Sustainability of Cross-Border RTDI Projects and Networks

-The Case of CIRCE

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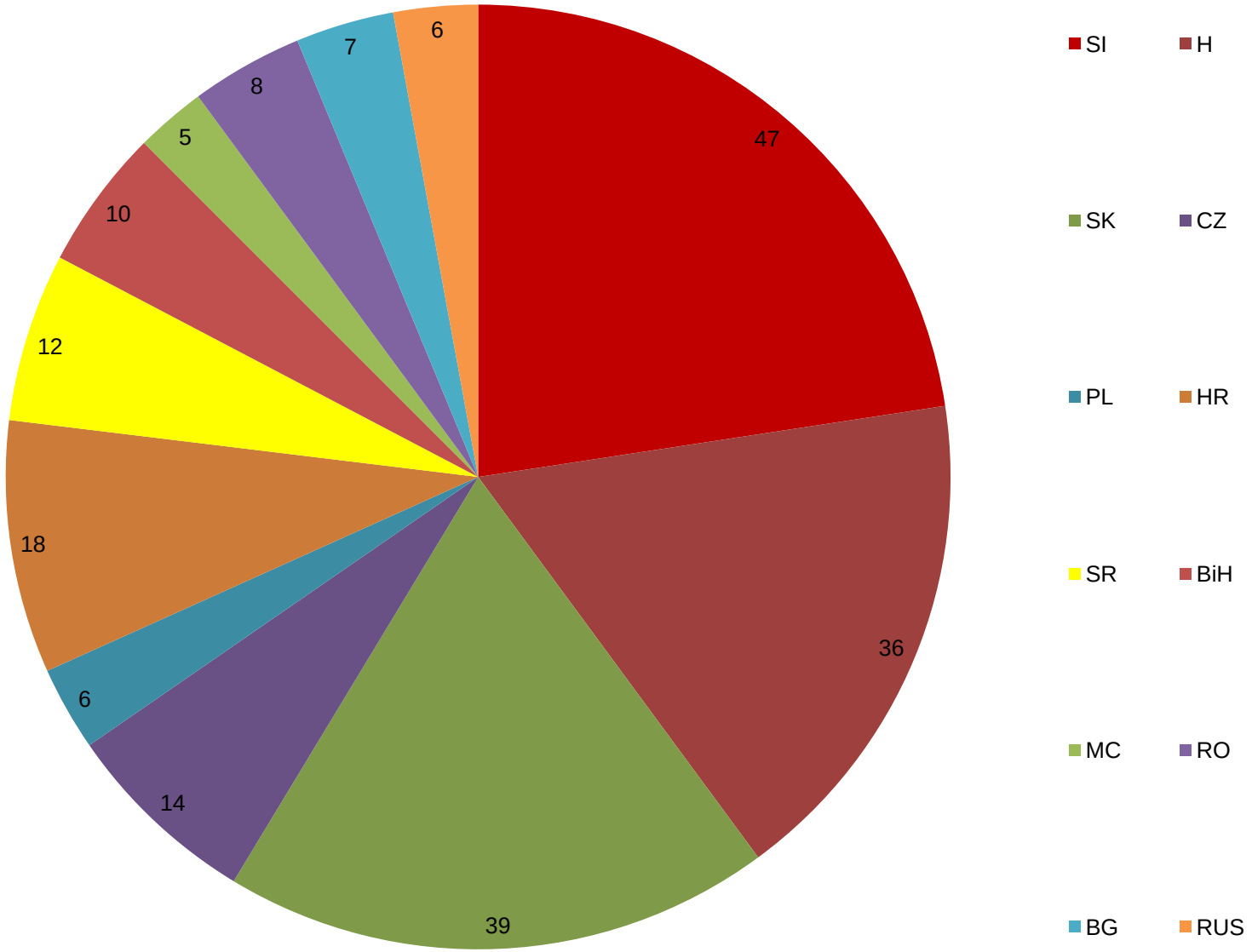
Austrian funded cross-border RTDI programme

In the first 3 calls 395 participants (mainly SMEs) involved

Partners were initially primarily from „Central Europe“; recently mostly from SEE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Programme Goals

1. Increasing the *innovation capacity* of enterprises and their capability to absorb and apply external knowledge
2. Increasing the *cooperation capacity* of enterprises and creation of cross-border innovation networks and cooperation structures

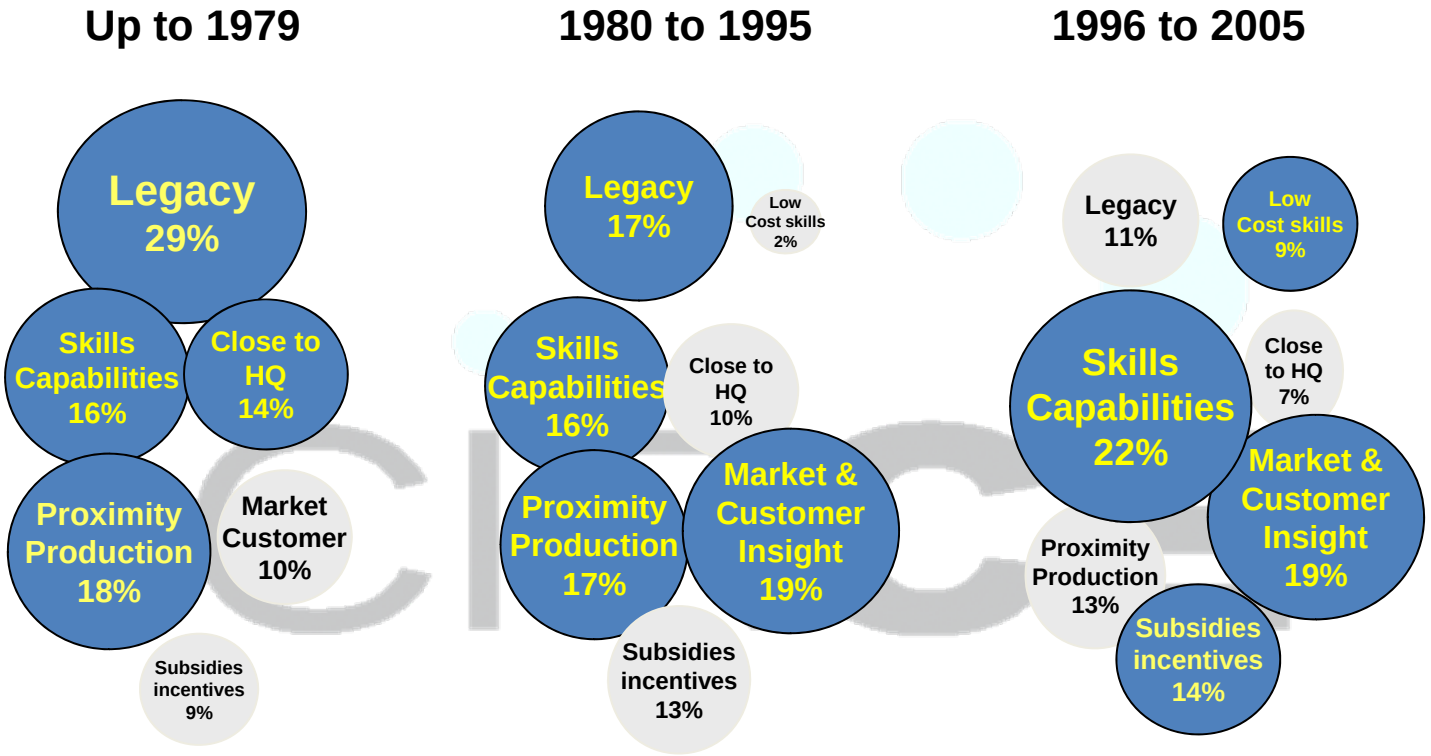
Both goals go together!

Basic Assumption

1) Innovation happens through cooperation (approximated by measuring exchange density, -intensity and patterns)

2) A balanced use for project partners and their contribution to build up capacities and knowledge depends on functioning exchange relations (approximated by inclusion/exclusion of partners; accessibility of partners etc.)

Globalisation of business R&D: the changing determinants of location



Source: INSEAD survey

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Measurement of Exchange Relations

1. Communication about project management
2. Communication about project content
3. Non-project related communication
4. Exchange of goods
5. Exchange of services
6. Exchange of money
7. Exchange about important contacts
8. Exchange about other important information

9. And mutual trust!

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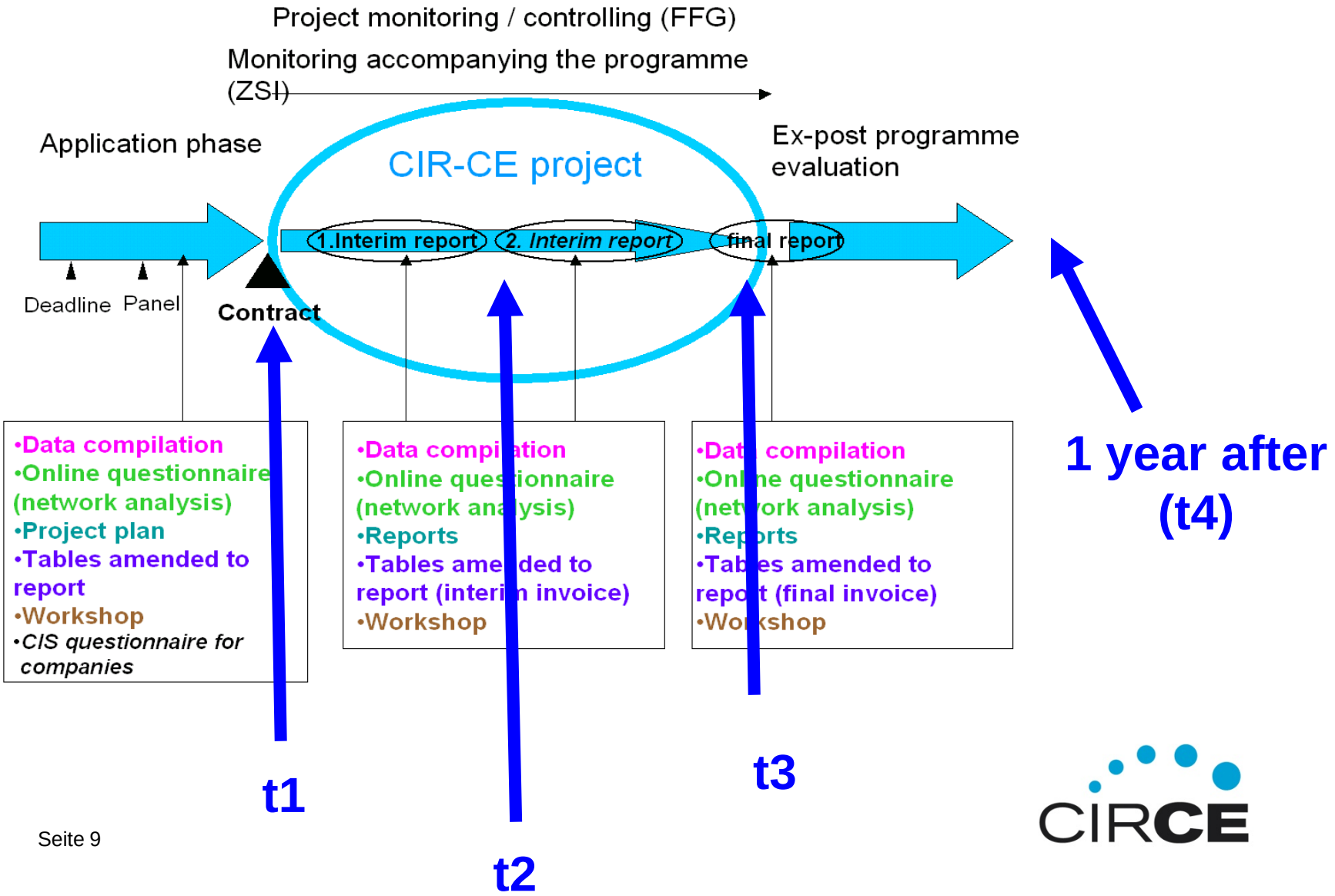
Objective of our Study

Investigation how project networks are developing

Conclusion can be drawn on:

1) **the management of project networks**
2) **the development of science-industry relations**
3) **development of customer-vendor relations**
4) **development of internationalisation**
5) **sustainability of public interventions**

Evaluation Concept

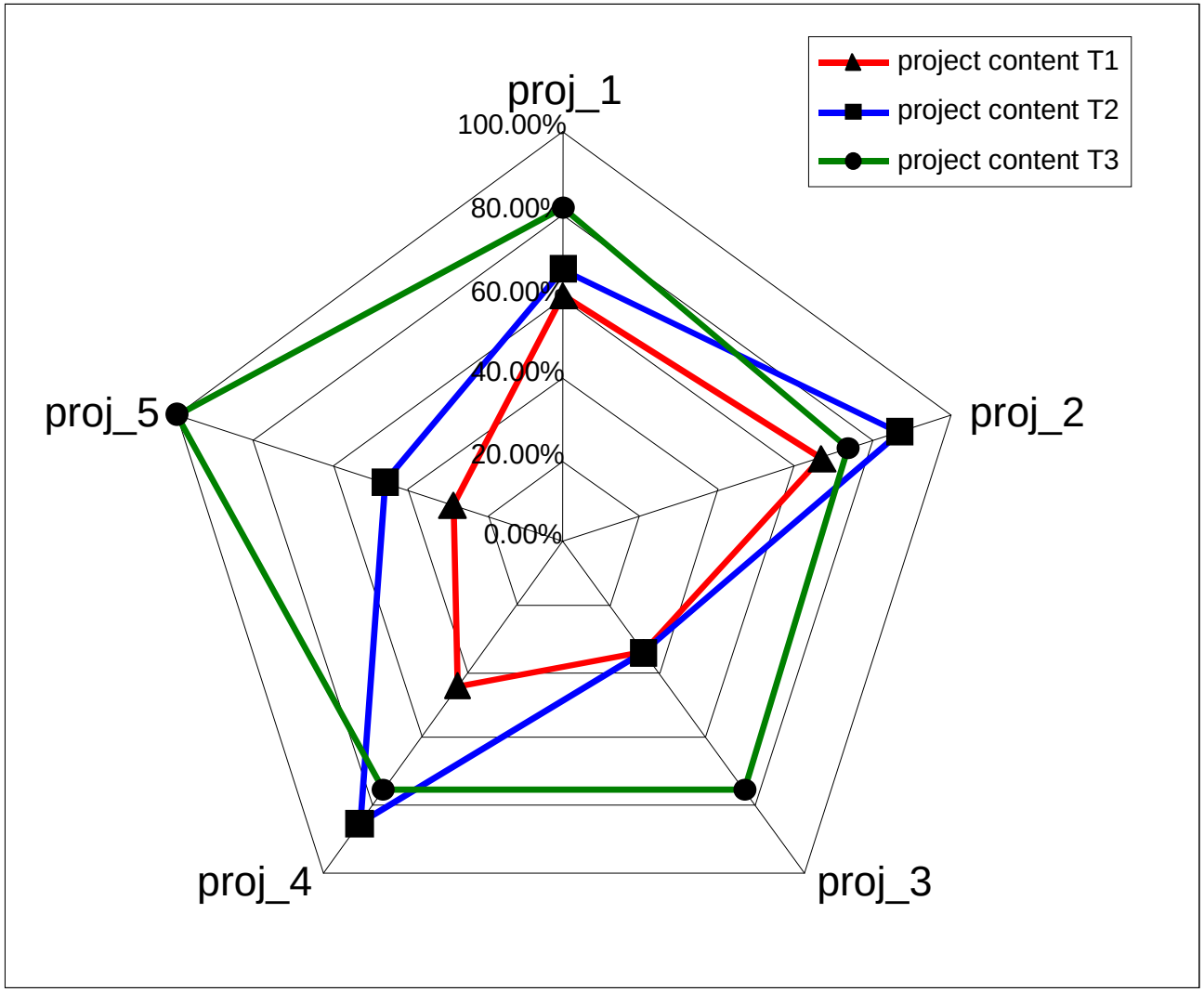


Science-Industry Relations

Benchmark: at least 80 % of all possible relations between science and industry in terms of exchange about project content and other valuable information should be realised.

Proj_cont density: science -> industry (SMEs) > 80 %

Information density: science -> industry (SMEs) > 80 %



Development of Science-Industry Relations

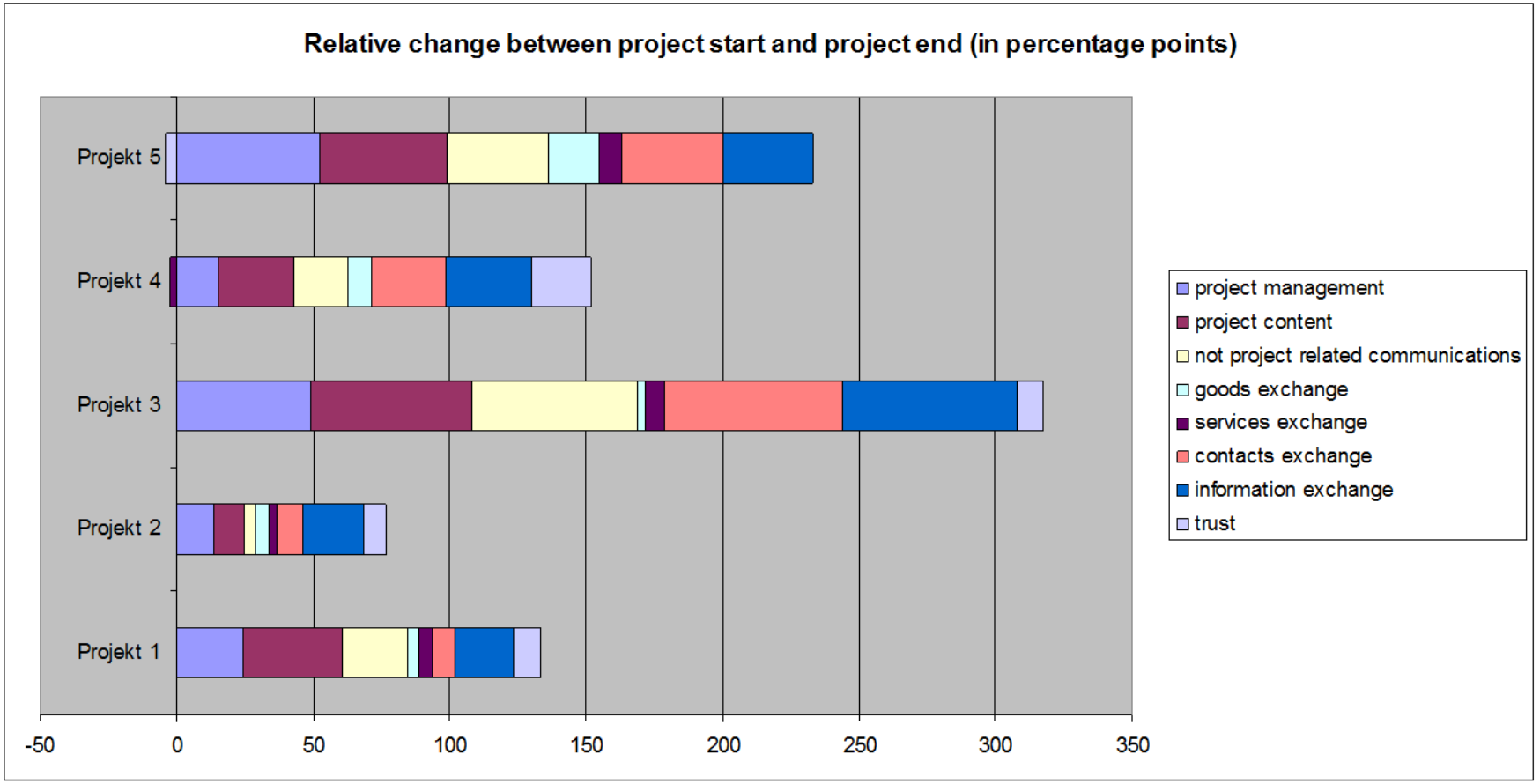
Internationalisation

Benchmark: at least 30 % of all possible exchange relations between Austrian and foreign partners should be realised

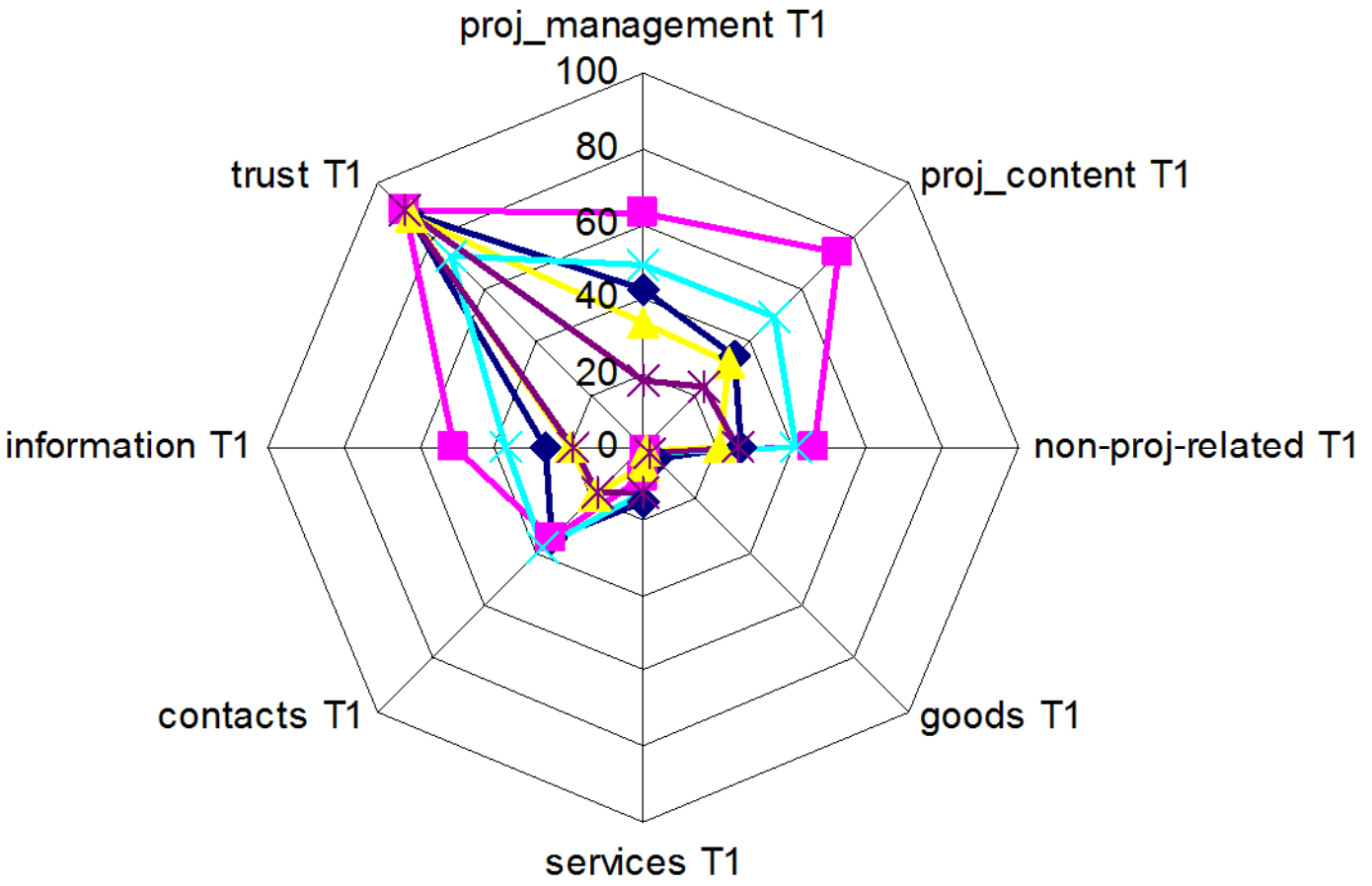
Σ of Exchange Austrian <-> EE/SEE partners > 30 %partners

All exchange relations – network density between Austrian and non-Austrian	Project_3	T1	46/485	= 9.48 %	☹
All exchange relations – network density between Austrian and non-Austrian	Project_3	T2	50/405	= 12.35 %	☹
All exchange relations – network density between Austrian and non-Austrian	Project_3	T3	175/469	= 37.31%	☺

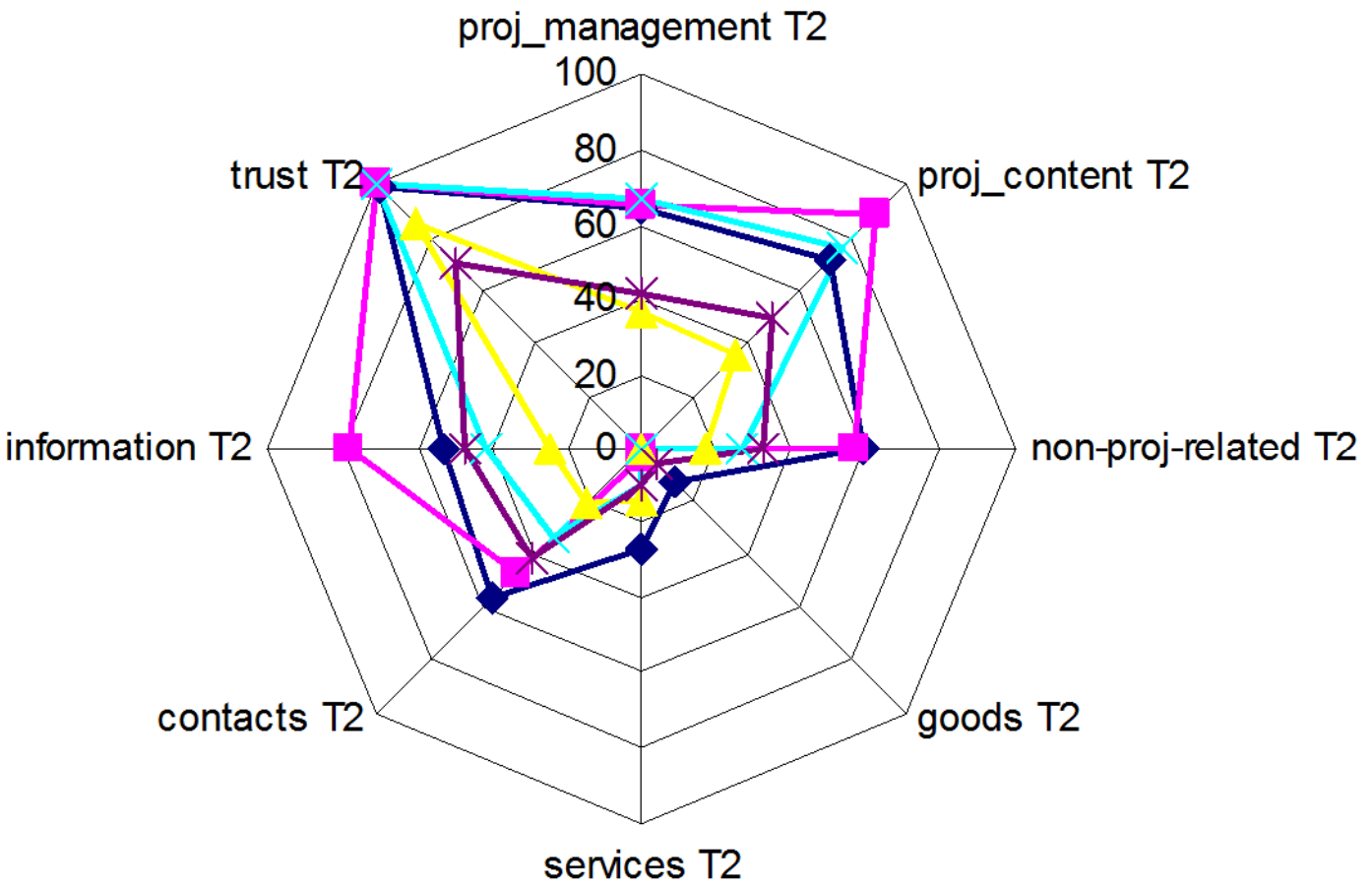
Development of international exchange relations



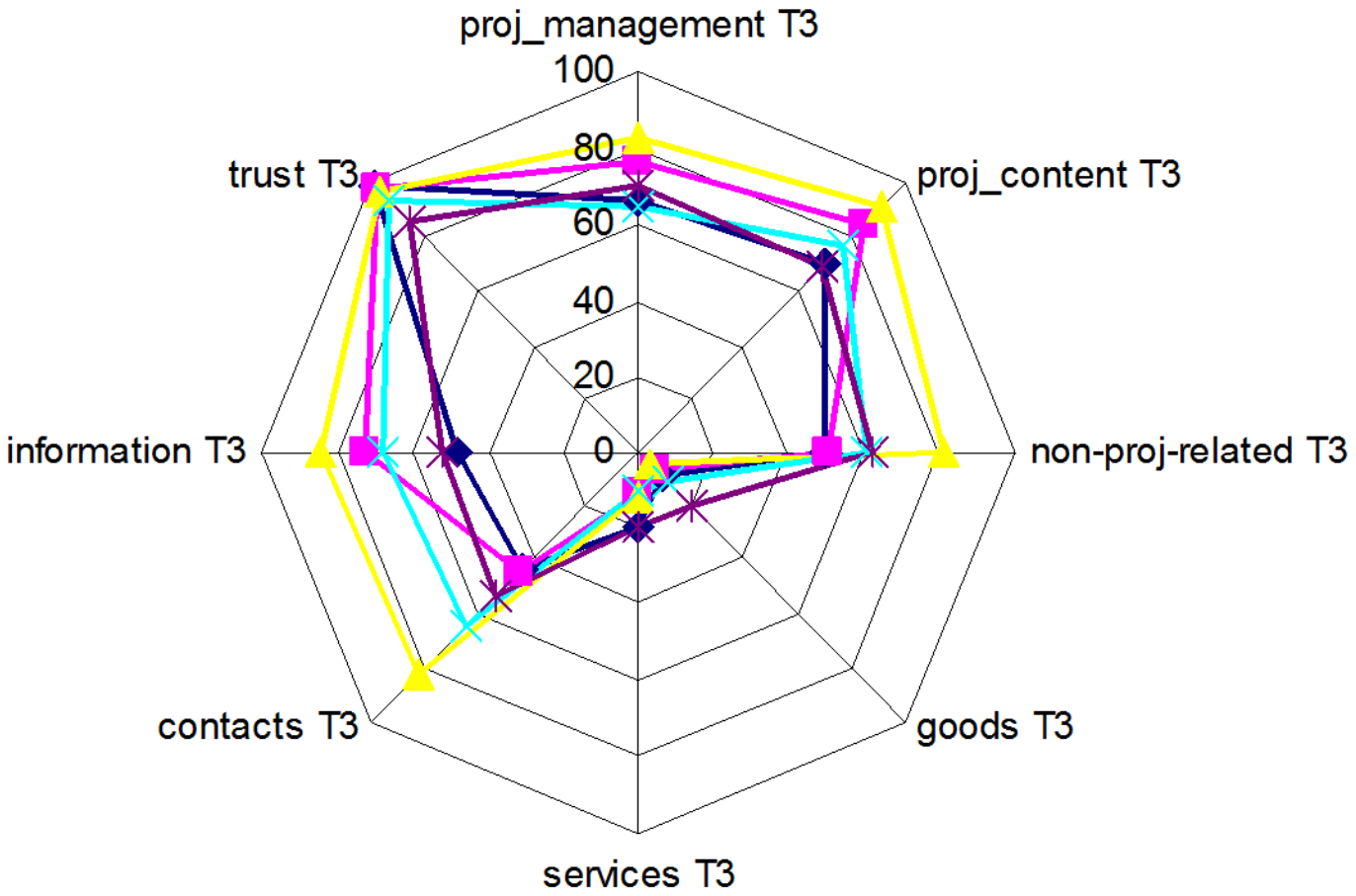
Increasing Network Density by Project (T1 vs T3)



Development of Project Networks (T1 vs T3)

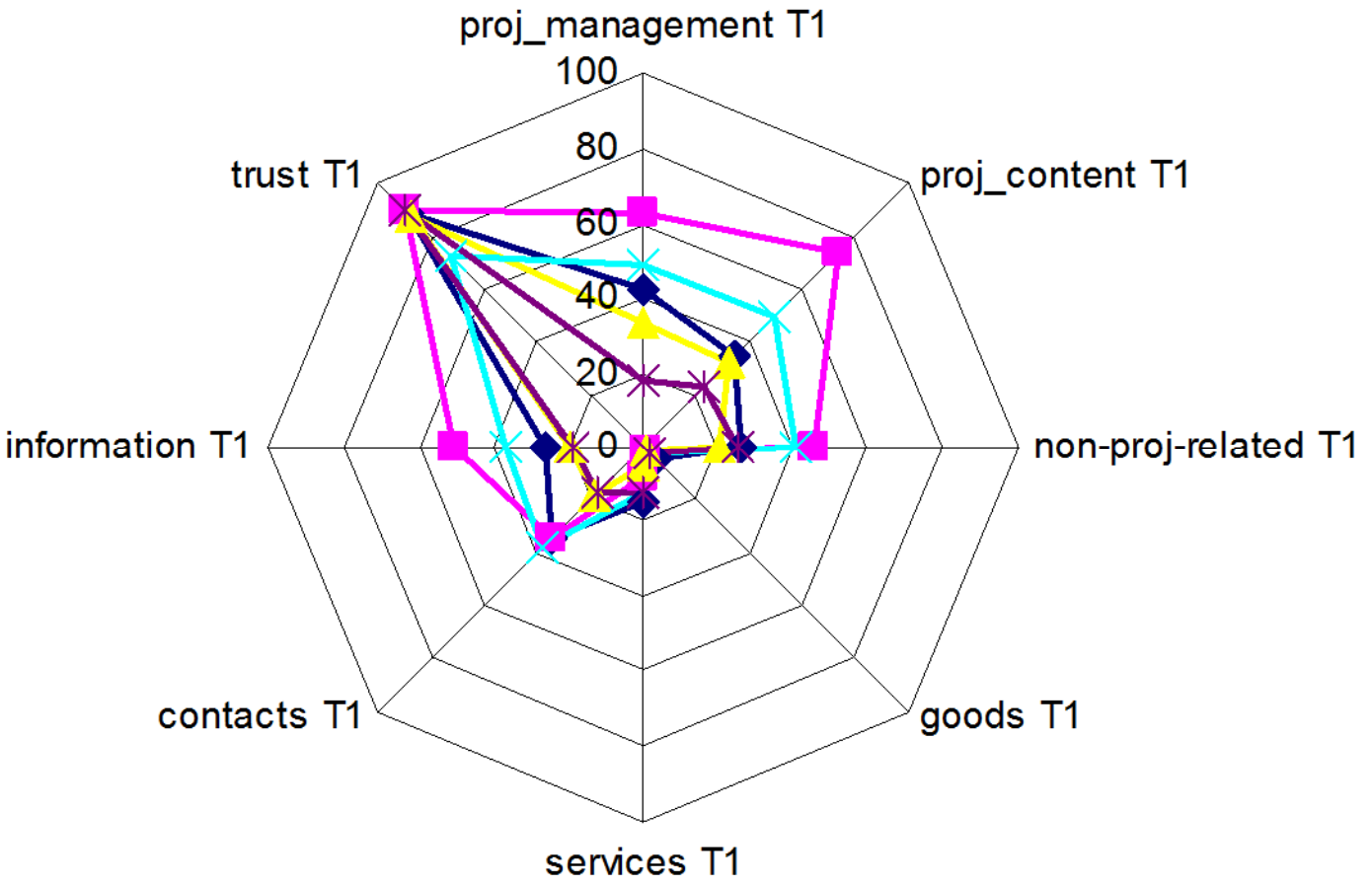


Development of Project Networks (T1 vs T3)

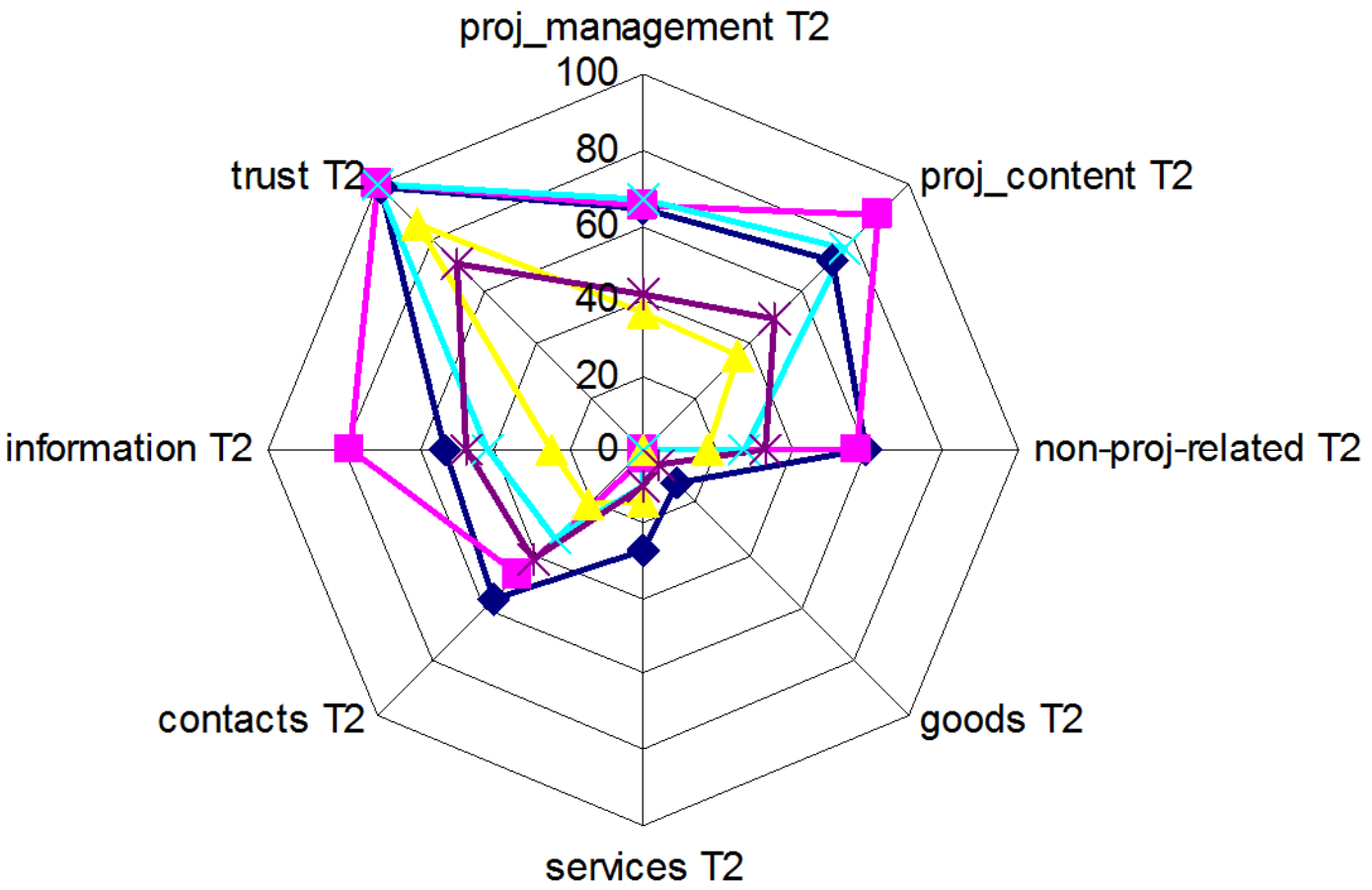


Development of Project Networks (T1 vs T3)

So Far - So Good?



Entwicklung der Netzwerke (T1 vs T4)



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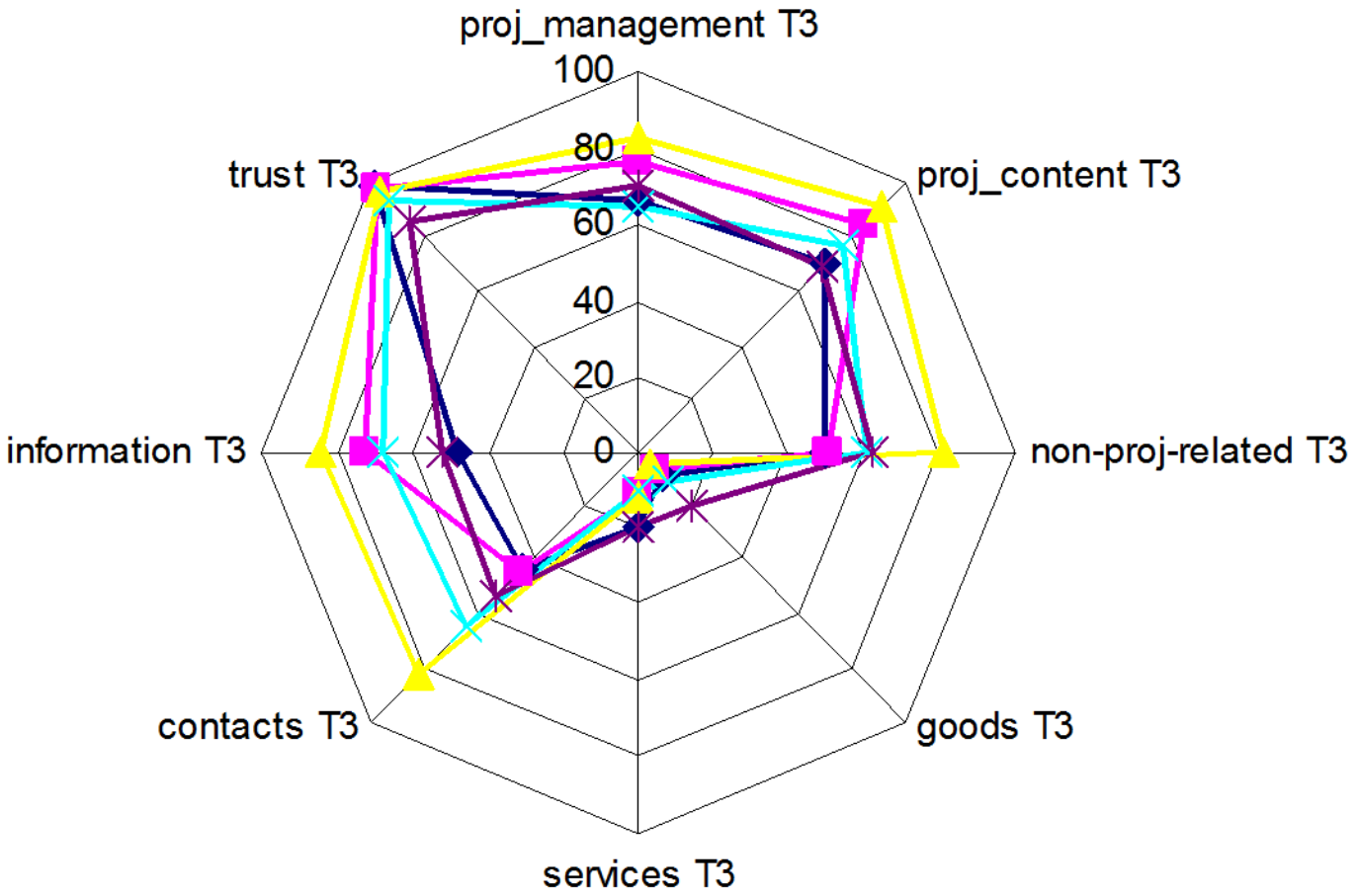

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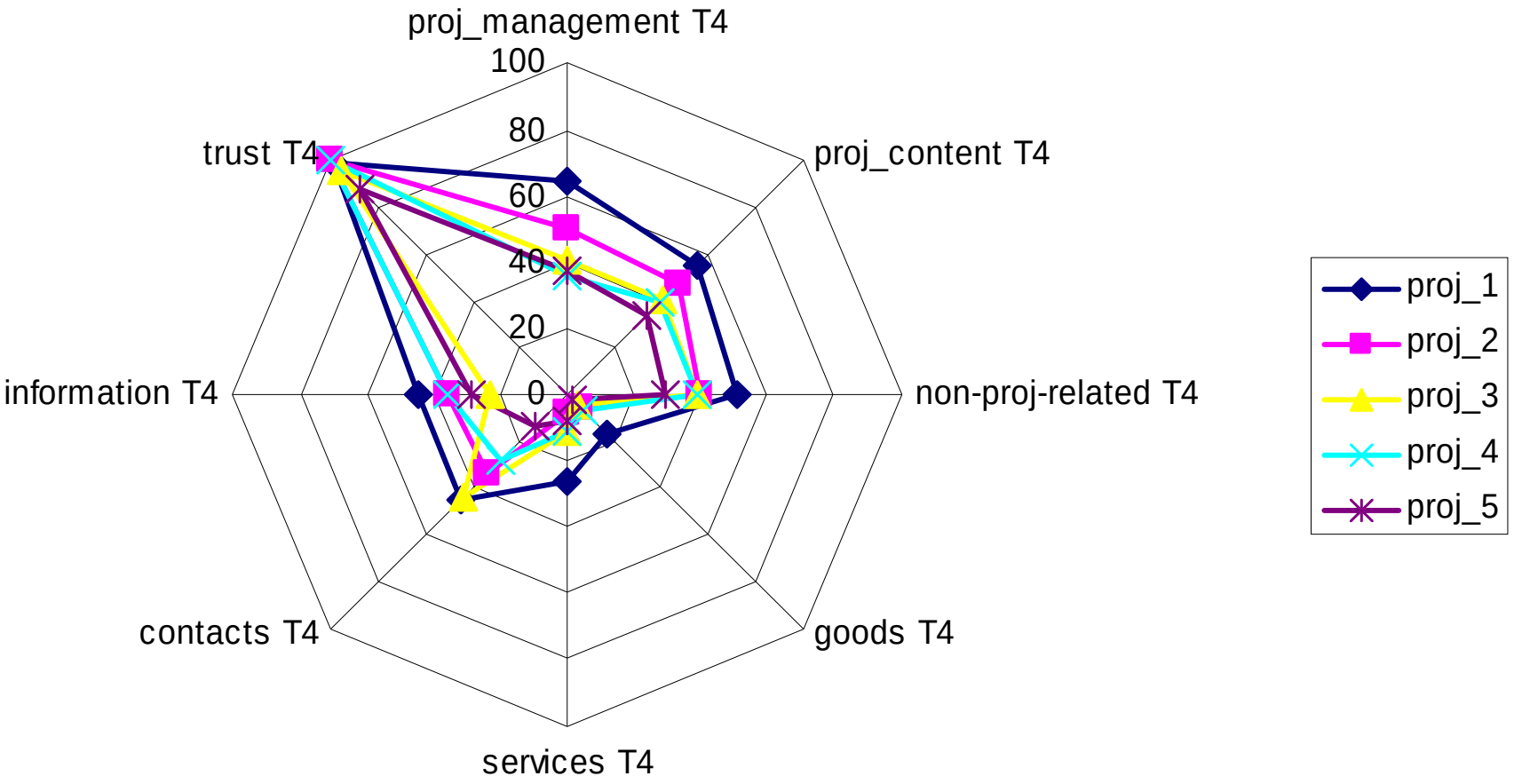
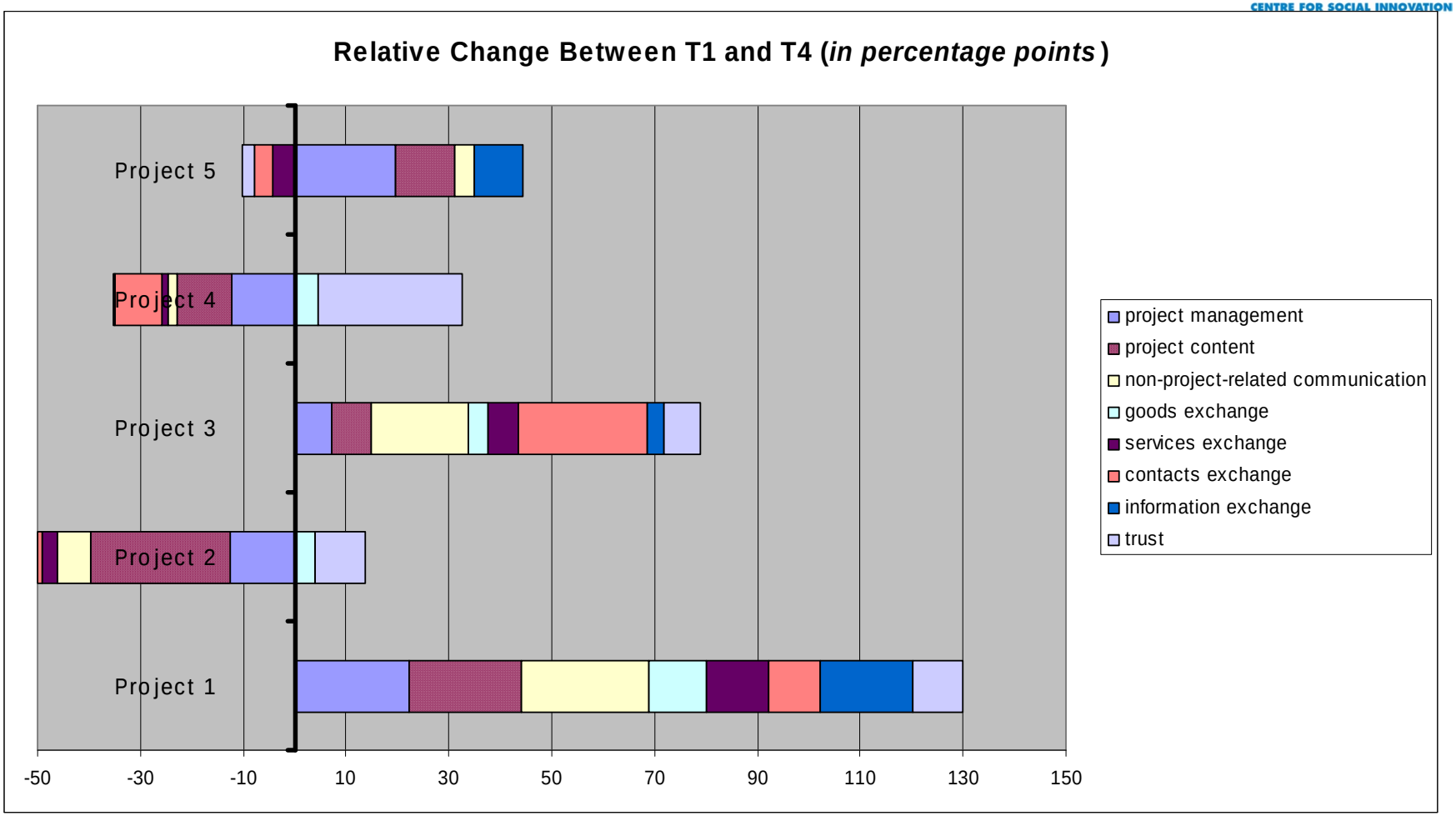


Entwicklung der Netzwerke (T1 vs T4)



Zuwachs der Netzwerkdichte pro Projekt (T1 vs T4)

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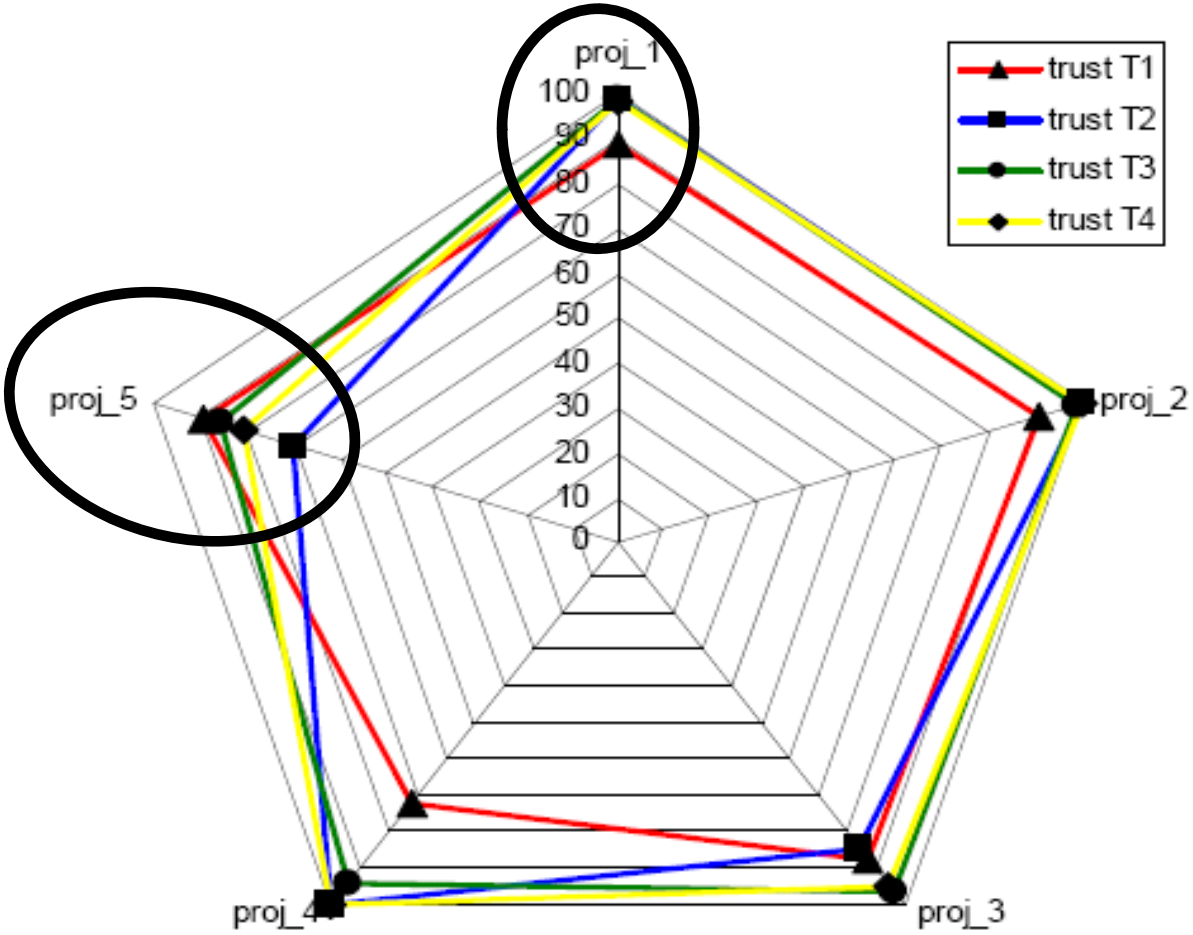
Sustainability

Not all exchange relations make sense for measuring sustainability (e.g. project management)

T4 > T1

- **Trust network density**
- **project content exchange relations**
- **Other valuable information exchange**



trust network intensity	proj_1	proj_2	proj_3	proj_4	proj_5
trust T1	2,04	2,74	1,64	2,62	2,04
trust T2	2,7	2,53	1,87	2,6	1,99
trust T3	2,02	2,23	2,65	2,62	2,27
trust T4	1,98	2,48	2,13	2,32	2,08

Development of Trust

(T1 vs T4)

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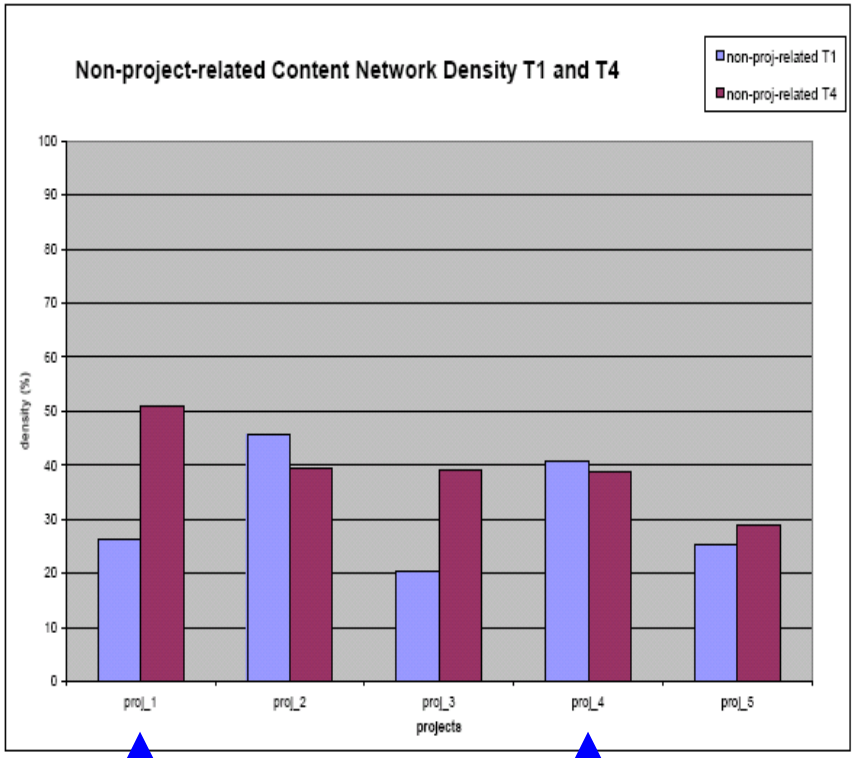

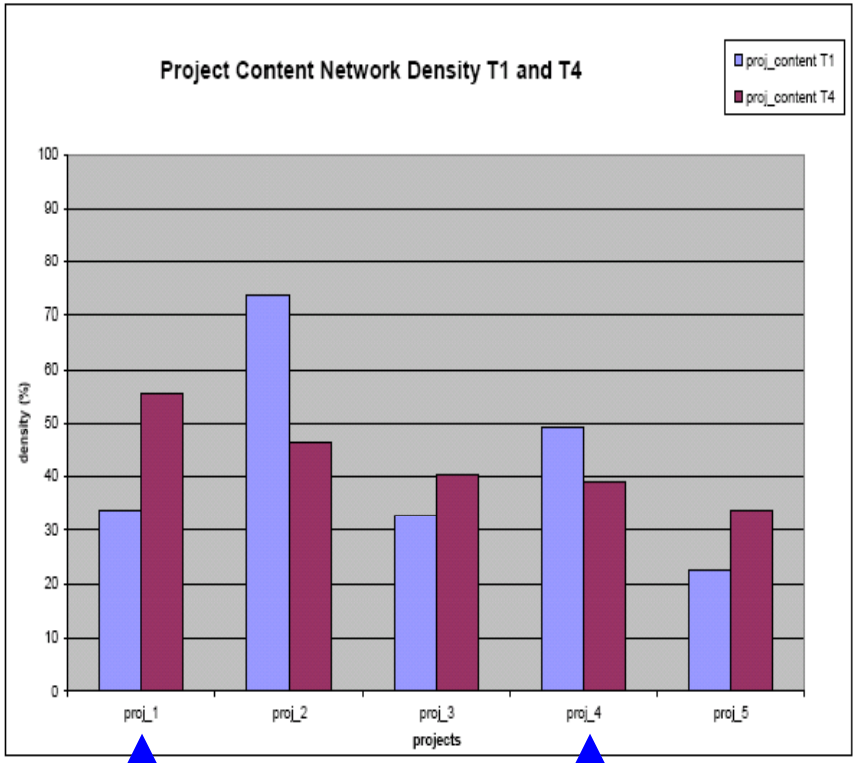

Project and non-project related communication (T1 vs T4)

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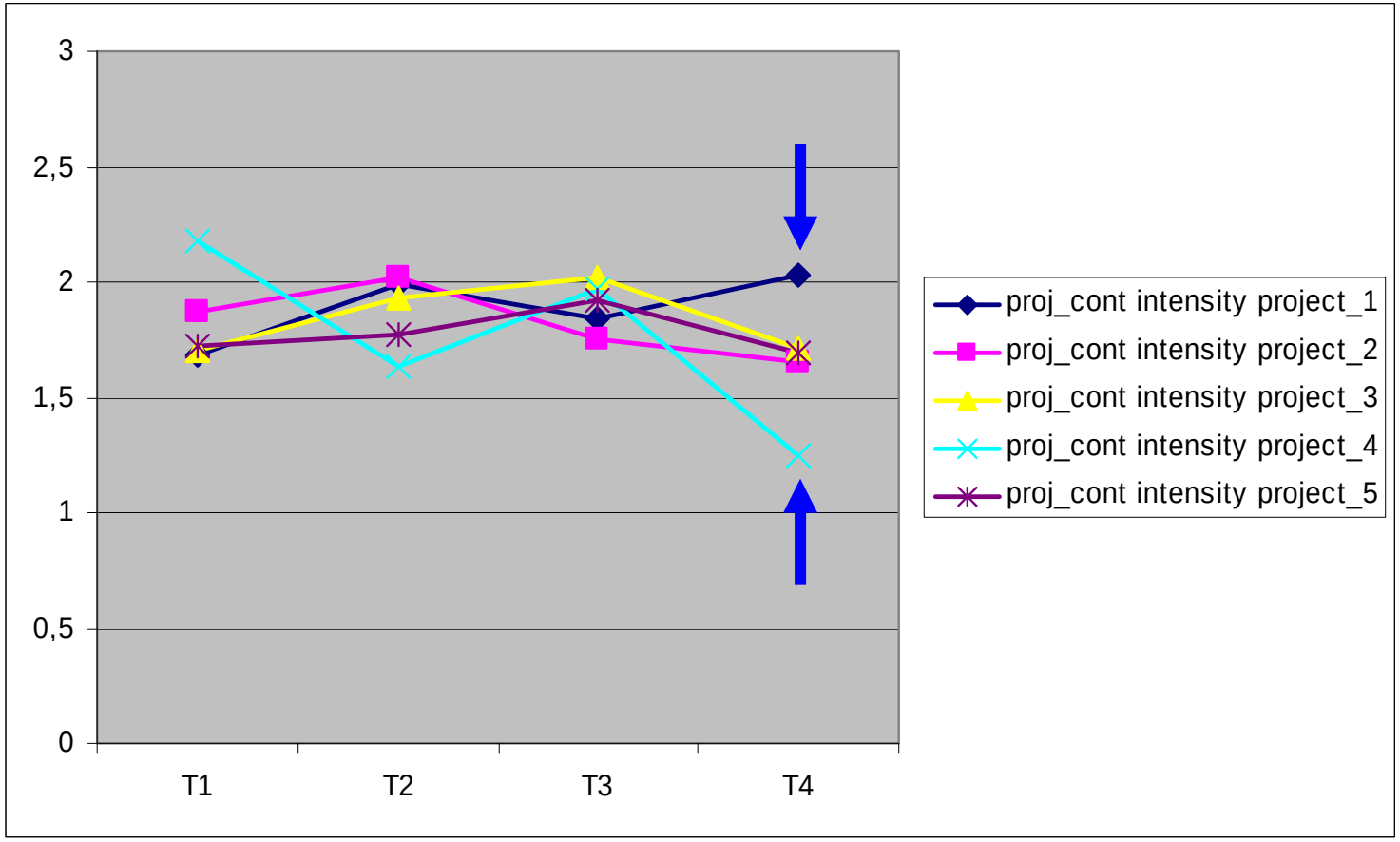

Intensity of project related communication

(T1 vs T4)(low=1; very high=3)

Sustainability of Science-Industry relations

T4 > T1

- **exchange on project content continues**
- **exchange of other valuable information continues**

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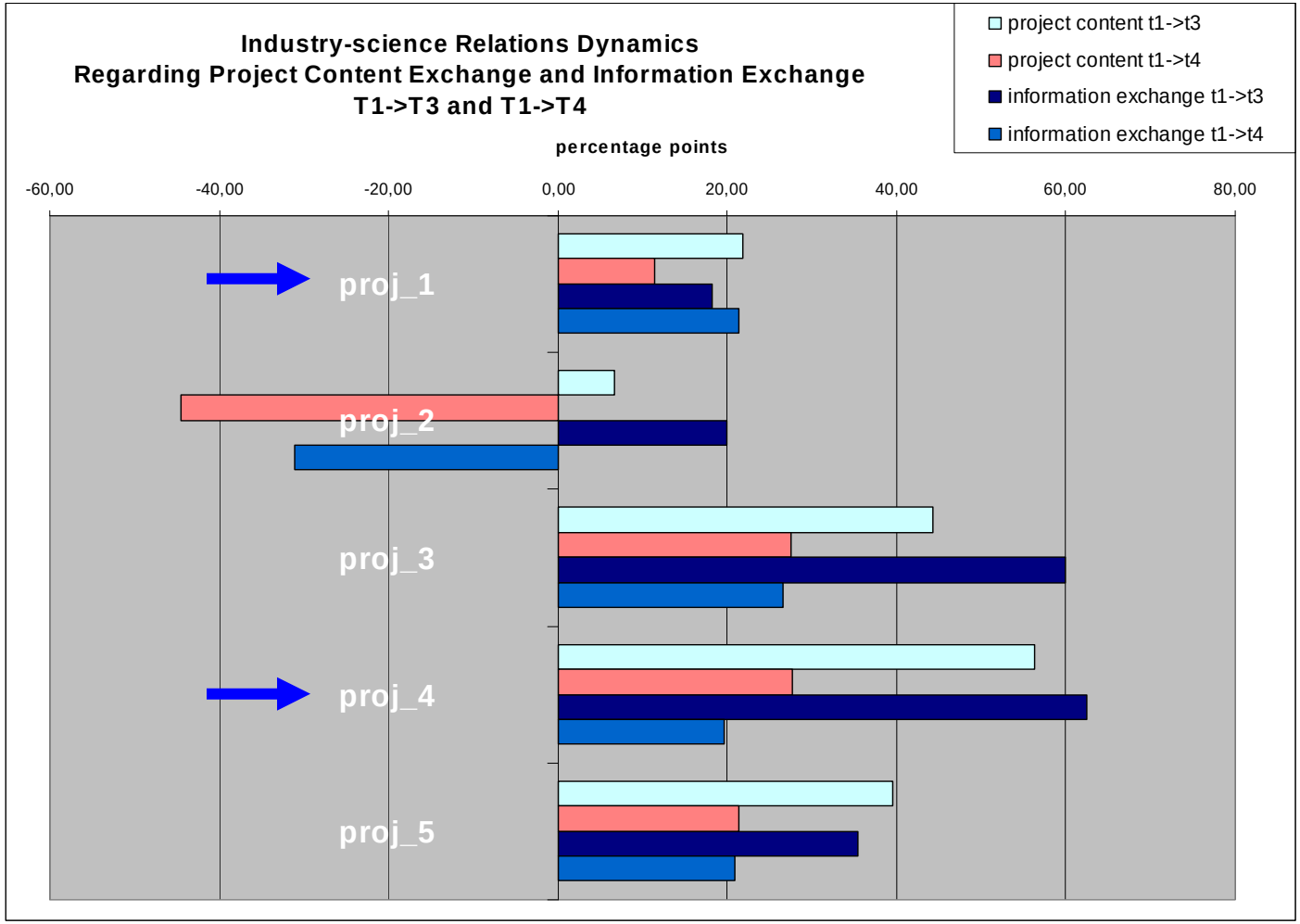

Project content exchange and exchange about other valuable information (T1 vs T4)

Sustainability of Customer-Vendor relations

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T4 > T1

- Exchange of goods
- Exchange of services

customer-vendor	proj_1	proj_2	proj_3	proj_4	proj_5
goods exchange T1	3.57%	2.08%	0.00%	2.50%	4.29%
goods exchange T2	12.31%	0.00%	0.00%	0.00%	5.00%
goods exchange T3	8.22%	4.65%	3.54%	13.85%	19.64%
goods exchange T4	12.73%	7.89%	1.98%	7.69%	2.74%

customer-vendor	proj_1	proj_2	proj_3	proj_4	proj_5
service exchange T1	9.29%	4.14%	2.56%	13.33%	8.57%
service exchange T2	23.85%	2.08%	5.05%	9.52%	8.33%
service exchange T3	15.07%	6.98%	7.98%	10.77%	17.86%
service exchange T4	21.82%	5.26%	3.98%	7.69%	4.79%

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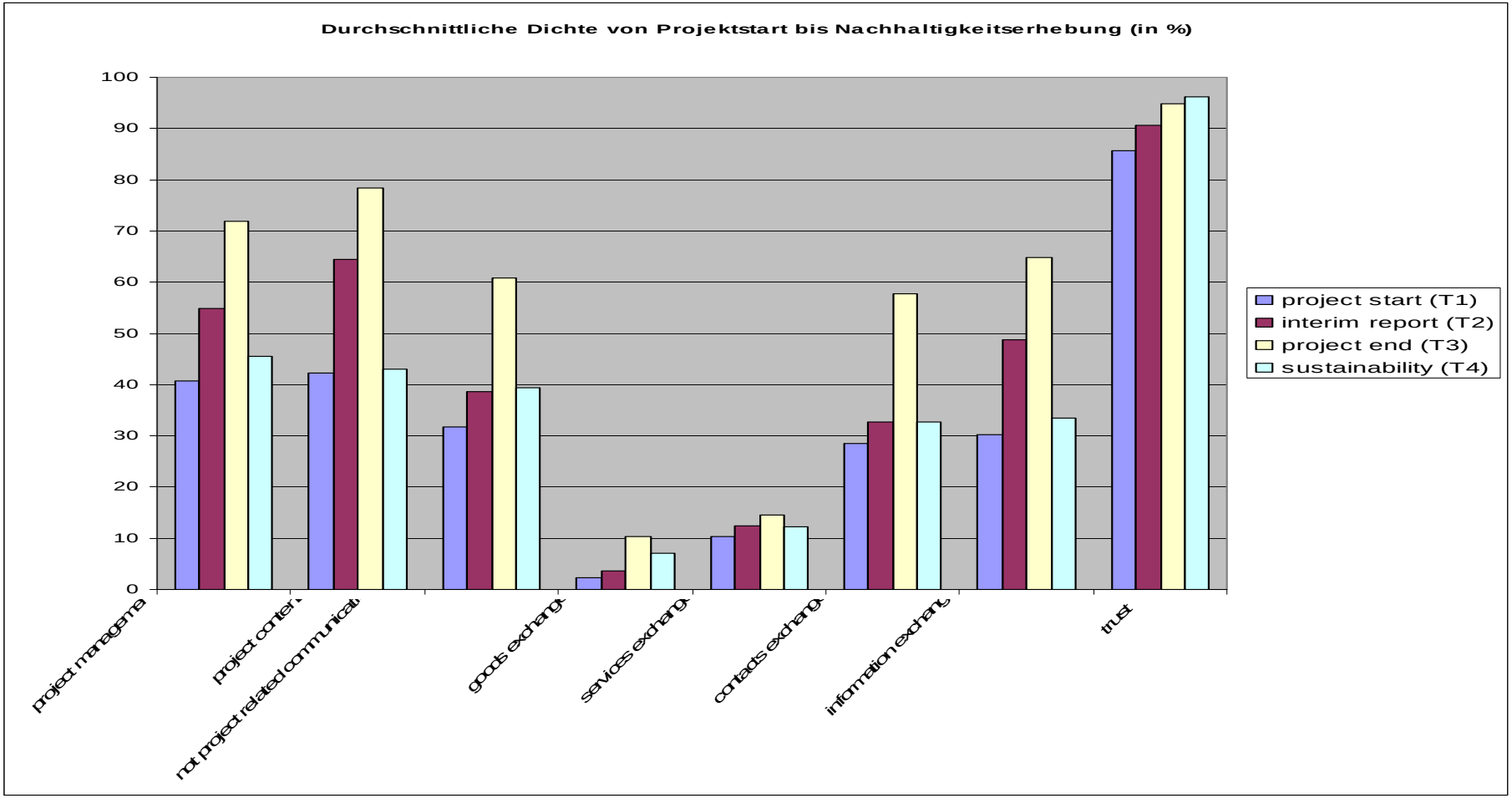

Change of network density by category (T1 vs T4)