



ELSEVIER

5 hats and the emergence of maps

Many advanced economies are asking the same questions.

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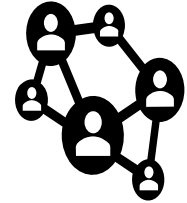


UK Location experiences



2015- GLOBAL DATA SCIENCE HUB FOR ELSEVIER-
London won out, top talent, attractive location,
critical mass.....

Covid-19- radically shifted our
location strategy globally
3>1; 700>70



2023- Elsevier sells Oxford Office to Fortescue Zero-
UK HQ plus Test Research and Engineering Facility
in Banbury & Technical Innovation Centre in Oxford





Directorate for Technology, Innovation & Partnerships



Advances use-inspired and translational research in all fields of science and engineering, giving rise to new industries and engaging all Americans — regardless of background or location — in the pursuit of new, high-wage jobs in science, technology, engineering and math (STEM).

1. NSF TIP has requested our help, to demonstrate to:

- NSF leadership, local politicians, academia & industry

2. ...that TIP money has been spent well:

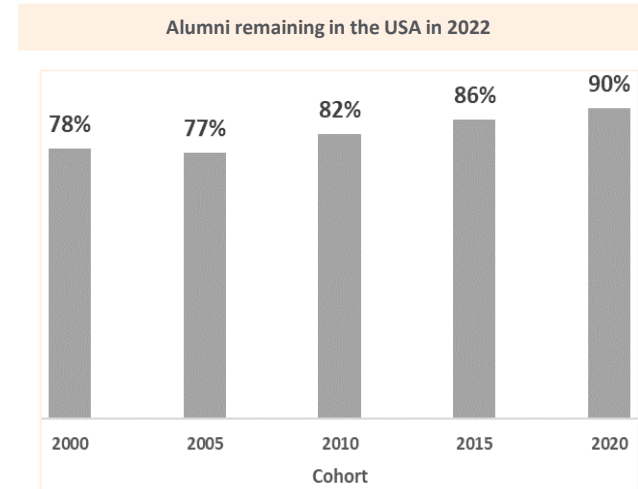
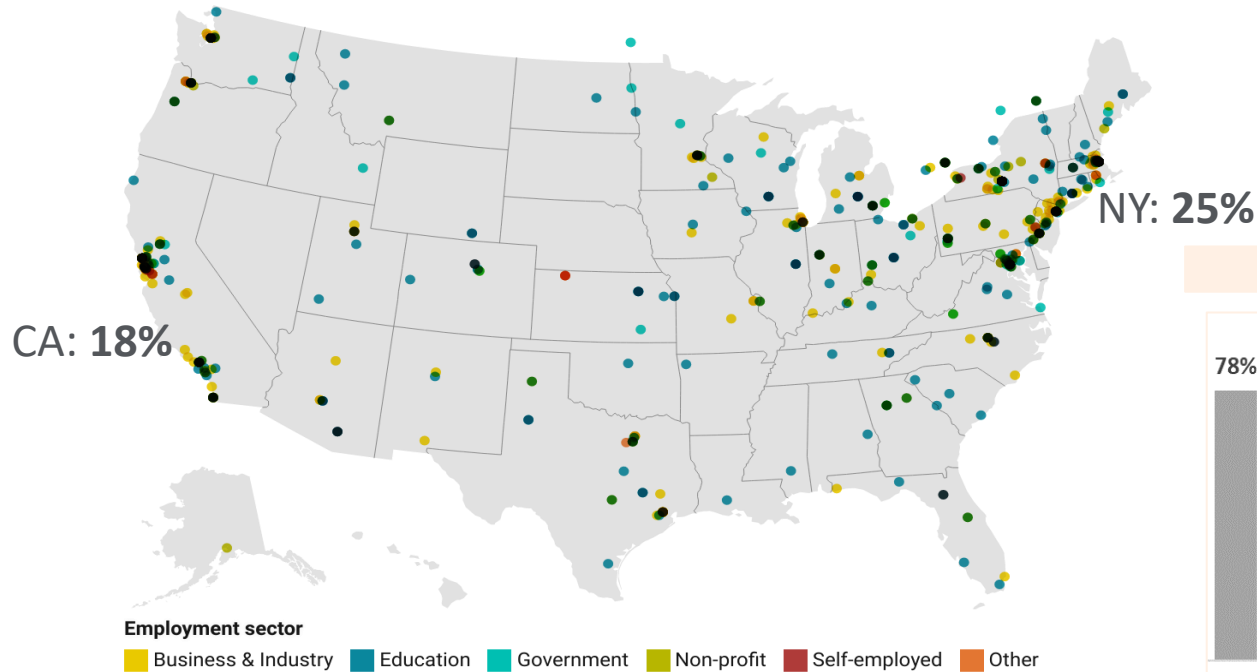
- Equitably across jurisdictions > states, territories, congressional districts, counties
- On the most promising Key Technology Areas
- ...to achieve maximum local economic benefits with federal money



**In short: money > research > innovation > jobs-
\$1bn pa**

Power of people

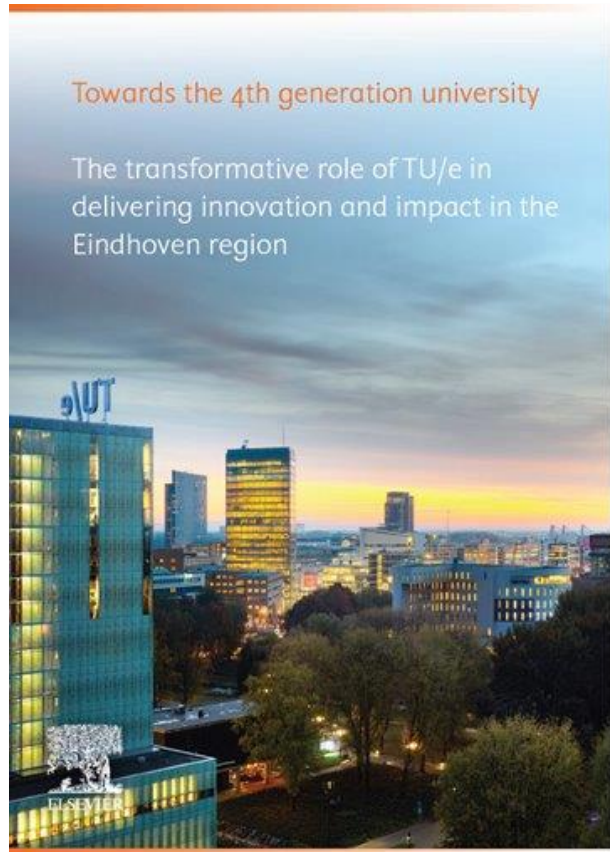
Cornell PhD alumni-where are they now?



Cornell Engineering and Agriculture and Life Sciences
Cohorts- 2000, 2005, 2010, 2015, and 2020

84% remained in USA after studies

TU Eindhoven-4th generation university: features



	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

Table 1

Key characteristics (selection) of the 4th Generation University as compared to the 3rd generation university model.

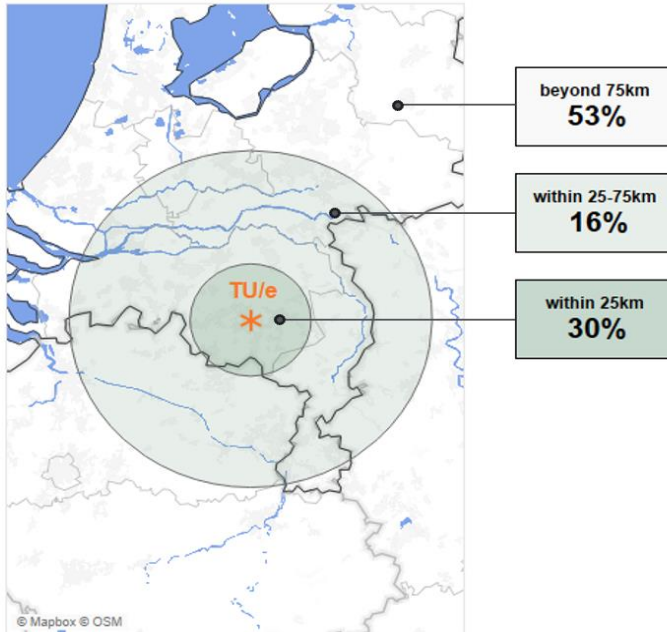
Source: (Marcel Bogers and Maarten Steinbuch)

Expanding the approach with 9 development partners across the globe

Back to People

alumni stay rate

Nearly a third of TU/e alumni stay within 25 km contributing to the region's economy. 75% remain in Netherlands



Alumni stay rates for TU/e based on a 3% sample of university alumni indicating TU/e in their education history in LinkedIn.

Source: LinkedIn

What's at stake?



Government of the Netherlands

> News >

The Netherlands to invest €2.5 billion to strengthen business climate for chip industry in Brainport Eindhoven

News item | 28-03-2024 | 15:59

TU/e Eindhoven University of Technology

D EVENTS News overview Media relations

Third round National Growth Fund: over 2.4 billion euros awarded to projects in which TU/e is involved

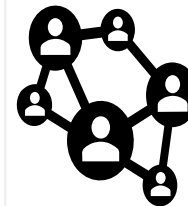
JUNE 30, 2023

Eleven project proposals with TU/e contribution receive investment in third round.

And closer to home

University of Liverpool- strongly collaborative

<input type="checkbox"/> Institution	Co-authored publications ↓	Co-authors at the University of Liverpool	Co-authors at the other Institution	Field-Weighted Citation Impact ∨
<input type="checkbox"/> GBR University of Manchester	2,520 ▲	2,293 ▲	2,975 ▼	2.63
<input type="checkbox"/> GBR University of Oxford	2,153 ▲	1,767 ▼	2,710 ▲	4.09
<input type="checkbox"/> GBR Imperial College London	1,723 ▲	1,537 ▼	2,136 ▲	4.67
<input type="checkbox"/> GBR University College London	1,705 ▲	1,482 ▼	2,017 ▼	5.06
<input type="checkbox"/> GBR University of Cambridge	1,606 ▲	1,435 ▲	2,150 ▲	3.72
<input type="checkbox"/> GBR University of Edinburgh	1,382 ▲	1,131 ▼	1,385 ▼	4.66
<input type="checkbox"/> GBR University of Birmingham	1,381 ▲	1,054 ▼	1,005 ▲	3.84
<input type="checkbox"/> GBR University of Sheffield	1,360 ▲	1,310 ▲	1,306 ▼	3.87
<input type="checkbox"/> GBR King's College London	1,255 ▲	1,060 ▼	1,250 ▼	5.05
<input type="checkbox"/> GBR University of Glasgow	1,207 ▲	999 ▼	914 ▲	4.58



University of Liverpool- UK corporate collaborators.

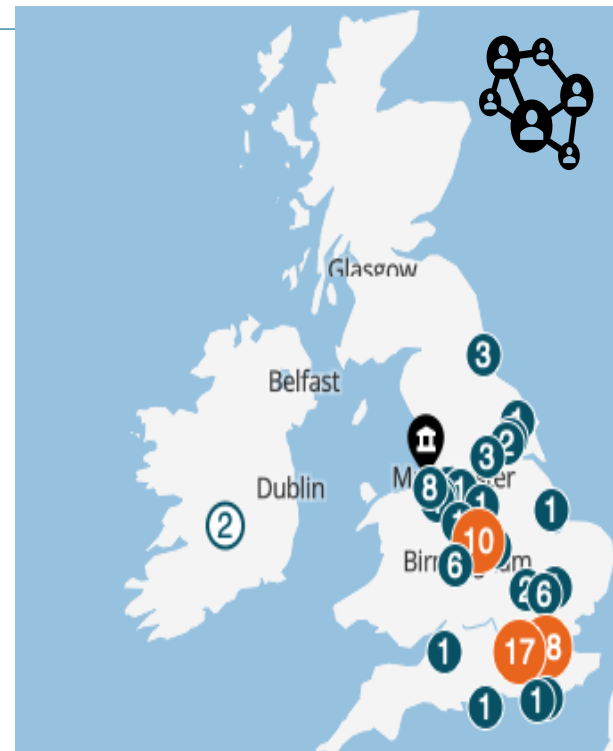
<input type="checkbox"/> Institution	Co-authored publications ↓	Co-authors at the University of Liverpool	Co-authors at the other Institution	Field-Weighted Citation Impact ↓
<input type="checkbox"/> GBR AstraZeneca	76 ▼	102 ▼	99 ▼	3.75
<input type="checkbox"/> GBR GlaxoSmithKline	40 ▼	173 ▼	67 ▼	5.29
<input type="checkbox"/> GBR Unilever	36 ▲	72 ▲	60 ▲	0.74
<input type="checkbox"/> GBR Oxford Nanopore Technologies	24 ▲	3 ▲	5 ▲	4.36
<input type="checkbox"/> GBR Willows Veterinary Centre and Referral Service Ltd.	21 ▼	21 ▼	19 ▼	2.08
<input type="checkbox"/> GBR Anderson Moores Veterinary Specialists	20 ▲	27 ▲	20 ▲	1.16
<input type="checkbox"/> GBR Rolls-Royce	20 ▲	29 ▲	12 ▲	0.85
<input type="checkbox"/> GBR North Downs Specialist Referrals	19 ▲	32 ▲	12 ▲	0.76
<input type="checkbox"/> GBR Dick White Referrals	16	17 ▲	18 ▲	0.52
<input type="checkbox"/> GBR Apconix	12 ▲	30 ▲	4	0.54



And another local example

Liverpool John Moores University-corporate collaborators

<input type="checkbox"/> Institution	Co-authored publications ↓	Co-authors at Liverpool John Moores University	Co-authors at the other Institution	Field-Weighted Citation Impact ↓
<input type="checkbox"/> GBR Unilever	18 ▼	20 ▼	17 ▼	1.09
<input type="checkbox"/> GBR Syngenta	17 ▲	19 ▼	13 ▼	1.06
<input type="checkbox"/> GBR The Football Association	10 ▲	15 ▲	12 ▲	3.69
<input type="checkbox"/> GBR Arsenal Football Club Plc	9 ▲	5 ▼	6 ▼	8.37
<input type="checkbox"/> GBR Liverpool Football Club	8 ▼	15 ▼	4 ▼	2.86
<input type="checkbox"/> GBR AstraZeneca	6 ▼	9 ▼	10 ▼	0.93
<input type="checkbox"/> GBR Manchester United Football Club	6 ▲	7 ▲	5 ▲	3.69
<input type="checkbox"/> GBR Lawn Tennis Association	4	4 ▼	3 ▼	0.97
<input type="checkbox"/> GBR British American Tobacco	3	5	1	0.00
<input type="checkbox"/> GBR Lhasa Limited	3 ▲	7 ▲	8 ▲	1.62



And there are other benefits



Collaboration can differentially boost one measure of research excellence-FWCI

Collaboration type	University of Liverpool	Liverpool John Moores
Institution only	1.12	1.02
National collaboration	1.37	1.22
International collaboration	2.15	2.00
Academic/Corporate	3.93	3.64

For Universities and the UK academic excellence matters

Personal Reflections- from multiple hats

- Universities main outputs are people and ideas- are **people** the real engines of economic growth?
 - Link to **social inclusion**-Oxfordshire universities; link between **Schools, FE and Universities**-Keele Focus
- Balancing placed based investments and maintaining “excellence”
 - **Covid- impact** on locations?
 - **Networks** and **co-creation** are both critical, regional, national & international
 - **Regional devolution** in England-is **not symmetric**, Keele/Staffordshire, Oxford/Oxfordshire
 - Learn **lessons from past**- RDA’s, S&I audits.....
 - Can we invest to achieve **multiple objectives** given tight fiscal environment and constrain **red-tape**?



**My recommendation increase focus
on Networks and People investments**

*“The best way to send
information is to wrap it
up in a person”*

J. Robert Oppenheimer

