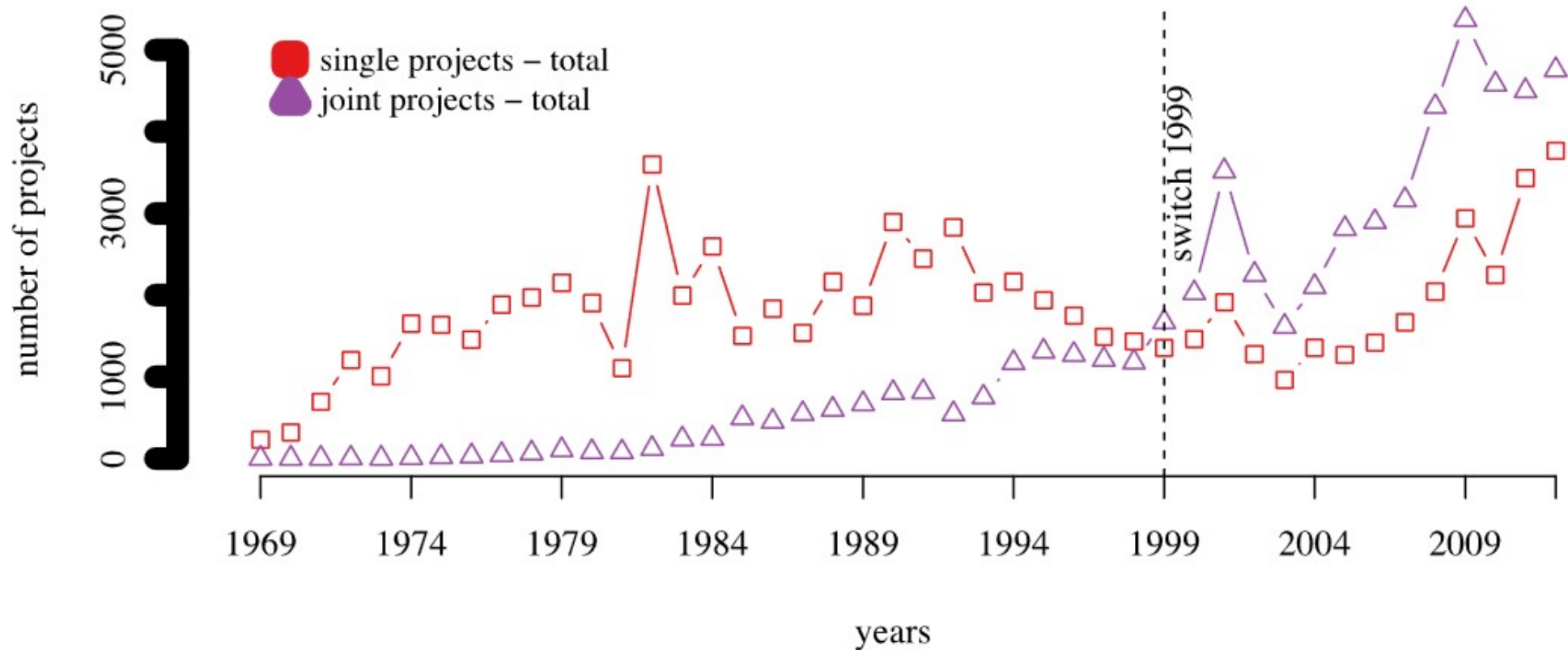# Internationalisation of regional clusters

An example based on InterSpin

Dr. Nils Grashof

Chair of Microeconomics

Friedrich-Schiller-University Jena
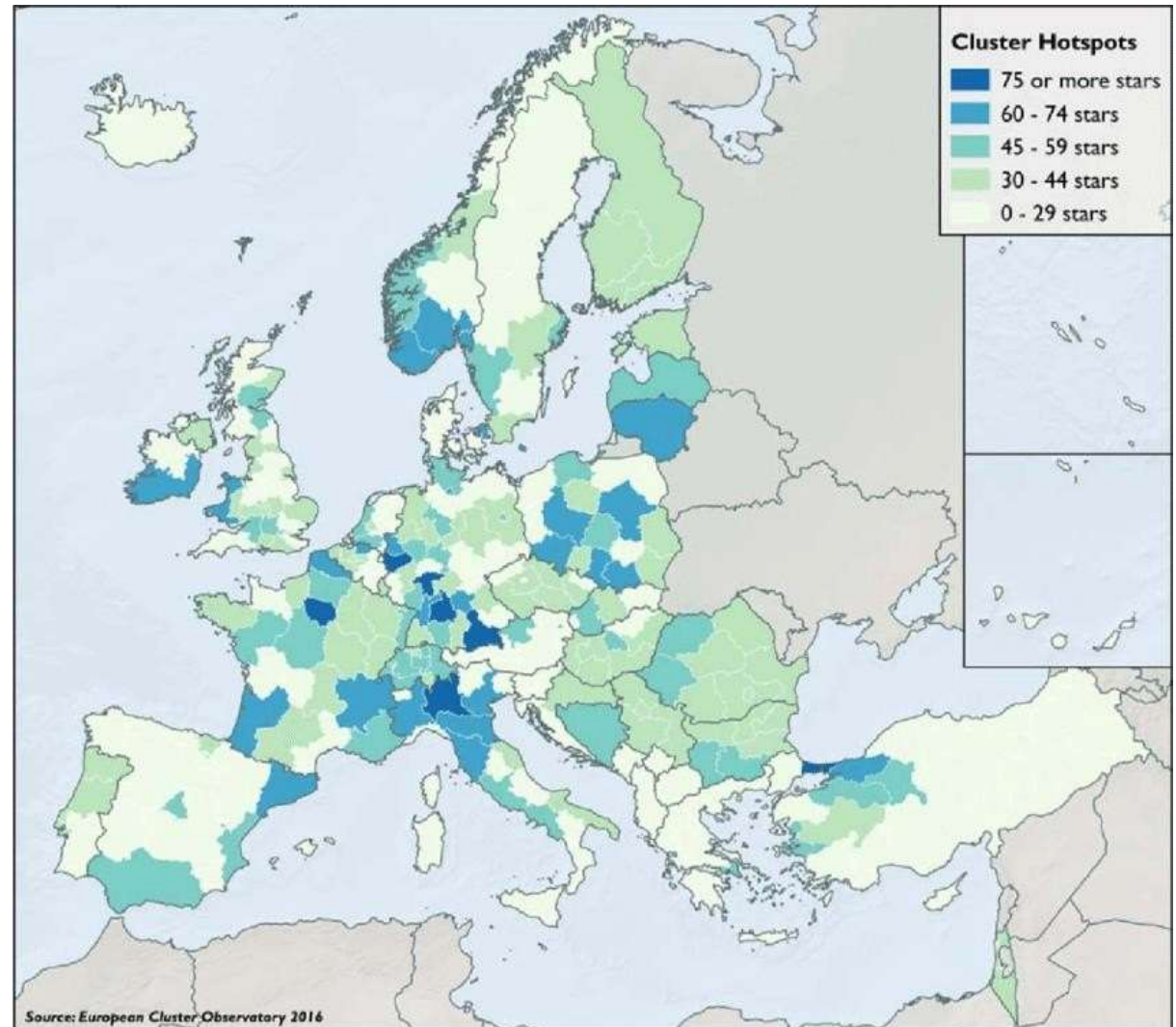
Policy interest in cooperative R&D

LOCALIZATION

Regional clusters – A economic reality

- Regional clusters (…)

    – employ nearly 40% of the European workforce

    – account for 55% of European wages
    (European Union, 2016)
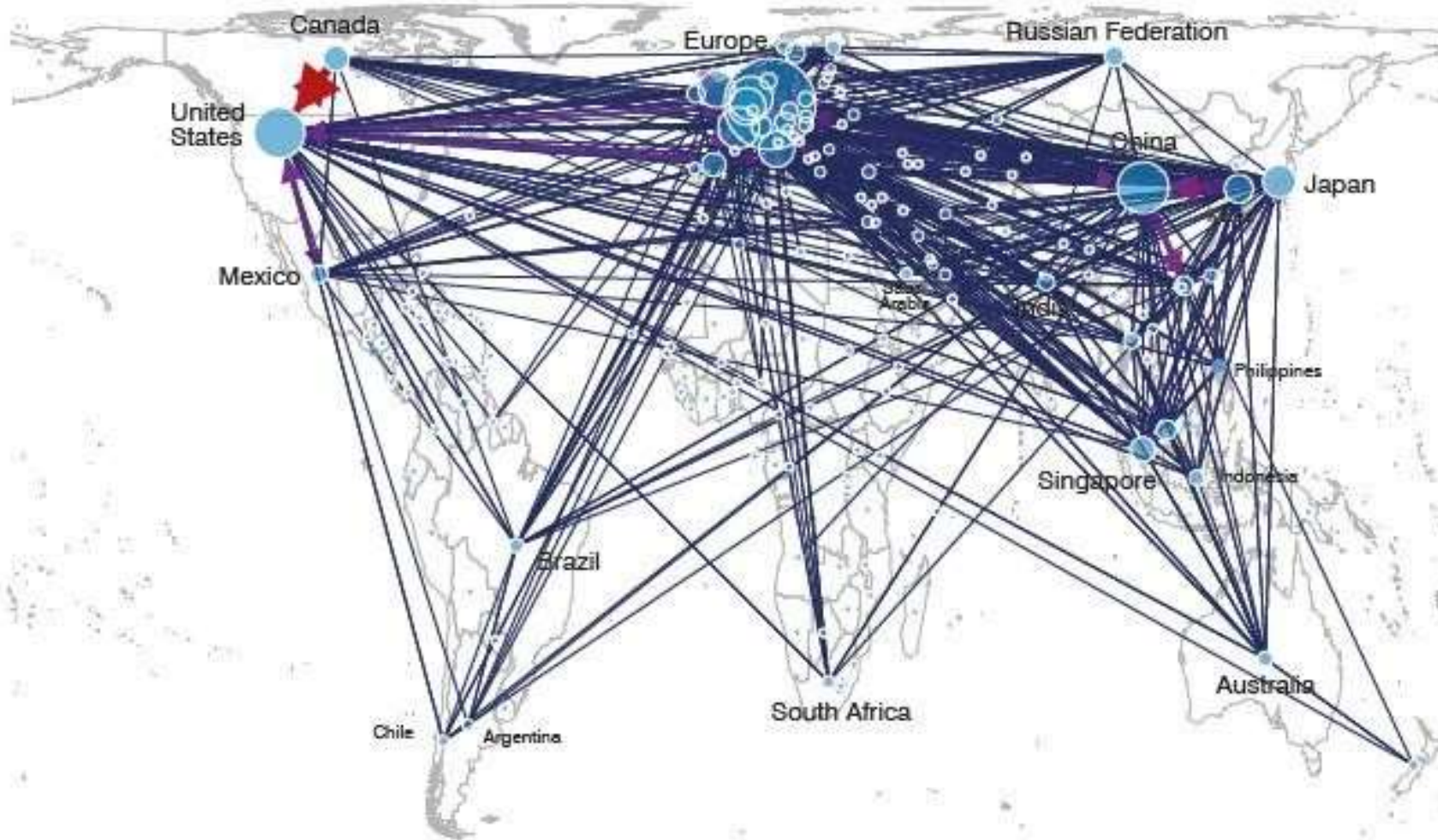

Cluster Hotspots
- 75 or more stars
- 60 - 74 stars
- 45 - 59 stars
- 30 - 44 stars
- 0 - 29 stars

Source: European Cluster Observatory 2016

National funding of cluster related projects in Germany

Source: EFI (2015)

GLOBALIZATION

Value chain trade worldwide

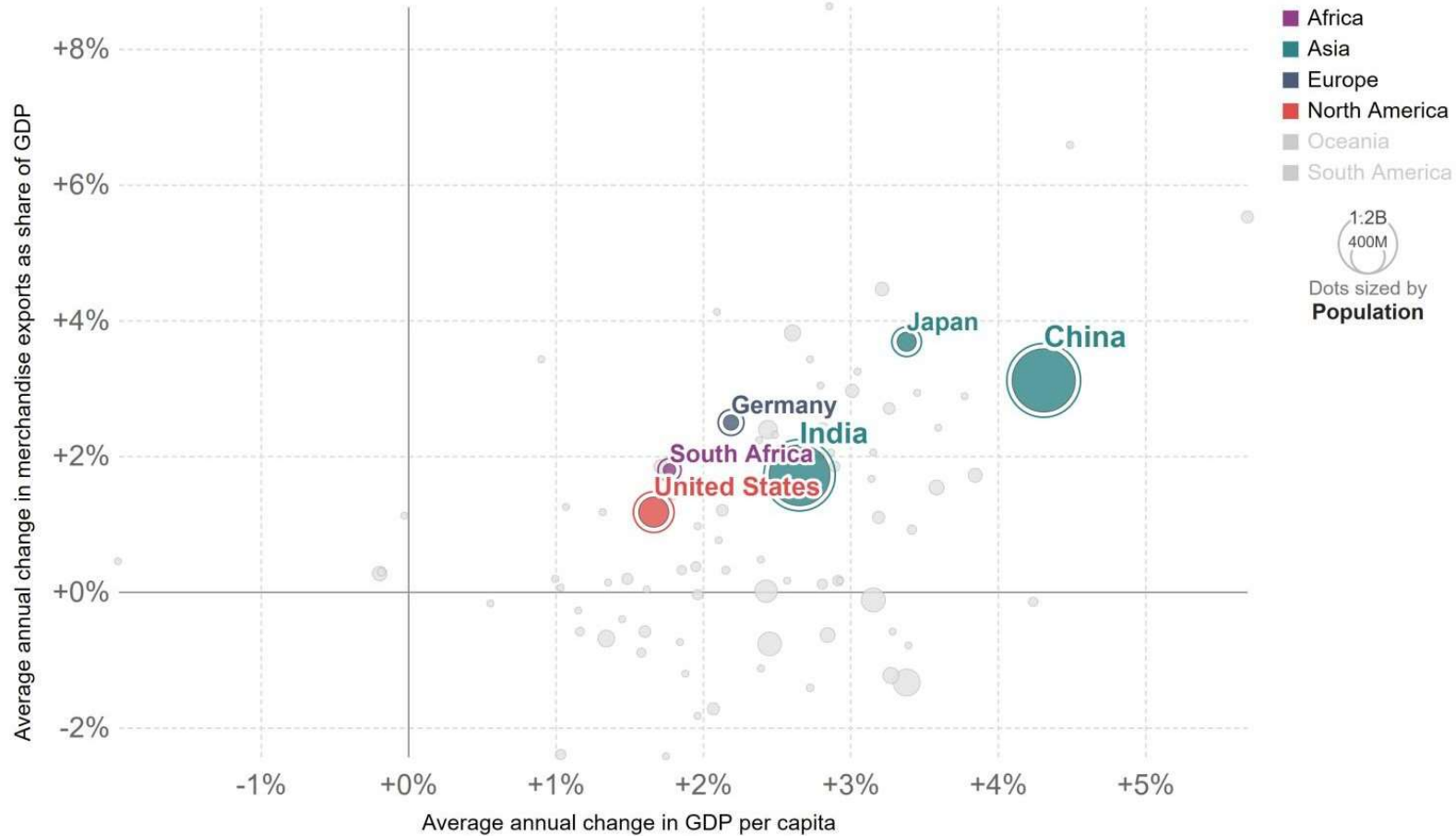Source: https://voxeu.org/article/value-chain-activity-age-changing-trade-alliances

Correlation between trade and growth

Growth of GDP and trade, 1945 to 2014
Average annual change in real GDP per capita vs Average annual change in exports as share of GDP.

Source: Fouquin and Hugot (CEPII 2016), Maddison Project Database 2020 (Bolt and van Zanden, 2020)   CC BY
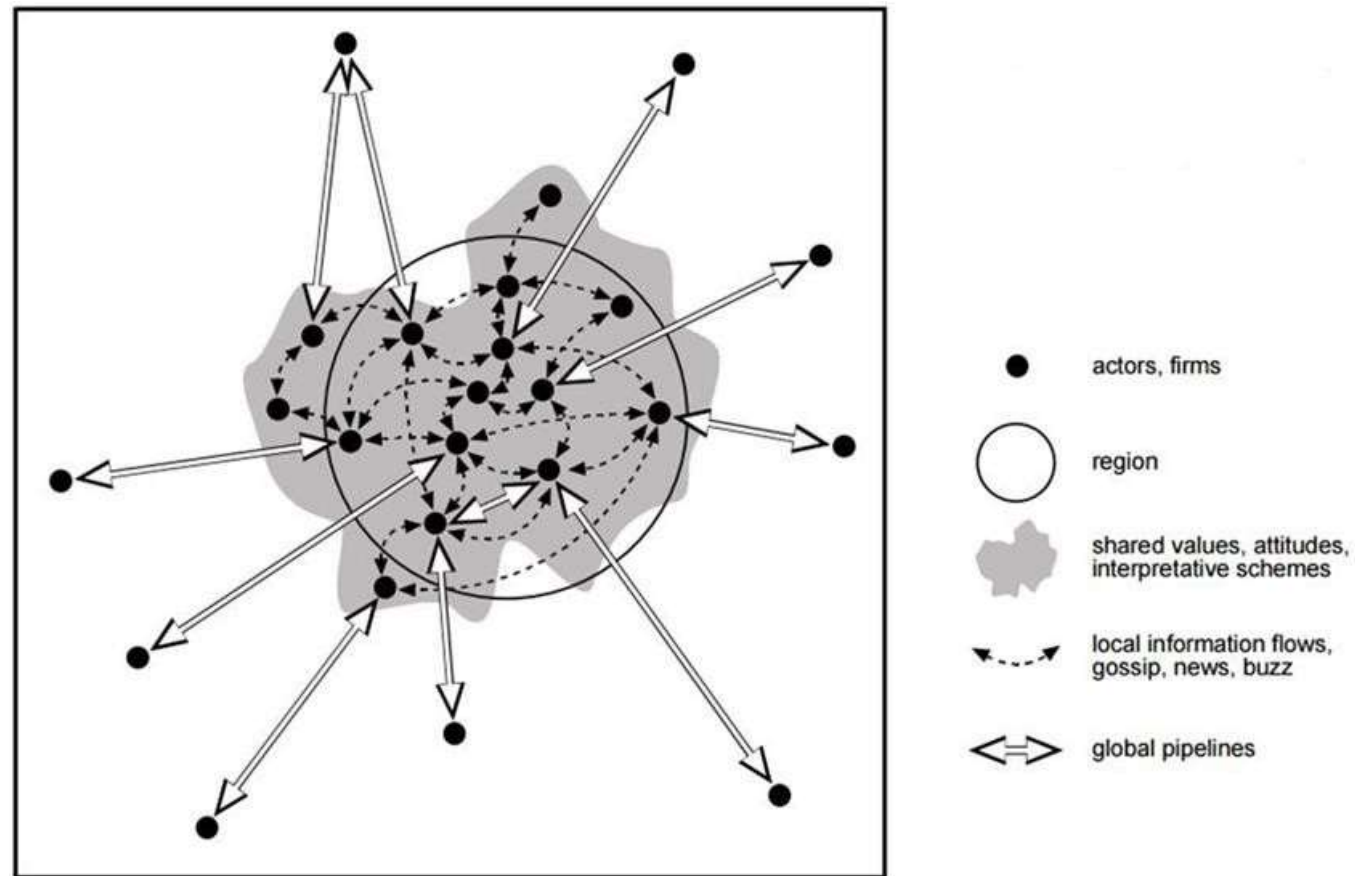
CAN REGIONAL CLUSTERS BE VIEWED IN ISOLATION FROM THE GLOBALIZATION TREND?

Local buzz and global pipelines

- Innovation is the result of a combination of internal as well as **external knowledge** (e.g. Hervas-Oliver & Sempere-Ripoll, 2014)
- Concept of **local buzz and global pipelines** by Bathelt et al. (2004)

Legend:
- ● actors, firms
- ○ region
- (grey shape) shared values, attitudes, interpretative schemes
- ···▸ local information flows, gossip, news, buzz
- ⟺ global pipelines

InterSpiN

- Effects of **supraregional** collaborations of clusters, e.g.
  - For small clusters with a poor knowledge base, external linkages are key for improving their performance (Morrison et al. 2013)
  - Clusters are able to link to excellent research partners abroad (Fornahl et al. 2015)

- ‚Internationalization of Leading-edge Clusters, Future concepts and Networks' (**InterSpiN**)
  - Supports German clusters/networks in advancing their cooperation with international partners in the field of R&D (Dohse et al., 2018)
  - Funded by the Federal Ministry of Education and Research (BMBF)

InterSpiN – Policy Design
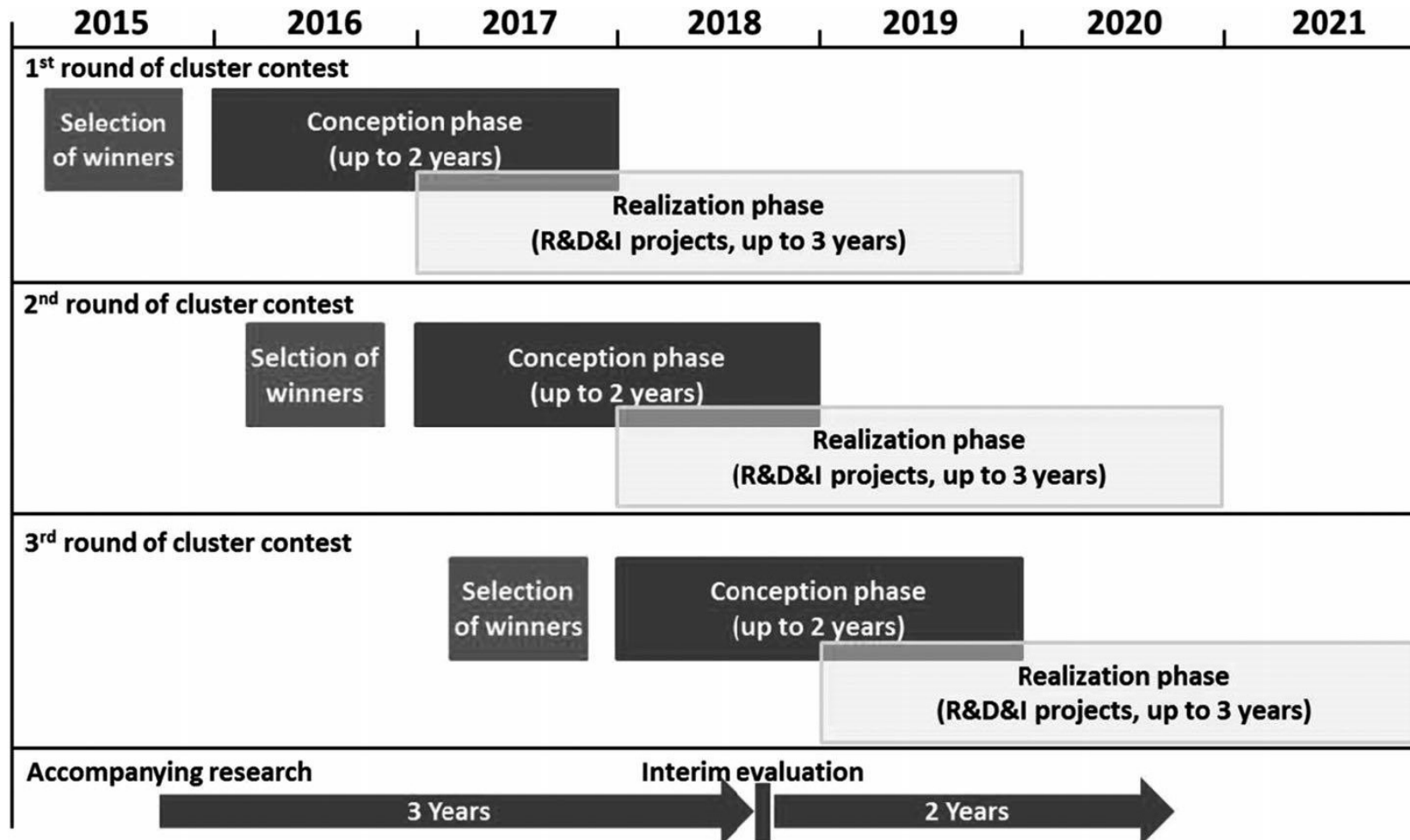
Source: Dohse et al. 2018

International links within InterSpiN
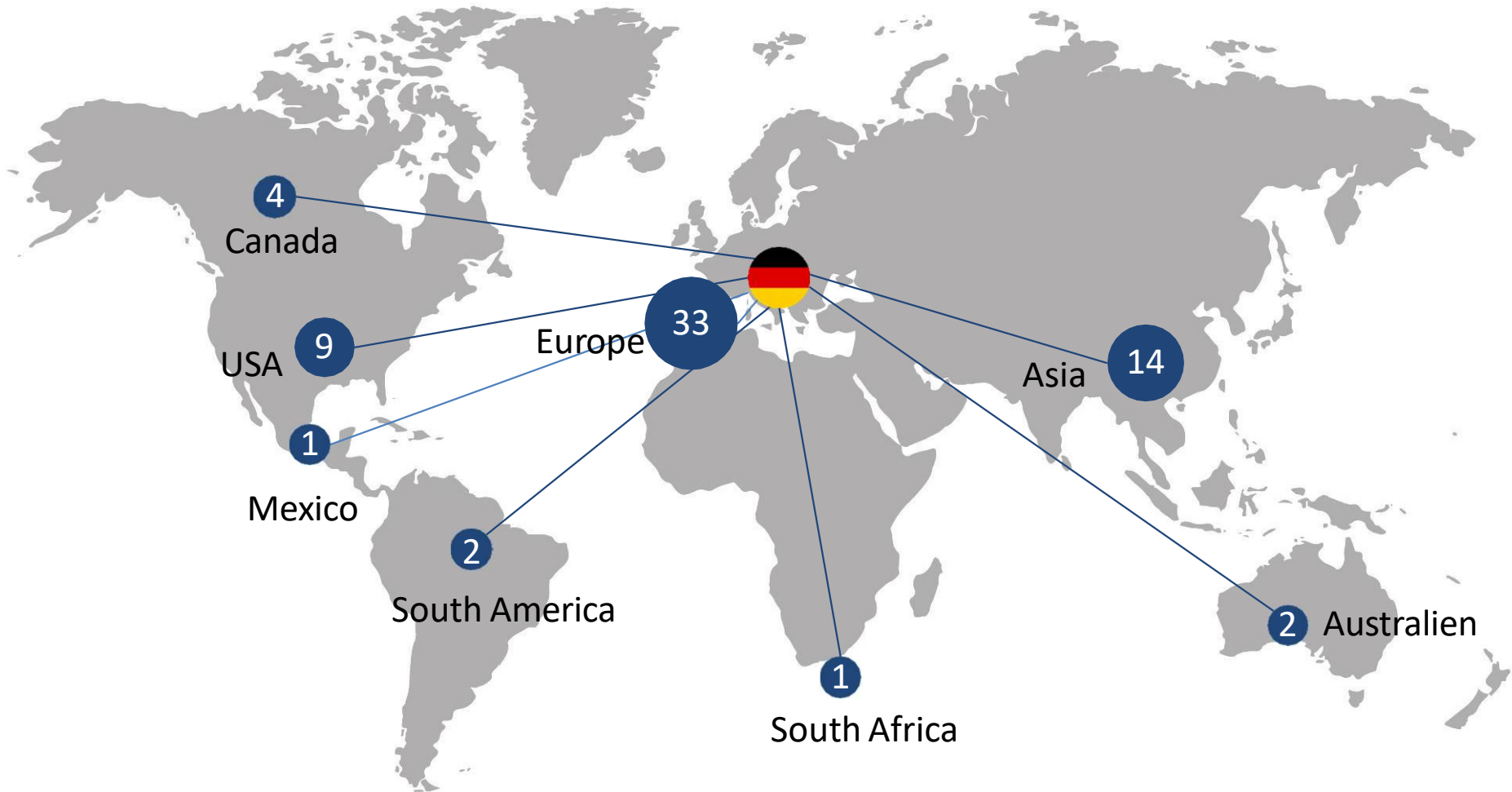
Data

- Accompaying research of the policy initiative (https://interspin.de/en/start/)

- Main quantiative/qualitative data sources:

  1. **Organisational survey** (two waves for the first and second round)
  2. **Monitoring of the cluster managements** (incl. personal/phone interviews and quantitative query)

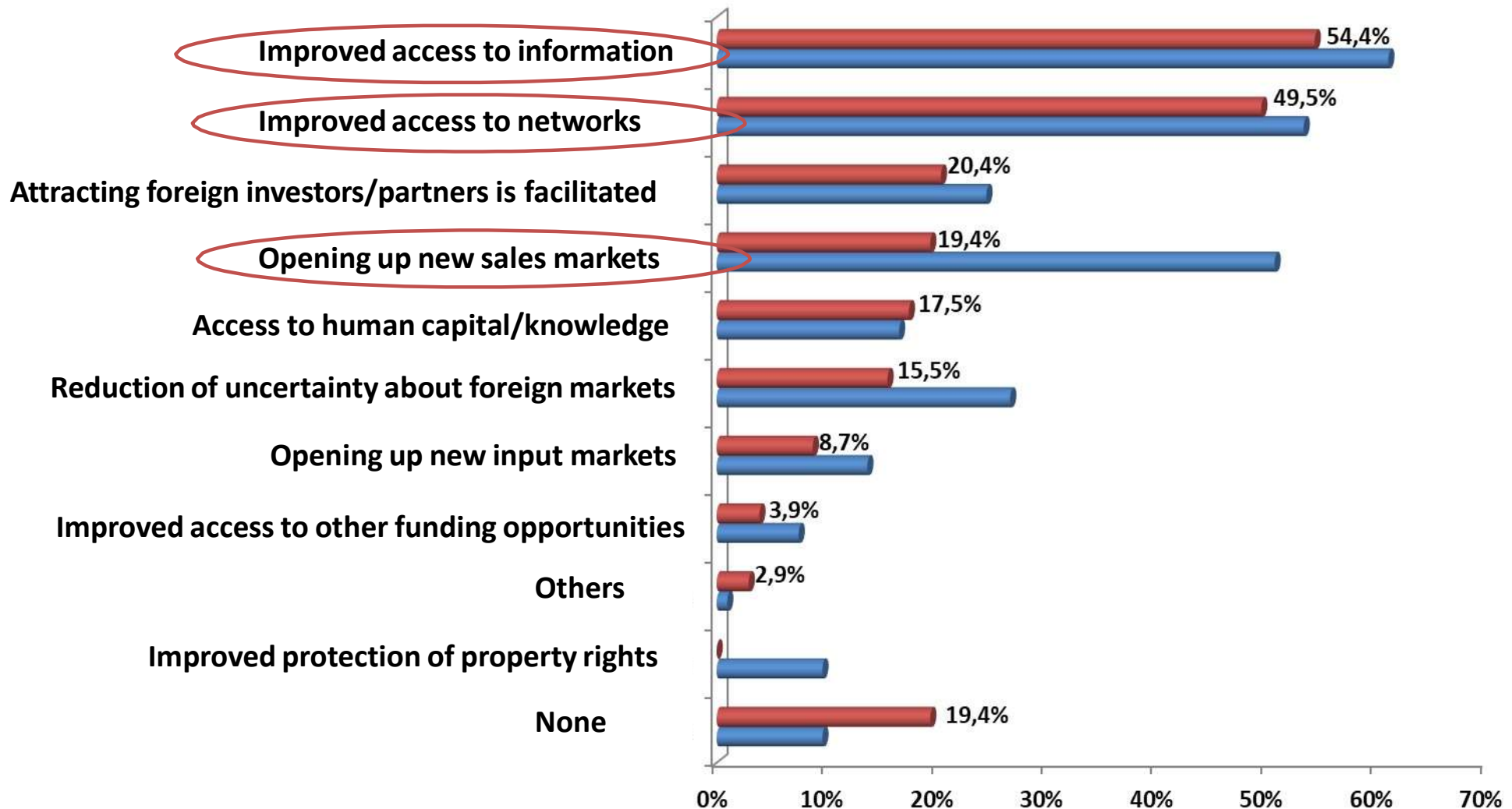# Relevance of funding in clusters

Businesses need government support to overcome barriers to internationalisation
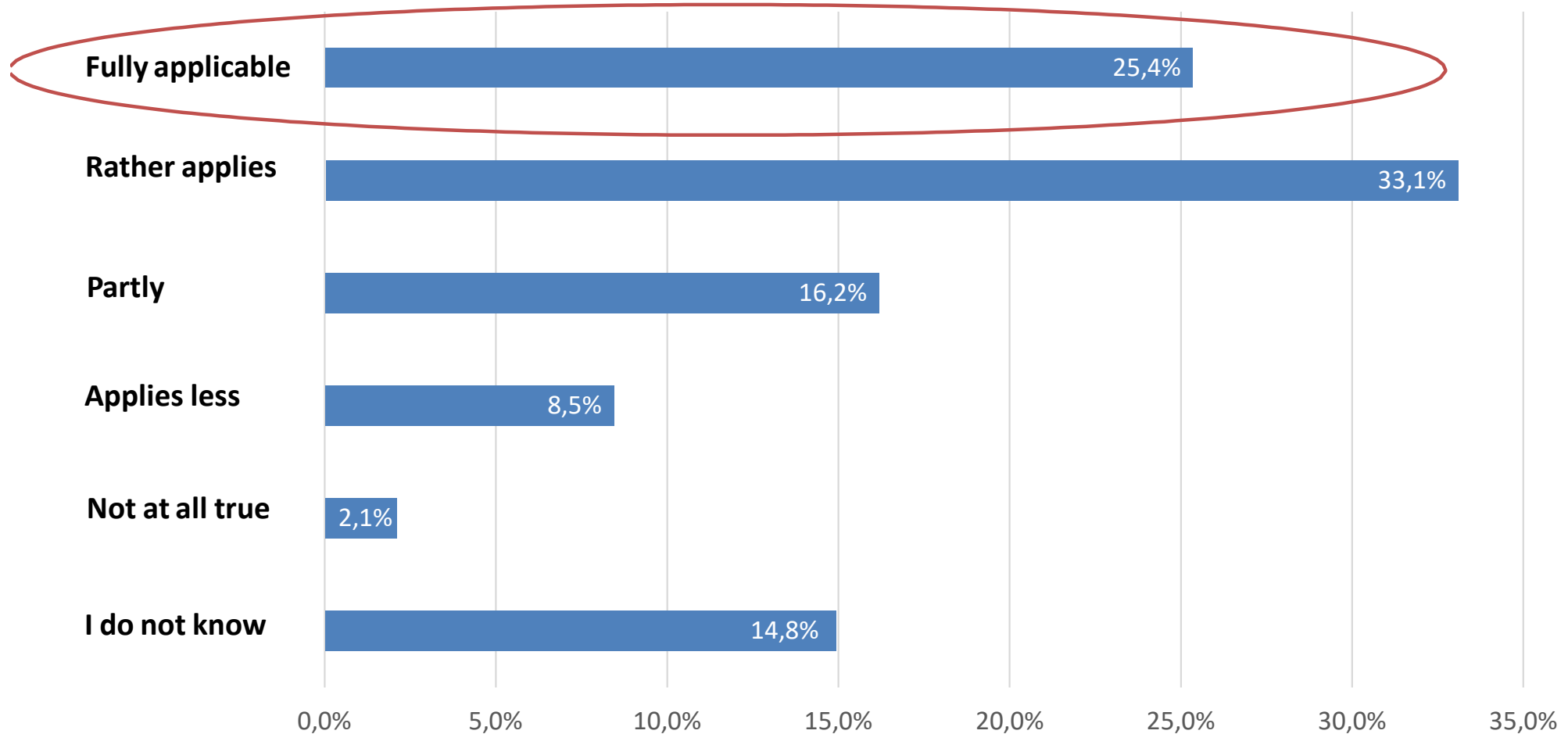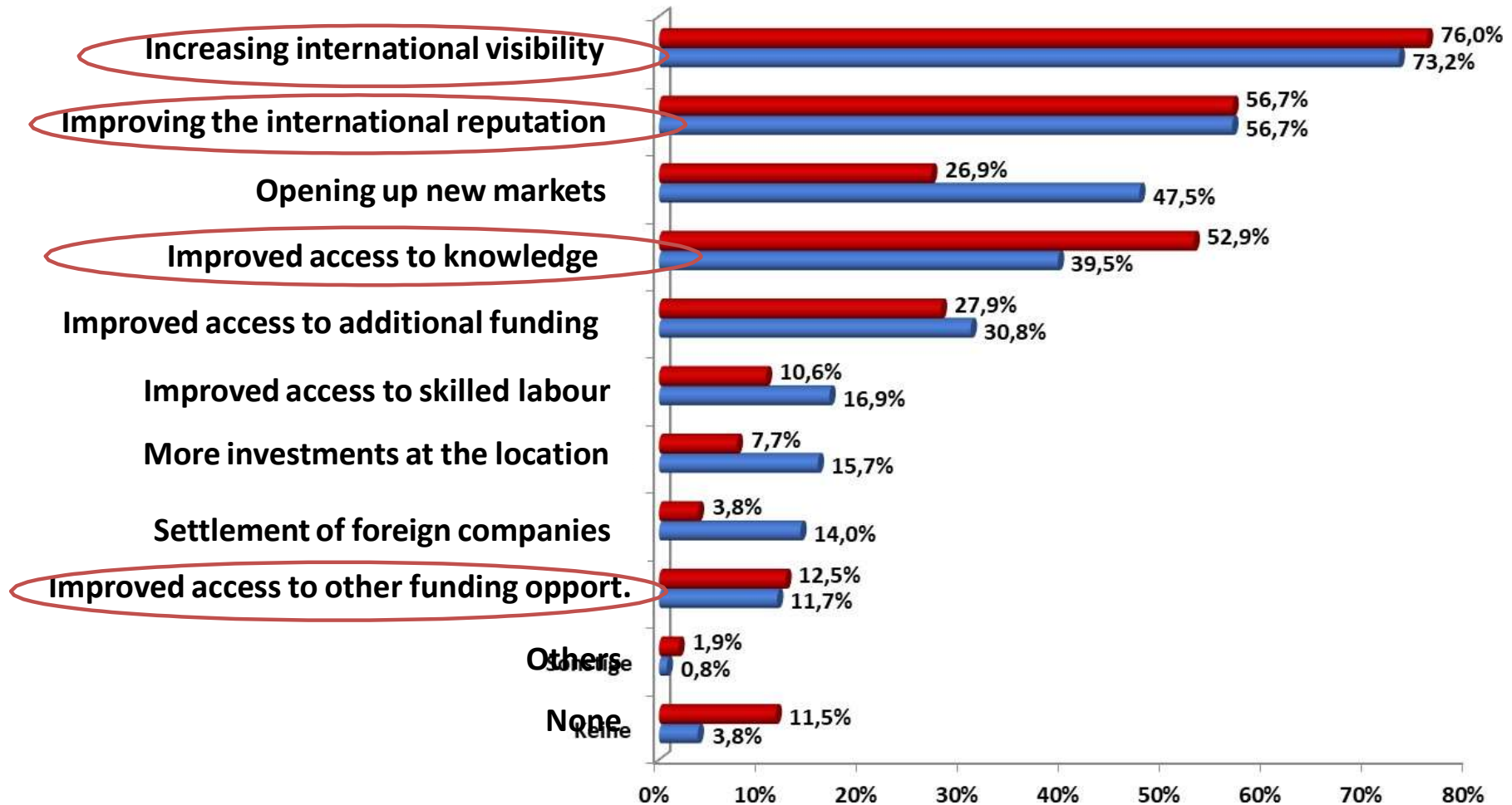

Source: InterSpiN Organisational survey

Benefits for <u>companies</u> through

Benefits for <u>cluster/network</u> through cluster/network internationalisation

■ Realisierte Vorteile (N = 104)　　■ Erwartete Vorteile (N = 522)

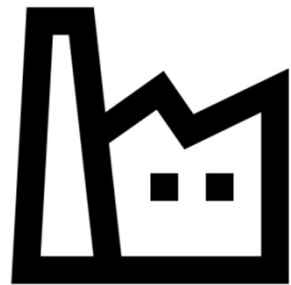| Benefit	Realisierte Vorteile	Erwartete Vorteile
Increasing international visibility	76,0%	73,2%
Improving the international reputation	56,7%	56,7%
Opening up new markets	26,9%	47,5%
Improved access to knowledge	52,9%	39,5%
Improved access to additional funding	27,9%	30,8%
Improved access to skilled labour	10,6%	16,9%
More investments at the location	7,7%	15,7%
Settlement of foreign companies	3,8%	14,0%
Improved access to other funding opport.	12,5%	11,7%
Others / Sonstige	1,9%	0,8%
None / Keine	11,5%	3,8%

Source: InterSpiN Organisational survey

Interim summary – Benefits & Policy funding in general

- Policy support appears to be neccesary to overcome internationalization barriers

- Advantages are different, however in general…
  - <u>firms</u> experience **improved access to information and (international) networks**
  - <u>clusters/networks</u> experience **increasing international visibility and reputation** as well as **increasing knowledge access**

National and international partners
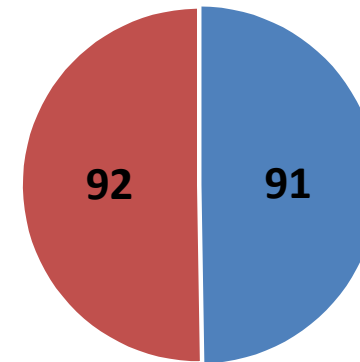
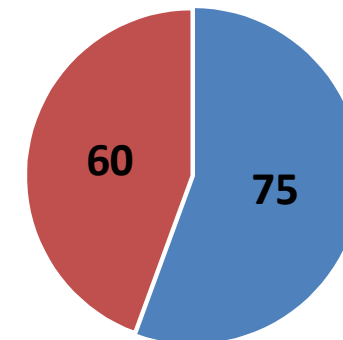**2. Funding round**

1. Funding round

130 141

92 91
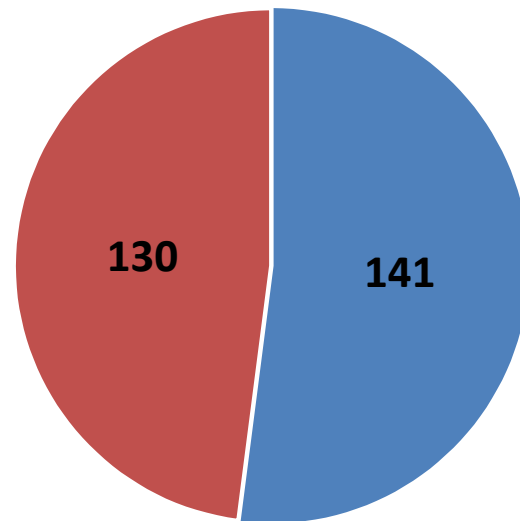
■ deutsche Partner ■ internationale Partner

3. Funding round

■ deutsche Partner ■ internationale Partner

60 75
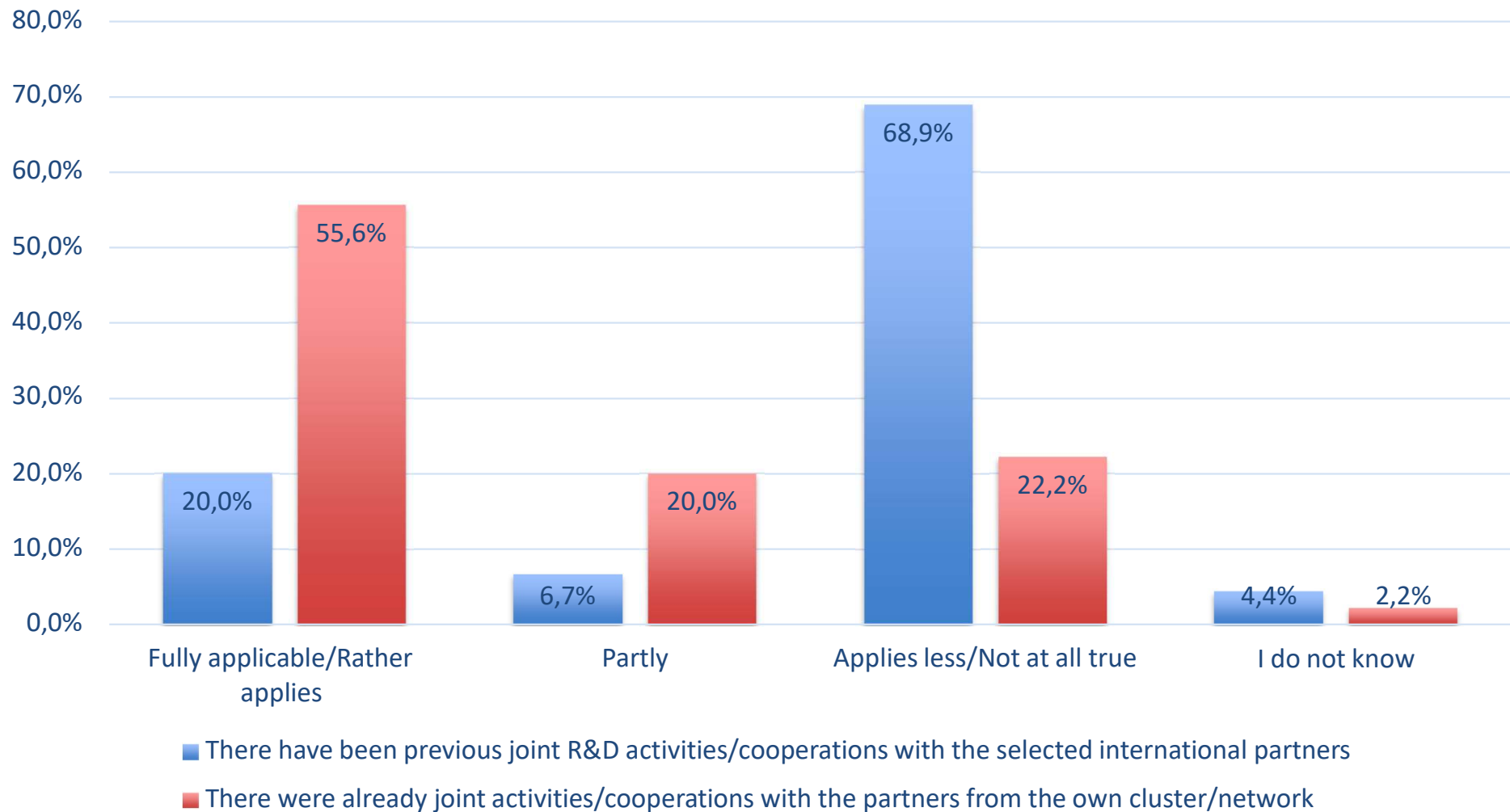
■ deutsche Partner ■ internationale Partner

Partner selection: Previous experience

Comparison: Previous experience with cooperation partners

Source: InterSpiN Organisational survey

Literature

- Actors need a certain technological distance to benefit from new knowledge for innovation processes (Nooteboom et al. 2007)
  - Company and university (Belderbos et al. 2004)
  - Industry A and Industry B (Corradini & De Propris 2017)
  - Region A and Region B (Singh 2008)
  - Cluster A and Cluster B (Janssen & Frenken 2019)

Partner selection: Technological/cultural proximity

Choice of international partners - technological & cultural proximity
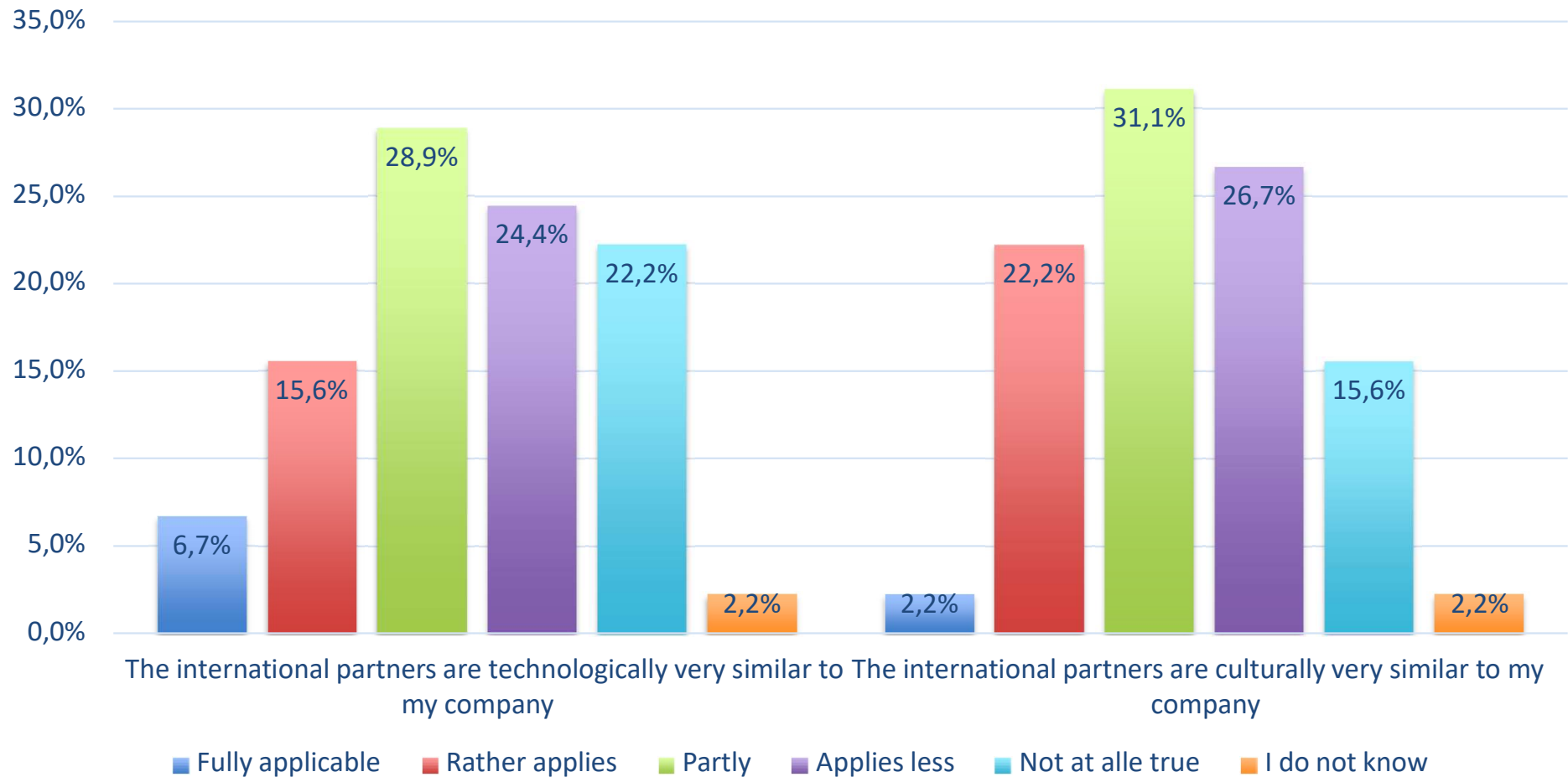
Source: InterSpiN Organisational survey

Interim summary – Partner selection

- In the course of the funding measure, it was possible to establish…
 - mainly new international relationships with new partners
  - and at the same time strengthen national or regional relationships with already known partners
- Partner selection not on the basis of possible counterpart funding, but on the basis of thematical fit

In the course of the internationalization of your cluster/network, have you made information <u>available to other actors from the cluster/network</u> in the past three years? If yes, on which topics and <u>to which actors</u>?
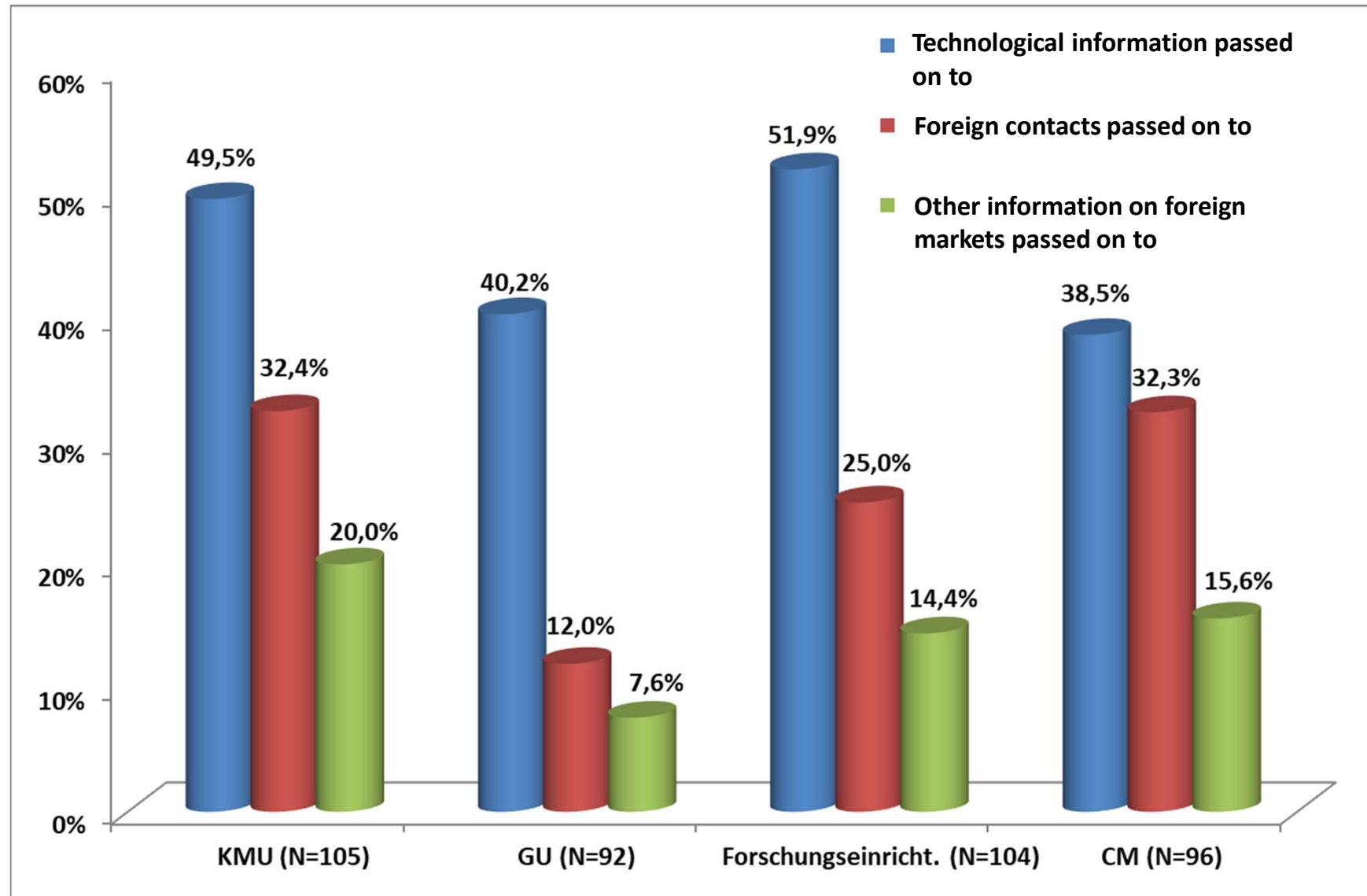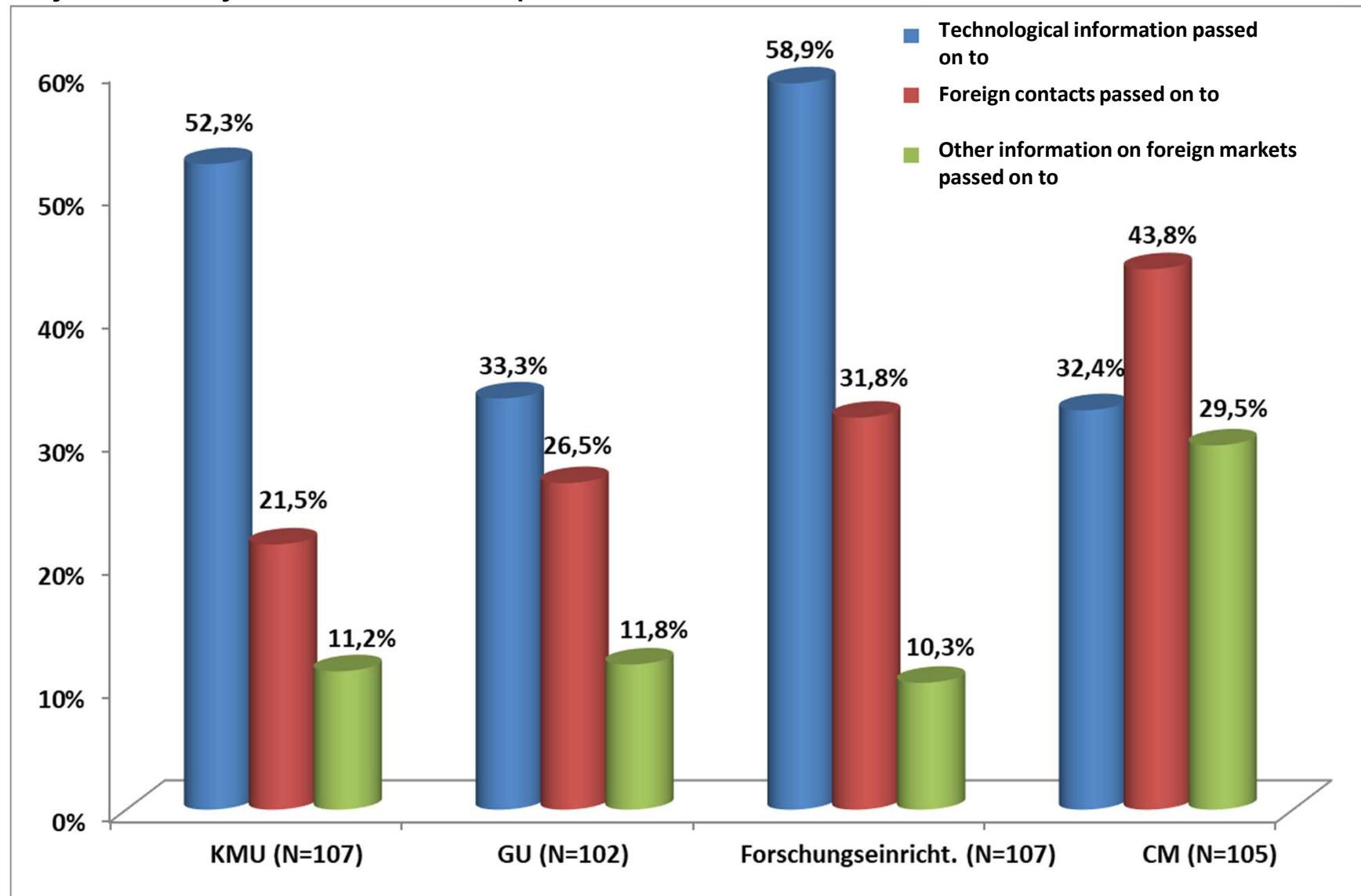

Source: InterSpiN Organisational survey

In the course of the internationalization of your cluster/network, have you received information from other actors in the cluster/network in the past three years? If yes, on which topics and from which actors?

Source: InterSpiN Organisational survey

Used information channels in the implementation phase of the collaborative projects

Ranking of the used information channels

Channel	Percentage
Newsletter	42,4%
Information events	29,5%
Participation in joint projects	28,1%
Bilateral meetings	23,7%
Working groups	21,3%
Informal conversations / office gossip	18,7%
I do not know	14,4%
I do not receive any information on this	12,2%
Others	6,7%
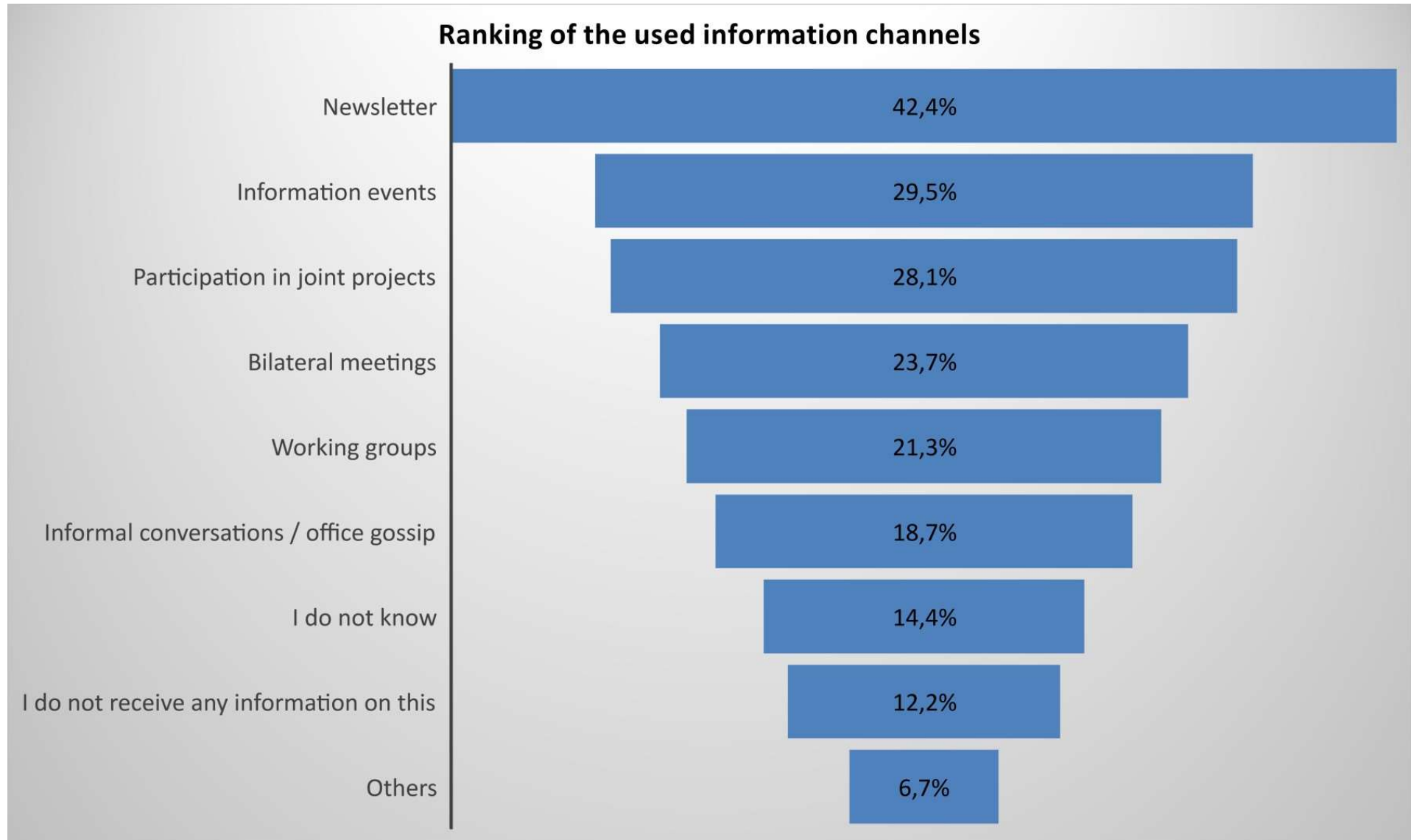
Source: InterSpiN Organisational survey

Interim summary – Information and knowledge diffusion

- SMEs across all types of information channels benefit particularly from information sharing by other cluster/network actors.

- SMEs, research institutions and cluster management have a special diffusion function for the clusters/networks

- No universal information channel

Conclusion

- InterSpiN is a pioneering approach that aims to combine localization and international advantages
  - Especially in specialised regions, build supra-regional relationships
- There is not a one-size-fits all approach, but the internationalization strategy should be cluster-specific and actor-specific
  - Partner selection
  - Information and knowledge diffusion
- Promising role of cluster management to support the internationalization process (e.g. through international delegation trips and/or workshops)

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