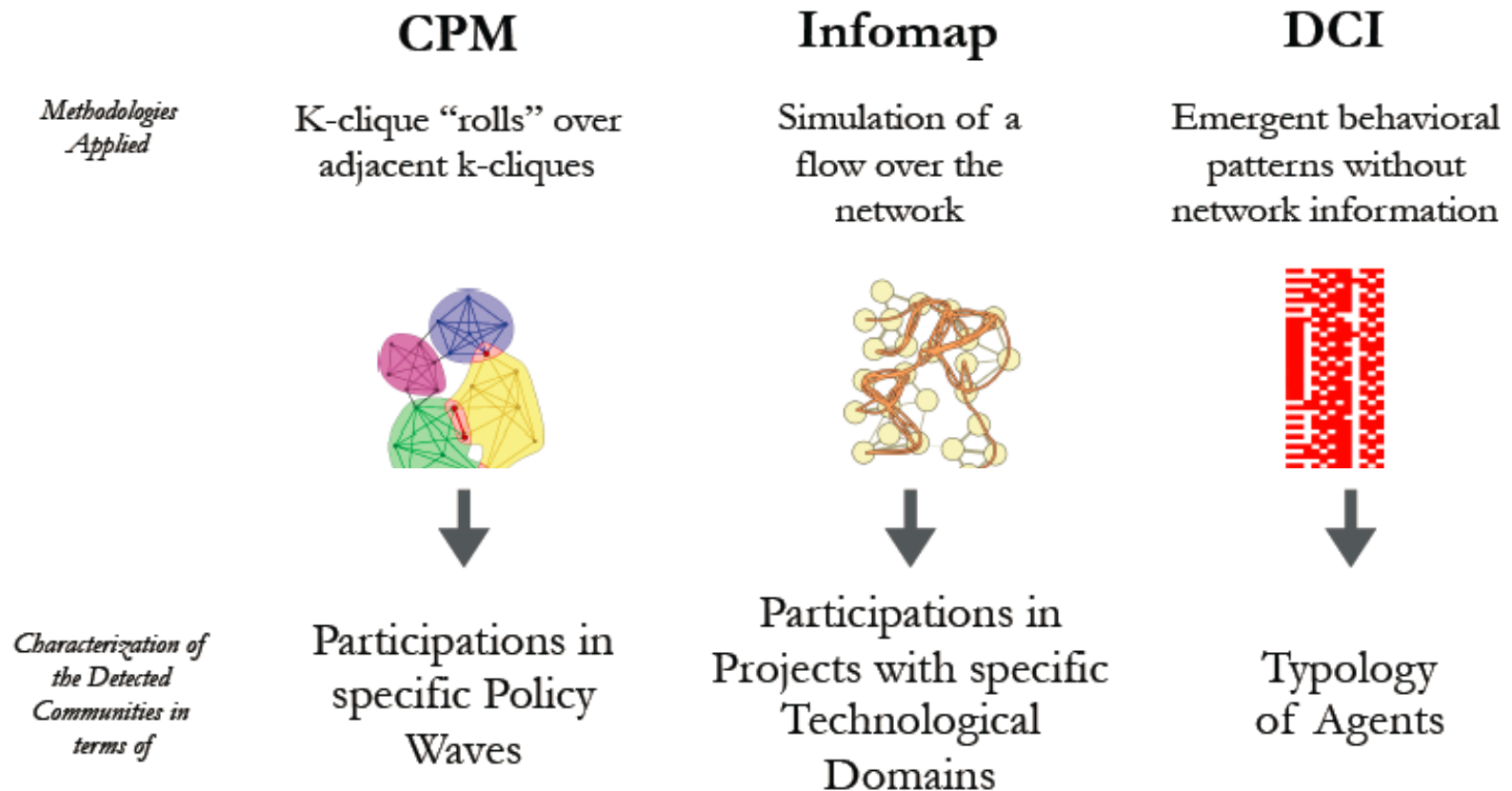- *was networking by design (heterogeneity and size) efficient?*

  →not necessary

- *who were the intermediaries?*

  →not necessarily the ones appointed to that role

- *Detecting the dynamics of subnetworks…*

Tuscany's innovation network policies_2000-06

- Detecting the dynamics of subnetworks_three methods

	CPM	**Infomap**	**DCI**
Methodologies Applied	K-clique "rolls" over adjacent k-cliques	Simulation of a flow over the network	Emergent behavioral patterns without network information
Characterization of the Detected Communities in terms of	Participations in specific Policy Waves	Participations in Projects with specific Technological Domains	Typology of Agents

Each methodology made possible the detection of subnetworks with specific characterization: structure, processes, functions
→Projects were too short to support innovation processes

Tuscany's innovation poles_2011-2014

Tuscany's regional government funded **twelve innovation poles** whose aim was

- to provide a range of **knowledge-intensive services**
  - including technology scouting,
  - support in the preparation of project proposals,
  - matchmaking

- to encourage **technology transfer** and stimulate the innovation capabilities of regional SMEs

Nodes & linkages: types
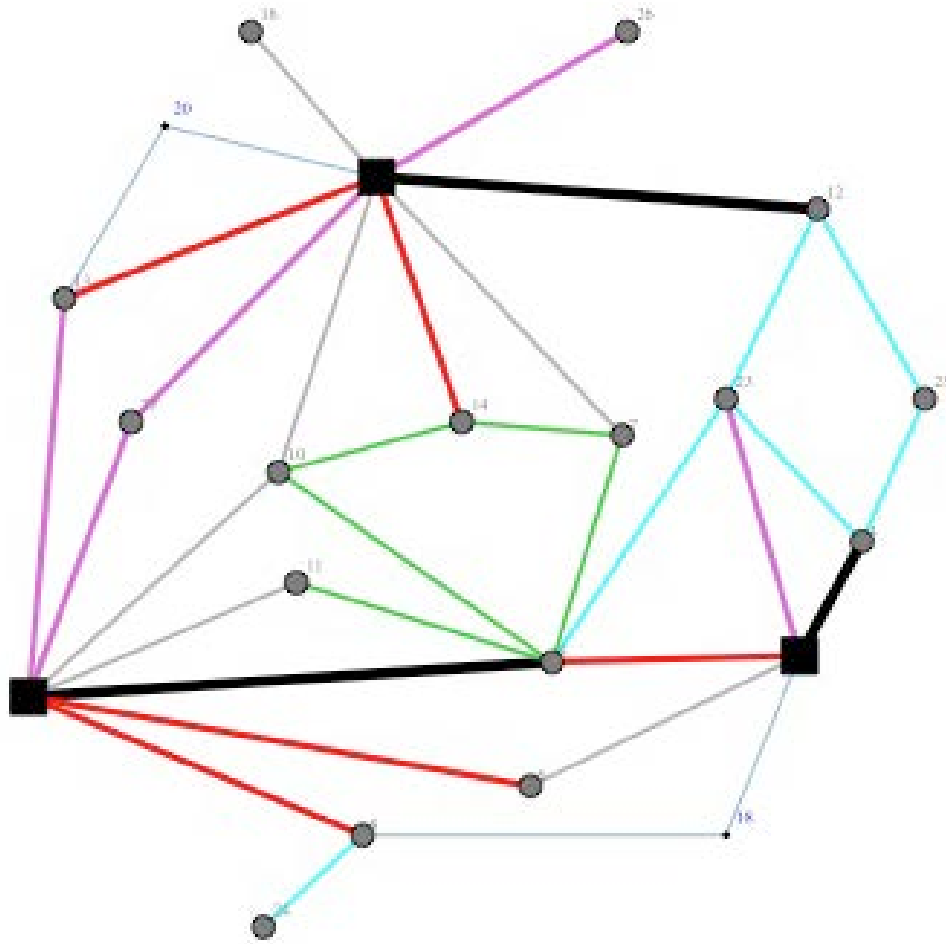
Nodes
- ■ Innovation pole
- ● Other insitutions/organizations
- • Personnel

Layer, ie. linkage type*
- Shareholding of a managing organization
- Leading the innovation pole consortium
- Managing the consortium
- Collaboration agreement
- Service provision
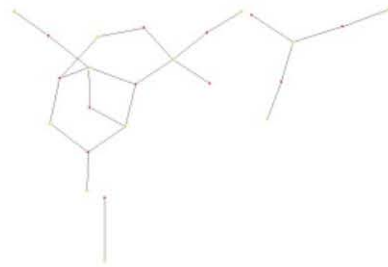- Employee seconded to a managing organiz.
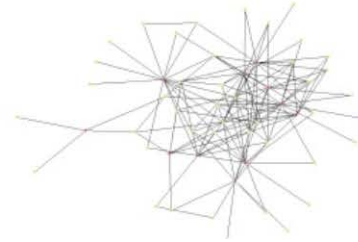- Providing work services to pole
- Membership
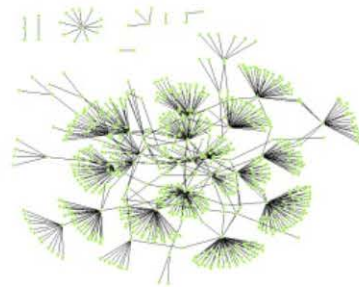
Shareholders
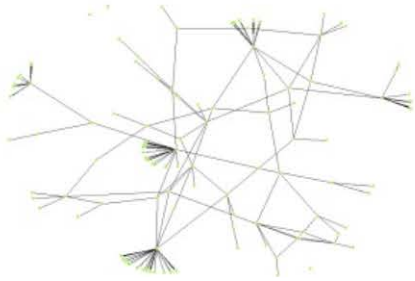
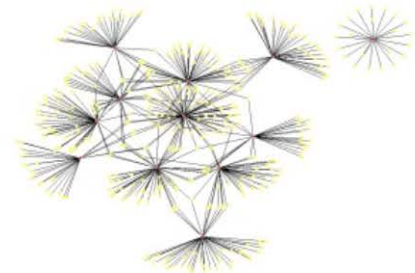**Consortium leaders**

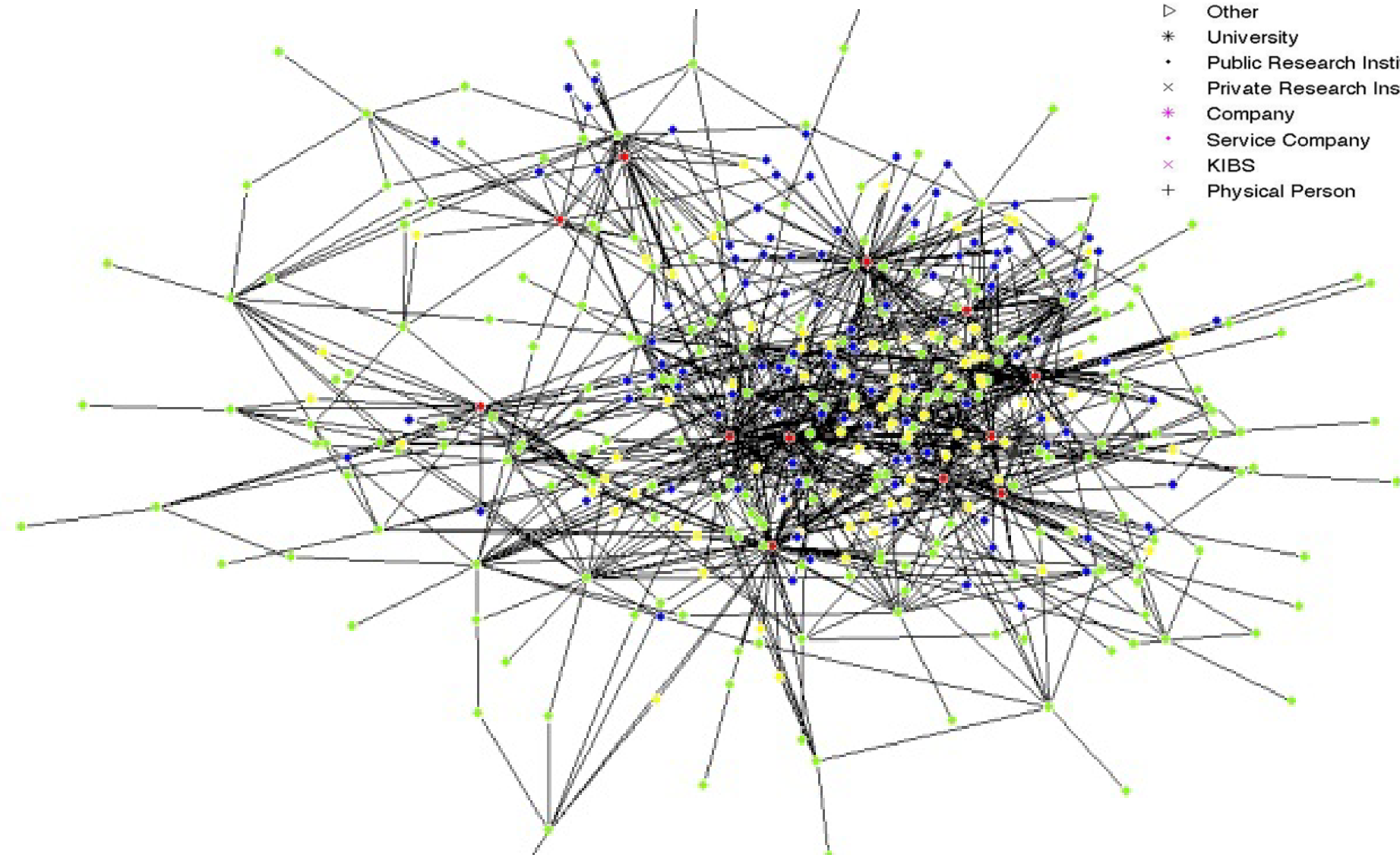**Managing organiza-
tions**
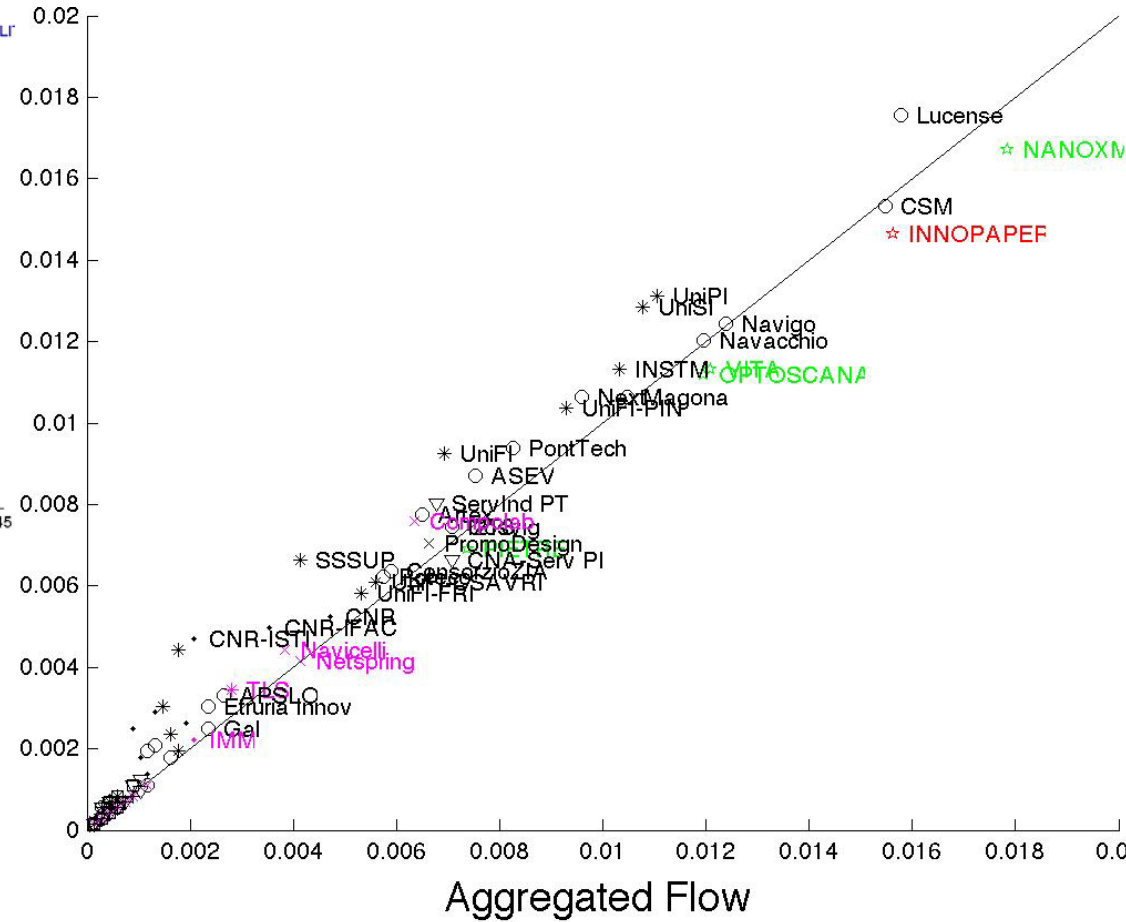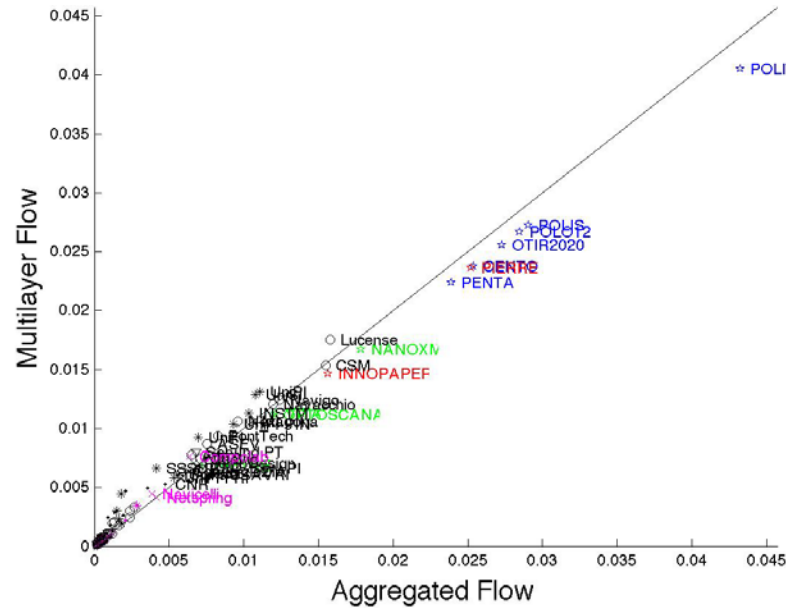
**Collaboration
agreements**

Service provision

Workers/consultants

**Employees
seconded to poles**

	POLO Class 1
	POLO Class 2
	POLO Class 3
	Territorial Public Body
	Chamber of Commerce
	Services Center
	Companies Association
	Other
	University
	Public Research Institution
	Private Research Institute
	Company
	Service Company
	KIBS
	Physical Person

Aggregate and Multilayer Flow

POLO Class 1 (★ blue)
POLO Class 2 (★ red)
POLO Class 3 (★ green)
□ Territorial Public Body
◇ Chamber of Commerce
○ Services Center
▽ Companies Association
▷ Other
✳ University
· Public Research Institution
× Private Research Institute
✳ Company
· Service Company
× KIBS
+ Physical Person

Insights on evaluation

- **Adequate set of system indicators**

- **Sector/technology differentiation**

- **Adequate data collection tools**

- **Short, medium, long run effects**

How can be framed the evaluation of such policies?

→**Emphasize self-evaluation (ex ante)**:

ask beneficiaries and innovation infrastructure to identify

- what **system failures** they are addressing

and

- how they are confronting them
- how they will evaluate their own performance

   Different sectors / technologies may differ in terms of the system failures that need addressing, or in terms of their relative importance

→**Adopt a system of indicators and qualitative metrics**

that captures **direct and indirect outputs**

as well as

measurable performance outcomes and **behavioural outcomes**

Hints on evaluation

For the purpose of **performance-driven fund allocation**:

→ a subset of output indicators could be used (direct outputs mainly), possibly differentiated by the objectives in terms of what system failures they intend to prioritize

For the purpose of returning a **comprehensive evaluation** of the intermediaries' performance:

→ all types of indicators should be used, encouraging the intermediaries to provide a detailed overview of **their contribution to addressing system failures** in the RIS in a **short**, **medium and long-term perspective**