Simulating Climate Knowledge Exchange across European Cities
a SNA – ABM approach

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To address the effects of climate change in (European) cities, local governments need to deploy adaptation strategies, which requires adequate climate and policy knowledge

How to use what’s already there?

1. Elements of context
2. Knowledge, networks, and knowledge networks
3. Simulating knowledge circulation with ABM

1. Elements of context

Urban areas concentrate:

- 75% of Europe’s population
- 75-80% of energy use
- 50% of economic activity
- High level of air pollution
- High level of soil sealing
- Heat and flood risks

→ Dire need to adapt to CC

1. Elements of context

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Taking action requires:

- Climate knowledge
- Policy knowledge

→ Usability gap

- Imbalance supply/demand of knowledge
- Barriers to knowledge integration

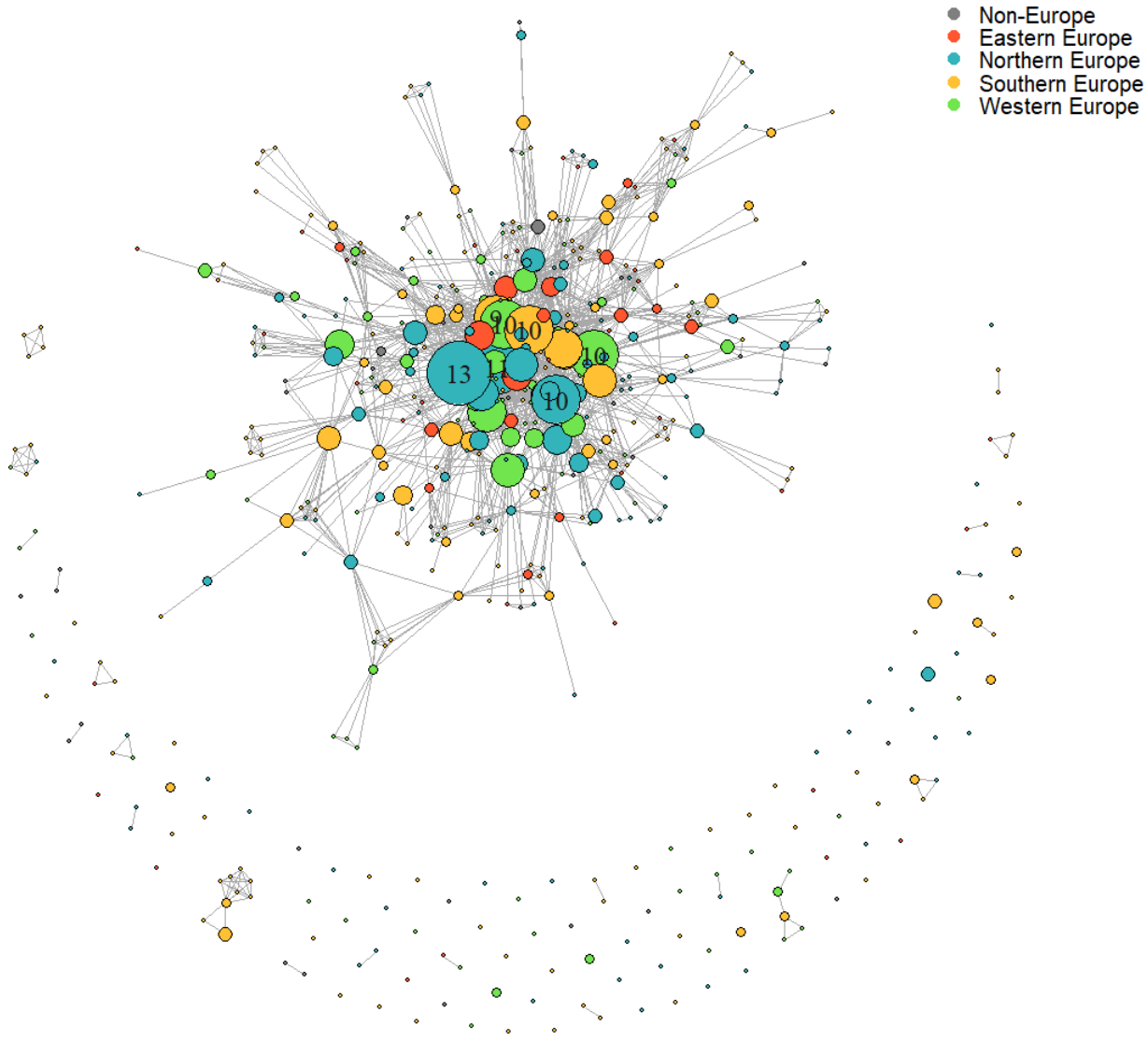
→ **How to connect knowledge and policy?**

2. **Knowledge**, networks, knowledge networks

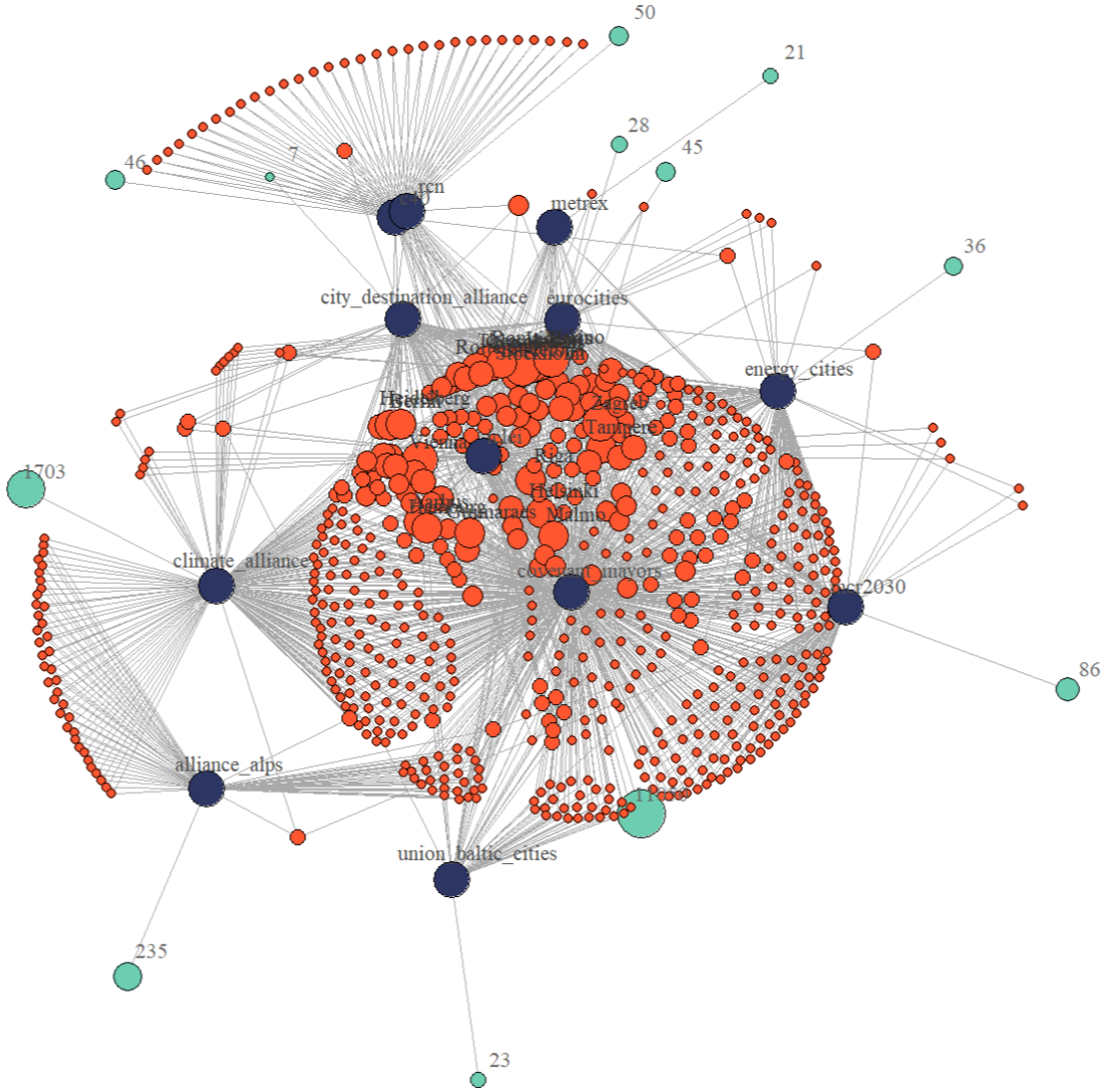
Knowledge co-producers

- EU's research policy: 1990-2025
- Societal impact & transnational scalability

→ Knowledge holders, some more active and more connected than others



2. Knowledge, **networks**, knowledge networks

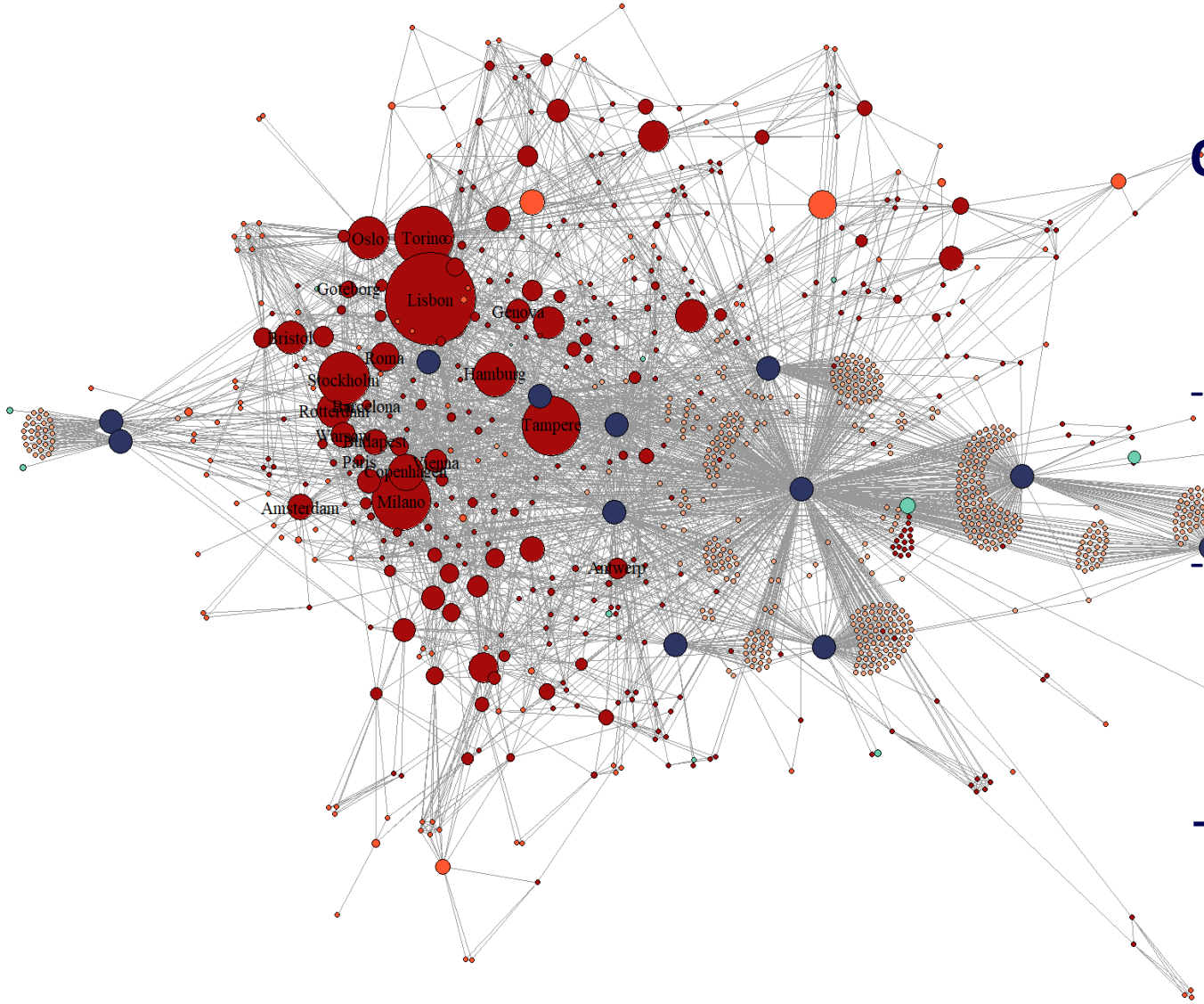


Transnational Municipal Networks

- Emerging in late 1980s
- Flexible knowledge sharing frameworks

→ Knowledge receivers, some more active and more connected than others

2. Knowledge, networks, **knowledge networks**



Connecting holders and receivers

- Influential hubs with spreader potential
- Pool of potential receivers

→ Nice setting laying the basis for an ABM

3. Simulating knowledge circulation with ABM

Agent: city

Attributes: propensity to:
- Possess K (projects)
- Share K (motivation)
- Seek K (motivation)

Attributes: potential to:
- Propagate K (connections, capacity)
- Receive K (connections)
- Absorb K (capacity)

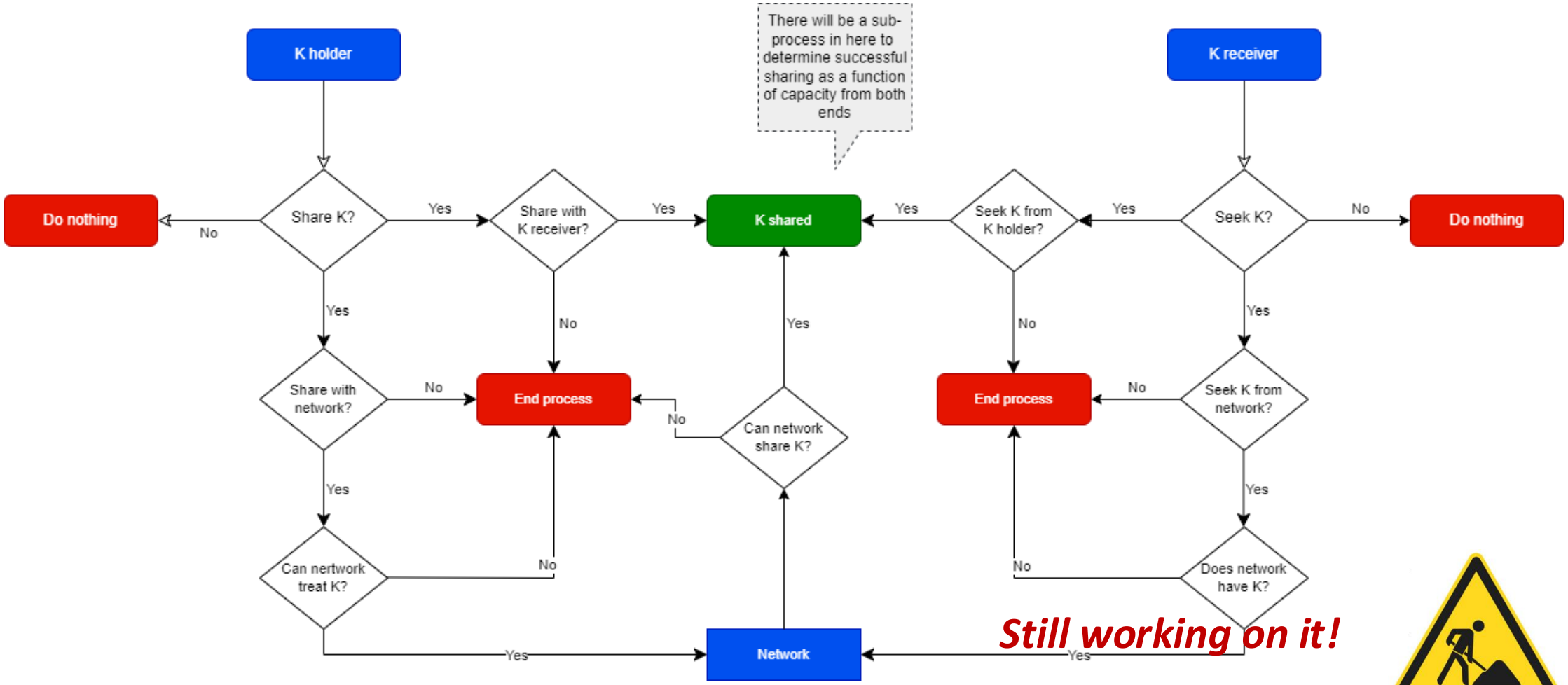
Agent: networks (TMNs)

Attributes: propensity to:
- Connect members (events)
- Foster scalability (activity)
- Foster integration K-policy (activity)

Attributes: potential to:
- Boost K propagation (capacity, scope)
- Connect K and policy (connections w. 3rd party)

Still working on it!

3. Simulating knowledge circulation with ABM



That’s all for today…

Questions, comments, remarks?

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Thank you. Takk. Merci. Gracias. Obrigado.

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