



ELSEVIER

TU/e EINDHOVEN
UNIVERSITY OF
TECHNOLOGY



Towards the 4th generation university
The transformative role of TU/e in delivering innovation and impact in the Eindhoven region

For UIDP July 2024



EDUCATION

14.000 students
2.000 PhD's

RESEARCH

9 Departments
4 Interdisciplinary institutes

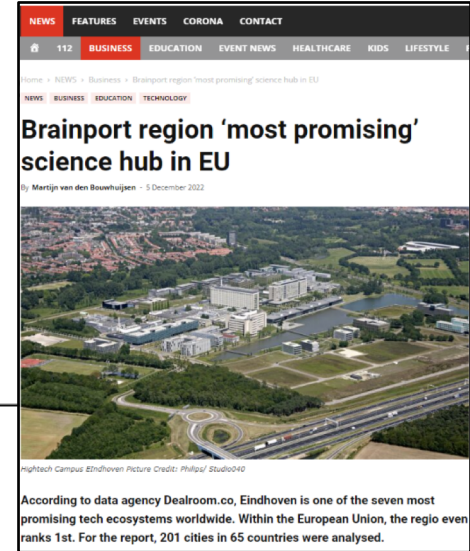
INNOVATION

The Gate
Innovation Space
Partnerships

Brainport Eindhoven

- Ca. 800.000 inhabitants
- 3 billion euros of private R&D
- ASML, Philips, NXP, Bosch, ThermoFischer + 3000 other companies

High-tech ecosystem:
Semiconductors / Artificial intelligence/ Integrated photonics / Additive manufacturing / Systems engineering





4th Generation University as driver of ecosystem

	3rd Generation		4th Generation
Goal	Education, research and knowledge transfer	▶	Mission-driven (challenge-based) education, research and valorization
Role	Create value	▶	Enable societal value creation
Method	Interdisciplinary research	▶	Transdisciplinary research and multi-actor innovation
Human capital	Researchers, professionals and entrepreneurs	▶	Researchers, professionals, entrepreneurs, artists, customers, ecosystem participants
Orientation	Global orientation	▶	Ecosystem orientation
Organization	Institutes, centers	▶	Innovation spaces
Interaction	Industrial partnerships	▶	Integration in global and local ecosystems
Technology integration	Digital instruments	▶	Advanced technology and AI integration

Bogers, M., & Steinbuch, M. 2023. De vierde generatie universiteit: Het nieuwe tijdperk van open innovatie en ecosysteemdenken. *Holland Management Review*, 208: 62-71

Towards the 4th generation university

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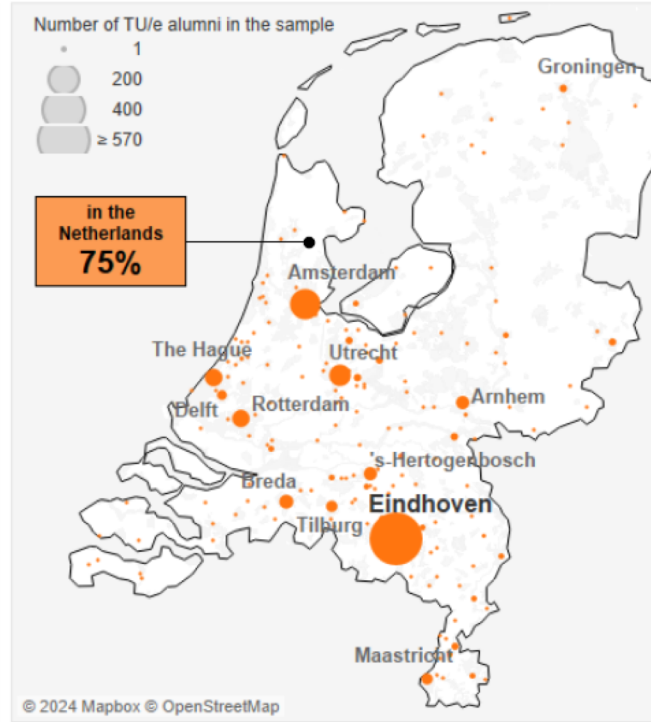
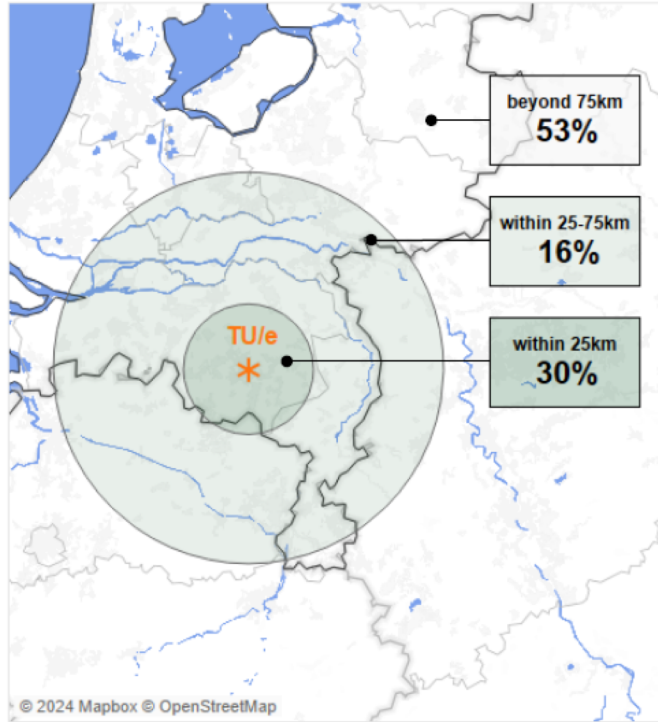


Elsevier – TU/e report

- **Help to tell the story of universities in regional innovation ecosystems**
- **A strategic tool for universities to assess their performance as drivers of the ecosystem**

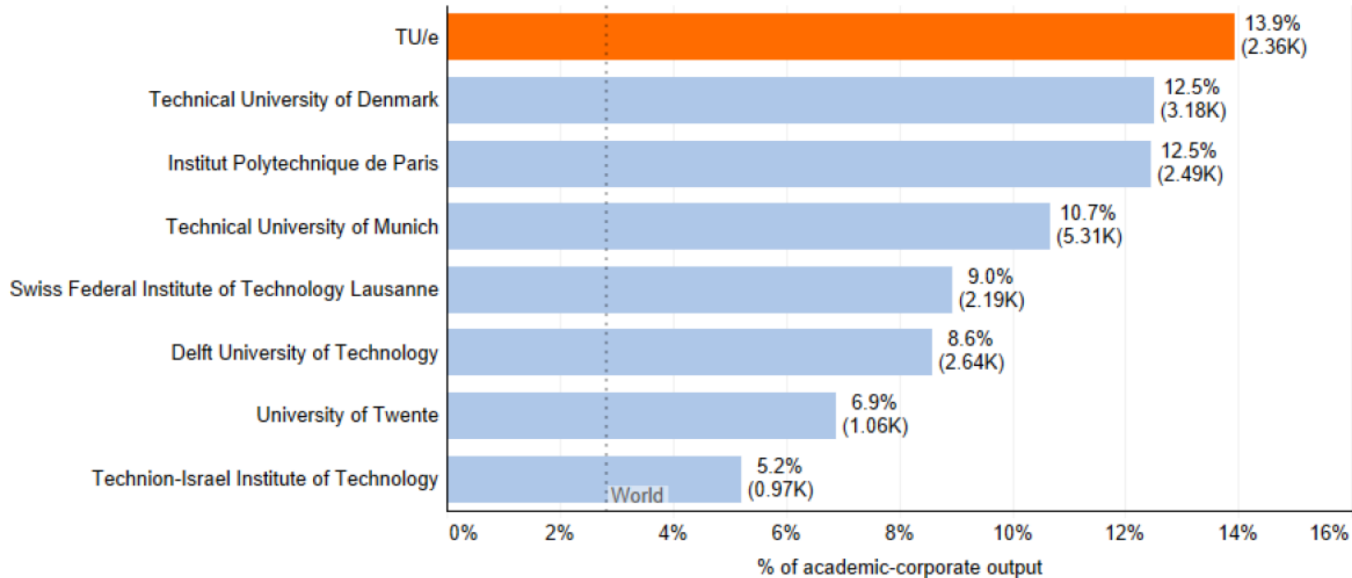


Gateway for top talent



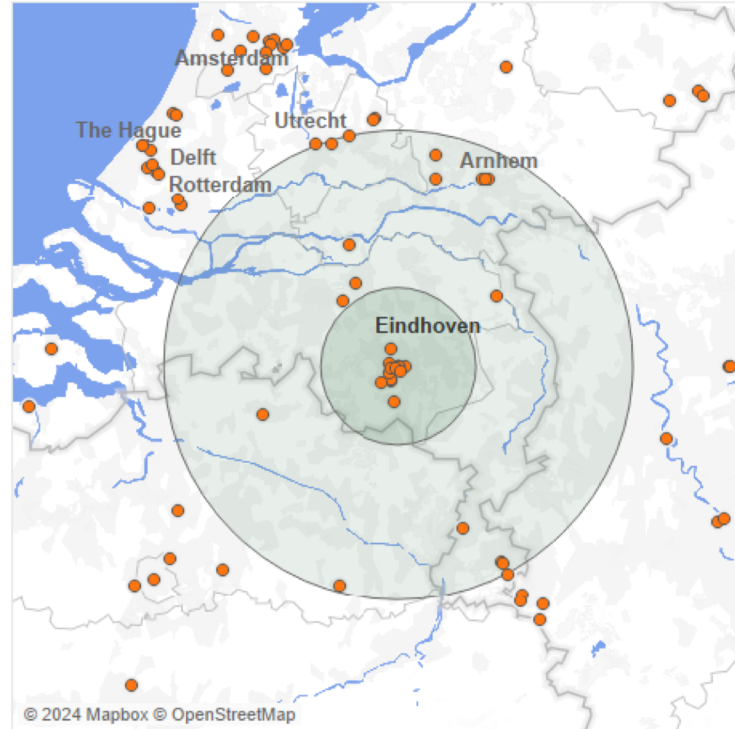
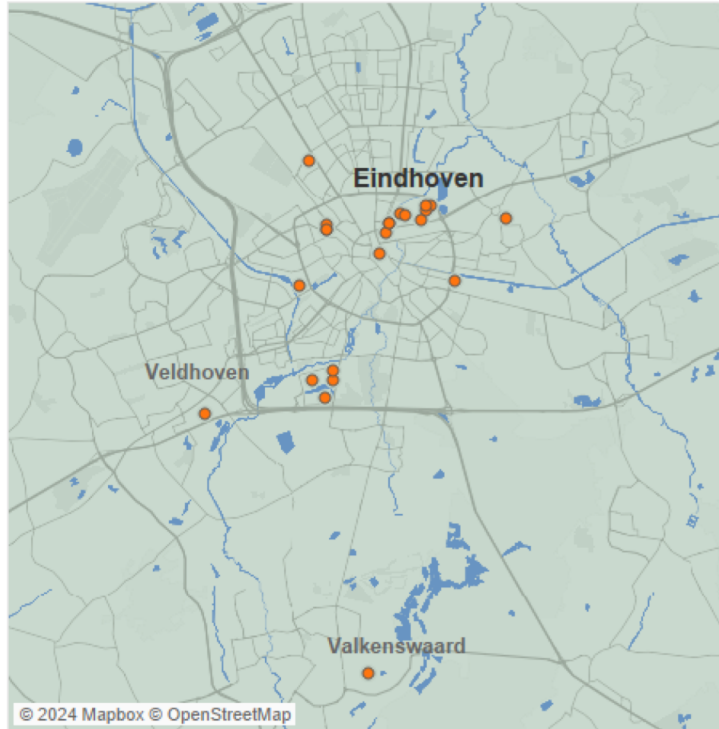
Alumni stay rates for TU/e based on pilot sample analysis.
Source: LinkedIn

Partner for knowledge, technology & innovation: academy - industry co-publications

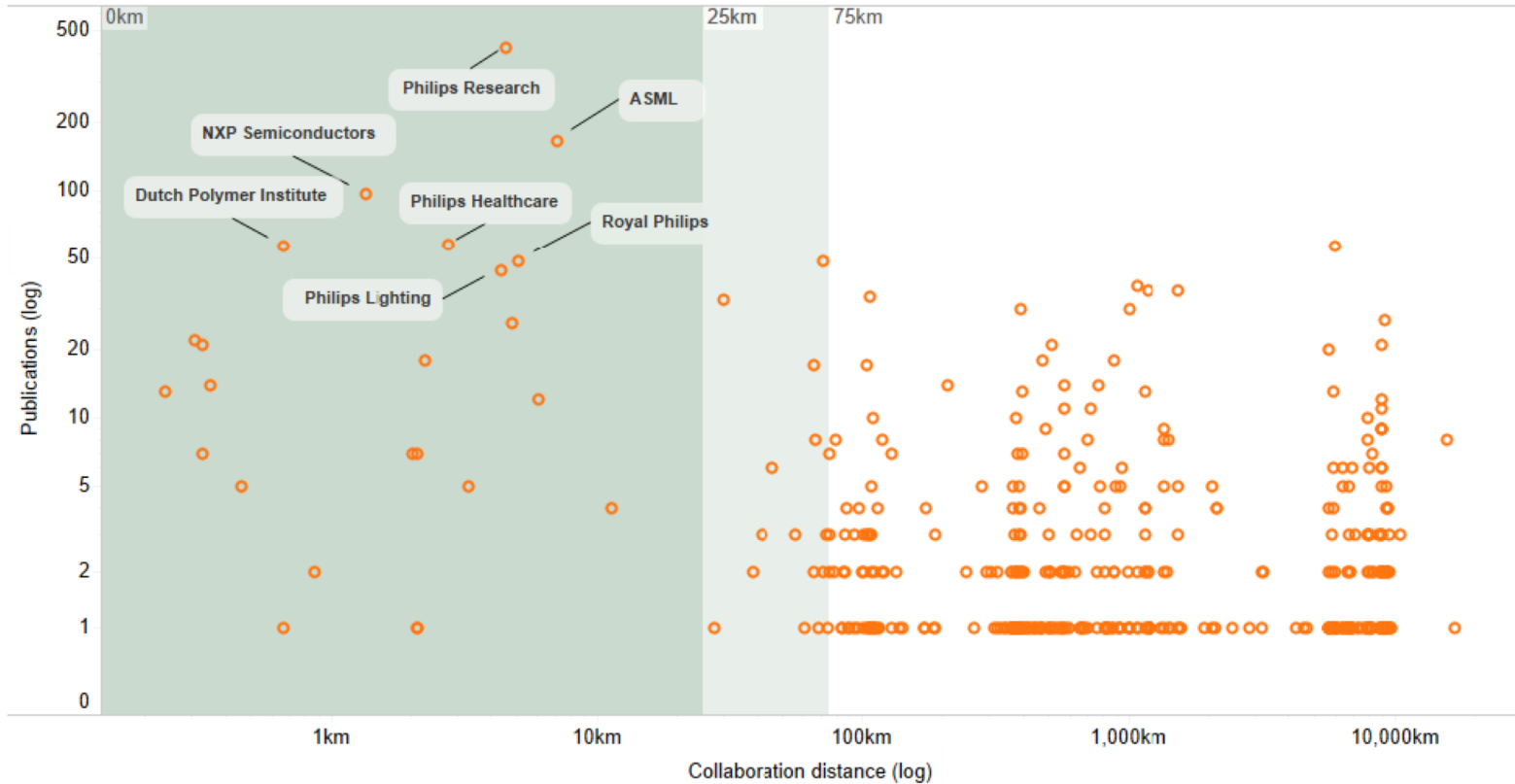


Share of academic-corporate output (2018–2022). Absolute number is shown in brackets.
Source: Scopus

Academy – Industry co-publications



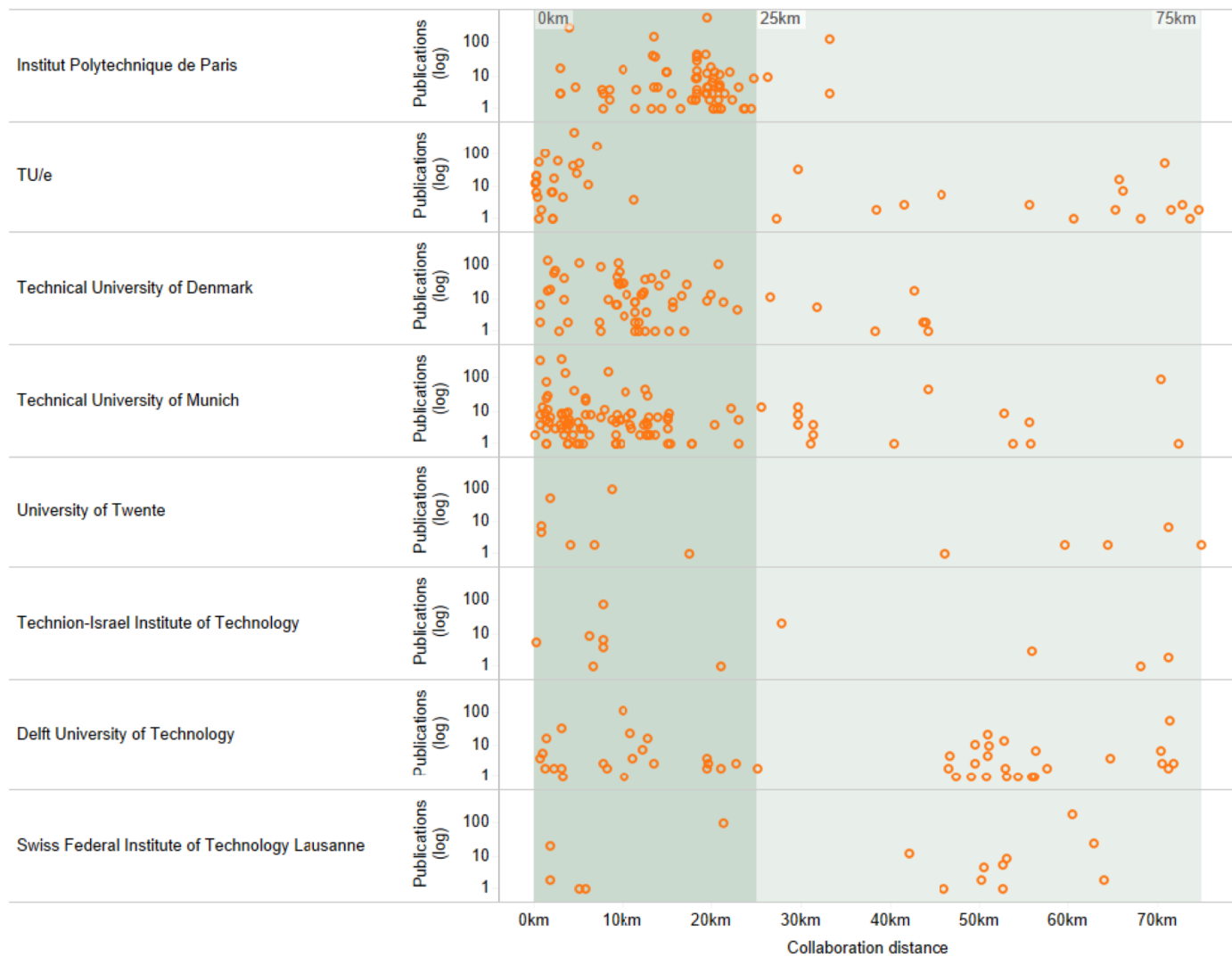
Co-publications: select partners



Diverse ecosystems

Distribution of industrial collaborators by distance from the university (horizontal axis) and number of joint publications (log vertical axis).

Source: Scopus



Start-up ecosystems

Distribution of university alumni-founded start-ups by distance (horizontal axis) from the university and latest number of employees (log vertical axis).

Note that several companies, for which employee data was unavailable, were excluded.

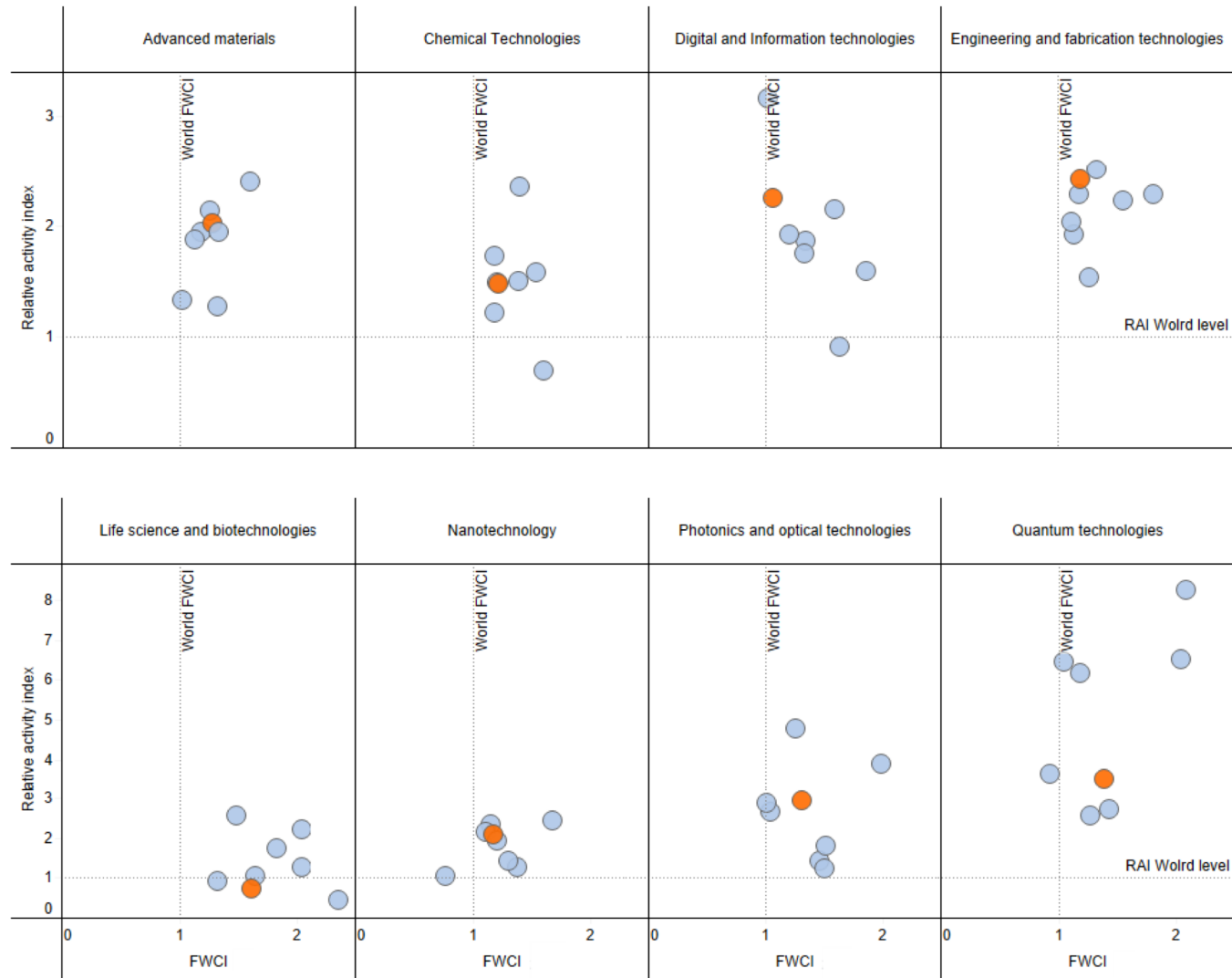
Source: Dealroom



TU/e enabling innovation partner: key enabling technologies

Relative activity index (specialization) and field-weighted citation impact of TU/e (orange) and comparators in key technology families (2018–2022).

Source: Scopus



Qualitative information about innovation ecosystem

Joint strategy making	Brainport Development, TU/e in Brainport board
Co-creation platforms:	Campuses, The Gate, Eindhoven Engine, Innovation Space
Partnerships	ASML, NXP, ThermoFischer, VDL, KU Leuven, etc.
Joint infrastructure	Living labs, pilot plants
Funds for start-up	Deep tech fund, 4 EIT KIC's
Social actions:	Brainport voor Elkaar, Expat Center, Impact 040, Eindhoven Studentenstad
International networks:	Vanguard initiative, EuroTech, EuroTeq, Cluster, ERA-hubs



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Thank you