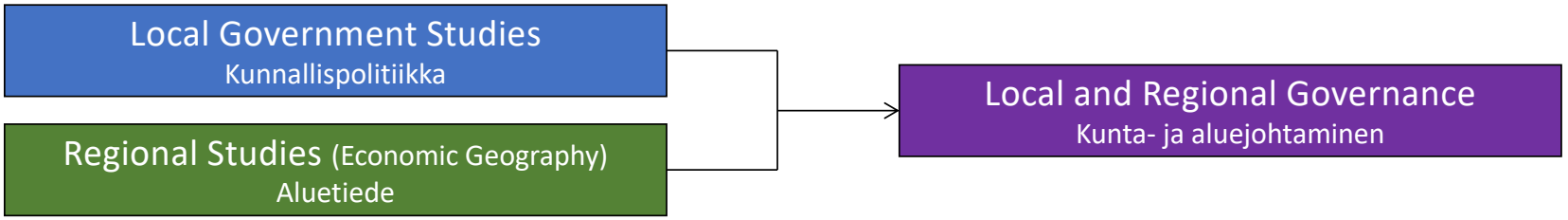
HAL.KAJO.214

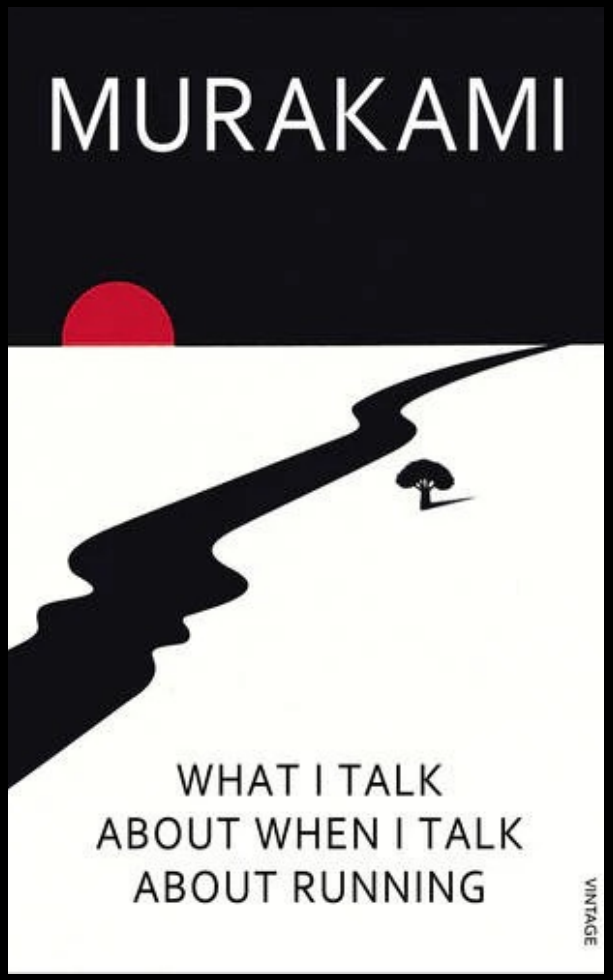
Economic Renewal of Cities and Regions

Markku Sotarauta

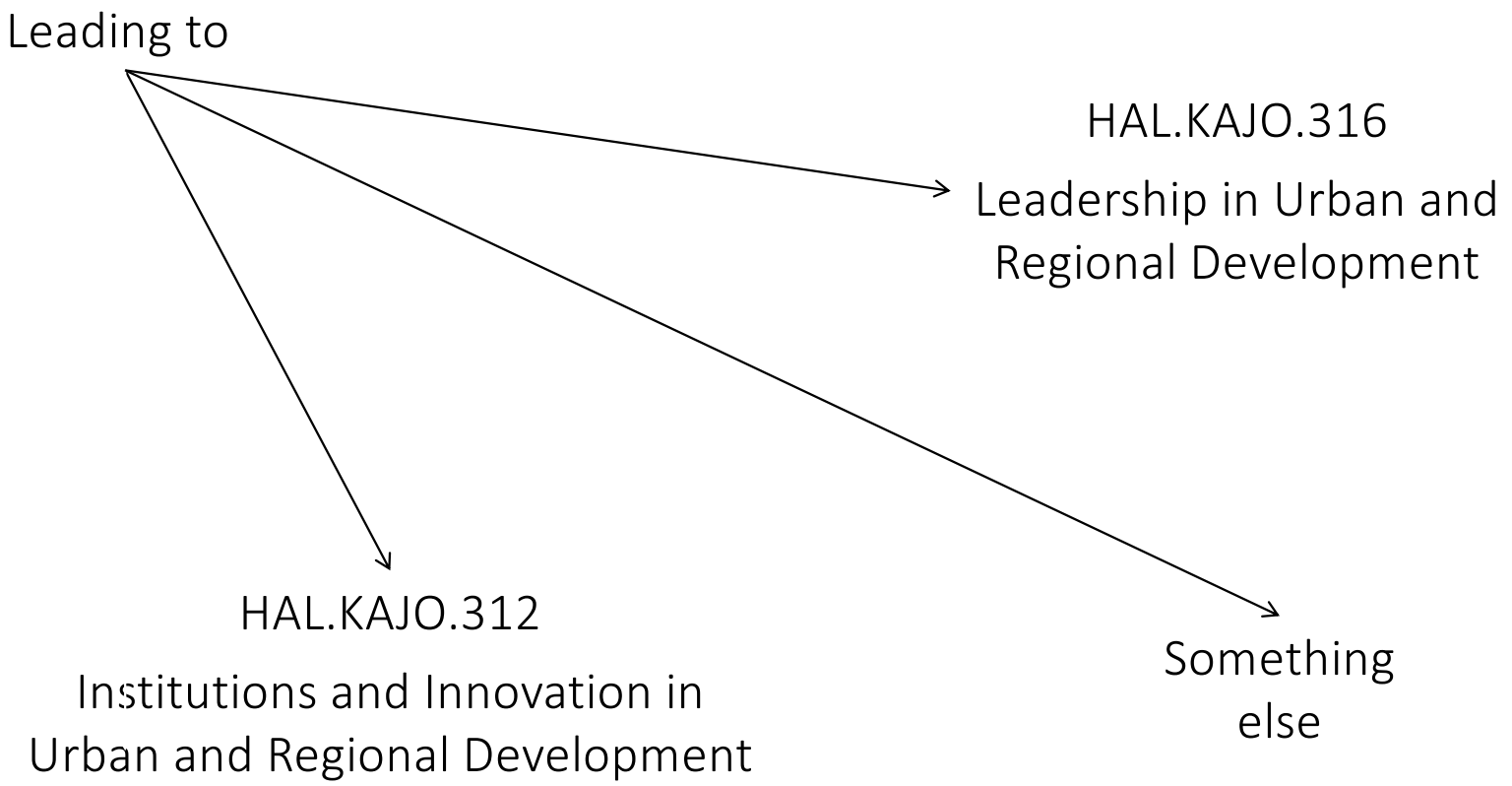
Local and Regional Governance
Kunta- ja aluejohtaminen

Local and Regional Governance





What I talk
about when I talk
about regional development


Leading to
HAL.KAJO.316
Leadership in Urban and Regional Development
HAL.KAJO.312
Institutions and Innovation in Urban and Regional Development
Something else

The material can be found here:

- www.sotarauta.info -> teaching -> HAL.KAJO.214 Economic renewal of cities and regions 5 ECTS
- Please note! Moodle is NOT used

Core questions in urban and regional studies

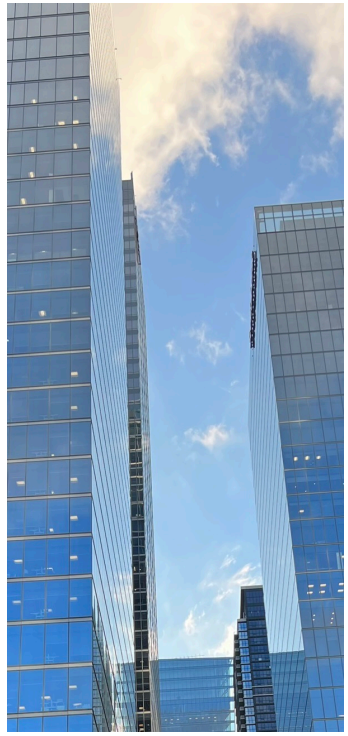
(Storper 2013)

- Why do some regions grow while the others decline?
- What differentiates regions that are able to sustain beneficial development from those that are not?
- Why are some regions more productive and/or innovative than others?
- What are the principal regularities in urban and regional growth?
- What are the events and processes that affect development pathways?

Learning outcomes, a small step towards answers

The most important knowledge-based theories and development models of cities and regions

- The key forces that shape economic development of cities and regions
- The potential and constraints of the most important economic development models in use
- How institutional varieties shape economic development of cities and regions in different locations
- The nature and thematic areas of innovation oriented local and regional development studies



What

- Six on-campus sessions (recorded and posted on the website)
- Online videos whenever you want
  - Andrés Rodríguez-Pose - The geographies of EU discontent and the revenge of places that don't matter (52:02)
  - Andrès Rodriguez-Pose: The revenge of the place in a nutshell, complements the above (5:58)
  - Andy Pike: Shifting horizons in local and regional development. (20:24)
  - Cluster Dynamics, part 1. 2010 (9:50)
  - Cluster Dynamics, part 2. 2010 (9:43)
  - Cluster Policy, part 1. 2010 (9:49)
  - Cluster Policy, part 2. 2010 (9:29)

Two reports to read

- Beer, A., McKenzie, F., Blažek, J., Sotarauta, M. & Ayres, S. (2020) Every place matters: towards effective place-based policy. Regional Studies Policy Impact Books; Taylor & Francis.
- Wøien, M., Kristensen, I. & Teräs, J. (2019) The status, characteristics and potential of smart specialisation in Nordic Regions. Nordregio Report 2019:3.

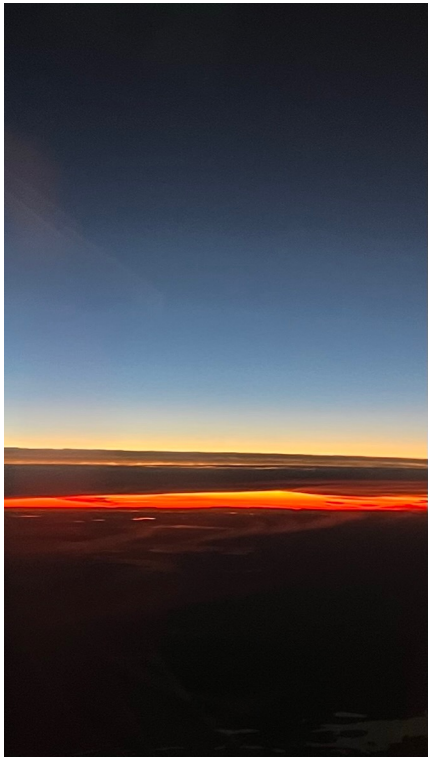
Work

Work for the class includes following the online and on-campus lectures, independent reading and writing an essay in Tuni-Exam.

- Everybody will write the essay in English
- The Tuni-exam will be open from December 2 to December 10.

Tuni-Exam Essay

- **Remember to book yourself a slot**
- The questions to discuss in the essay are:
  - Why do some regions/cities develop better than others?
  - What should we focus on to make place-based policies work well for regions? Use the two reports to mull this one over.
- The two questions on the Tuni-Exam are prompts to ponder your learning. They are NOT exam questions.
  - Their function is to guide thinking, learning and writing



Questions, comments?

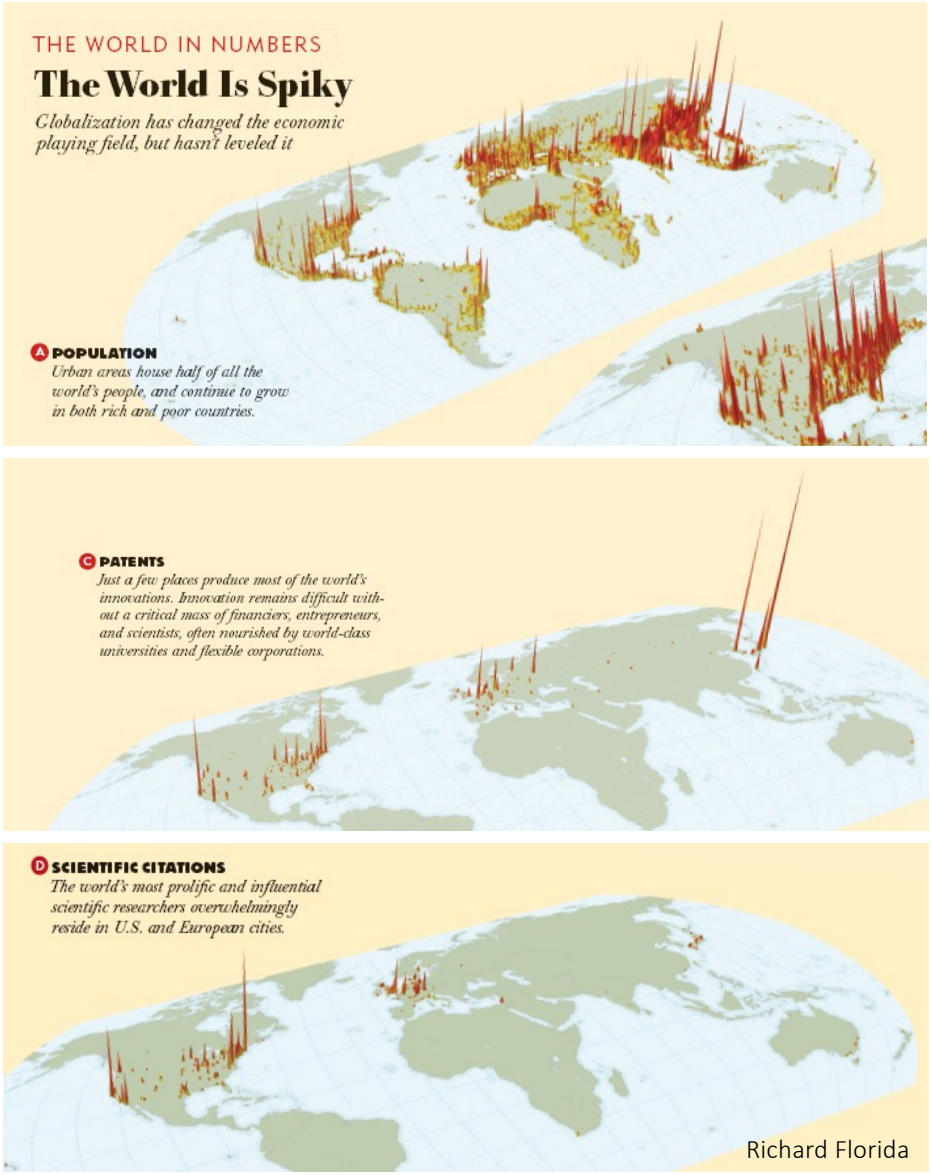
Regional development and place-based policy

Knowledge economy - Spiky or flat?

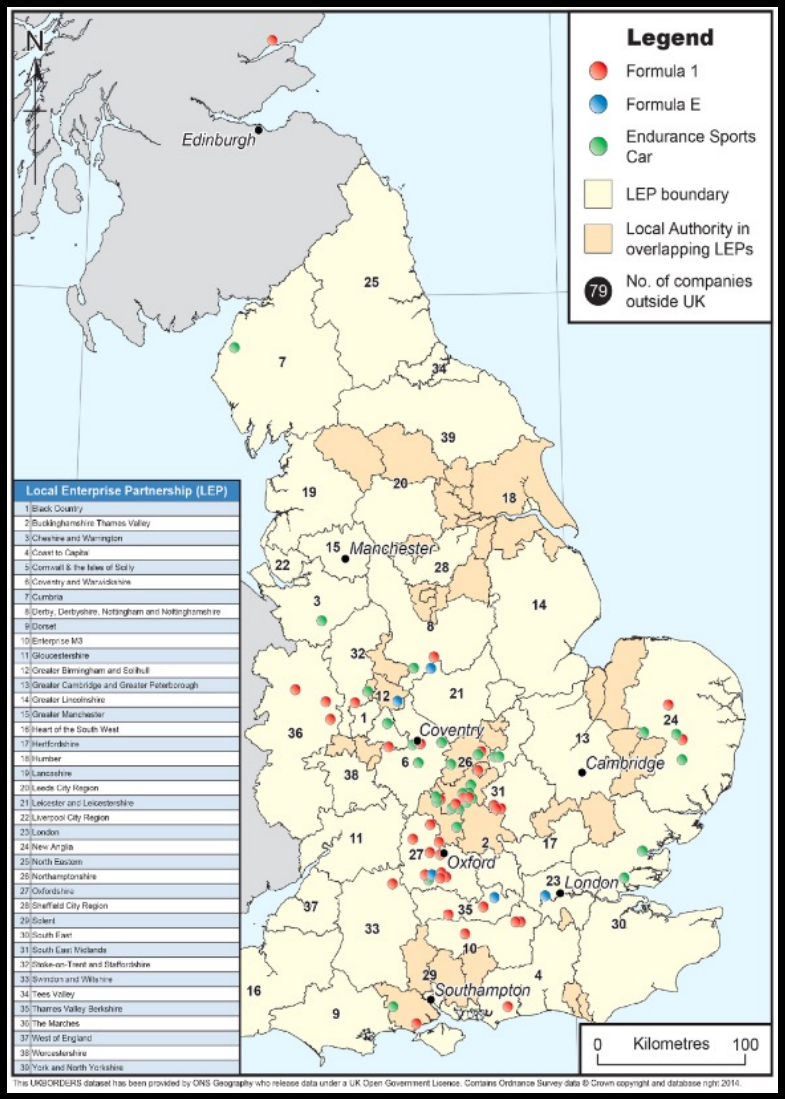
Spiky refers to Richard Florida's argument that the world is not 'flat', but 'spiky', economic and creative activity being heavily concentrated in certain clusters of cities rather than being evenly distributed.

What differentiates regions that are able to sustain growth from those that are not?

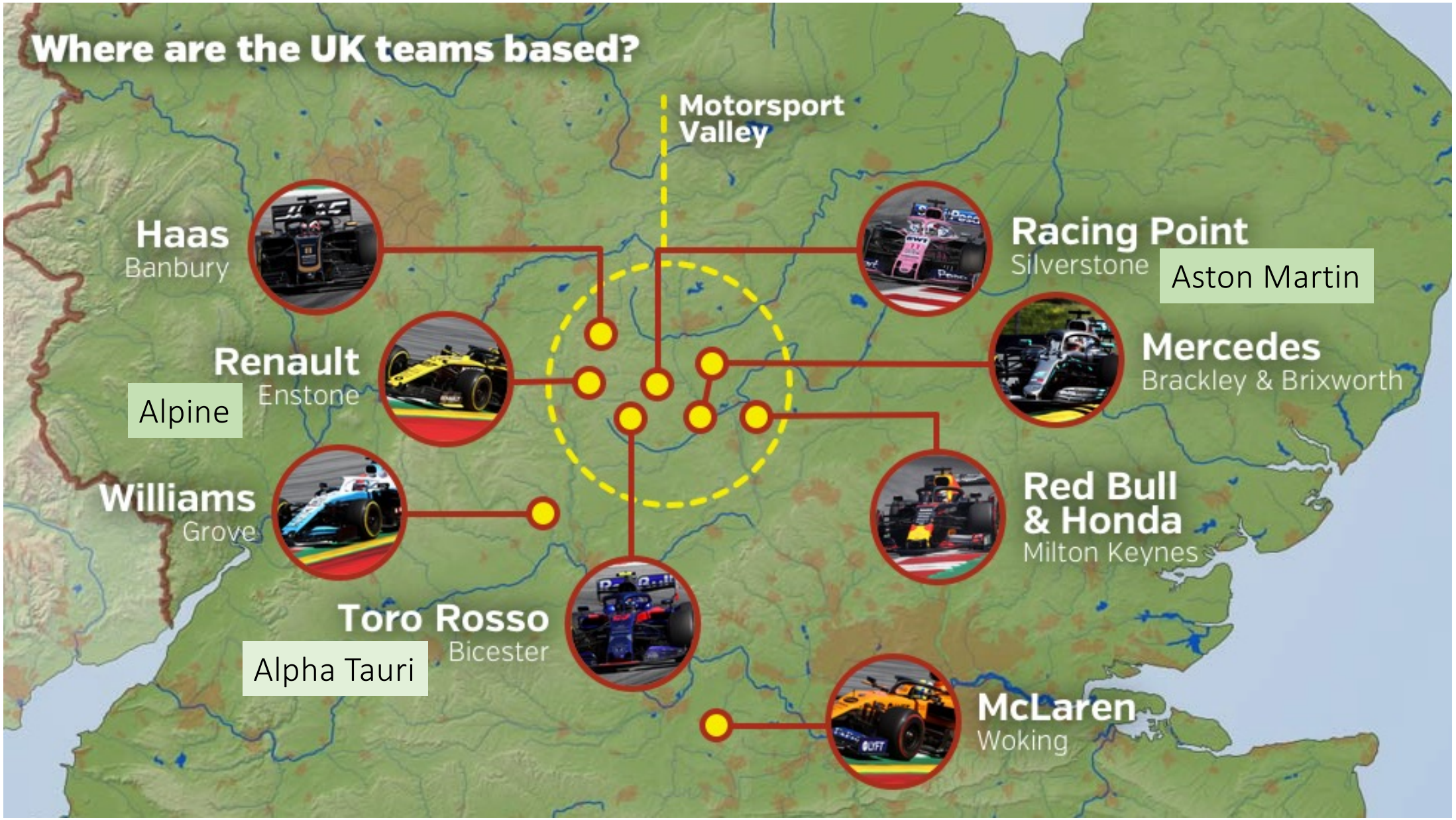
- Location?
- Clusters?
- Innovation ecosystems?
- Universities?
- Human capital?
- Governance systems?
- Leadership?
- …




Why are most of the Formula 1 teams located in the same reagion?
(Henry & Pinch, 2000; Henry, Angus & Jenkins, 2021)



This UKBORDERS dataset has been provided by ONS Geography who release data under a UK Open Government Licence. Contains Ordnance Survey data © Crown copyright and database right 2014.


Where are the UK teams based?
Motorsport Valley
Haas
Banbury
Racing Point
Silverstone
Aston Martin
Renault
Enstone
Alpine
Mercedes
Brackley & Brixworth
Williams
Grove
Red Bull & Honda
Milton Keynes
Toro Rosso
Bicester
Alpha Tauri
McLaren
Woking

Motor Sport Valley

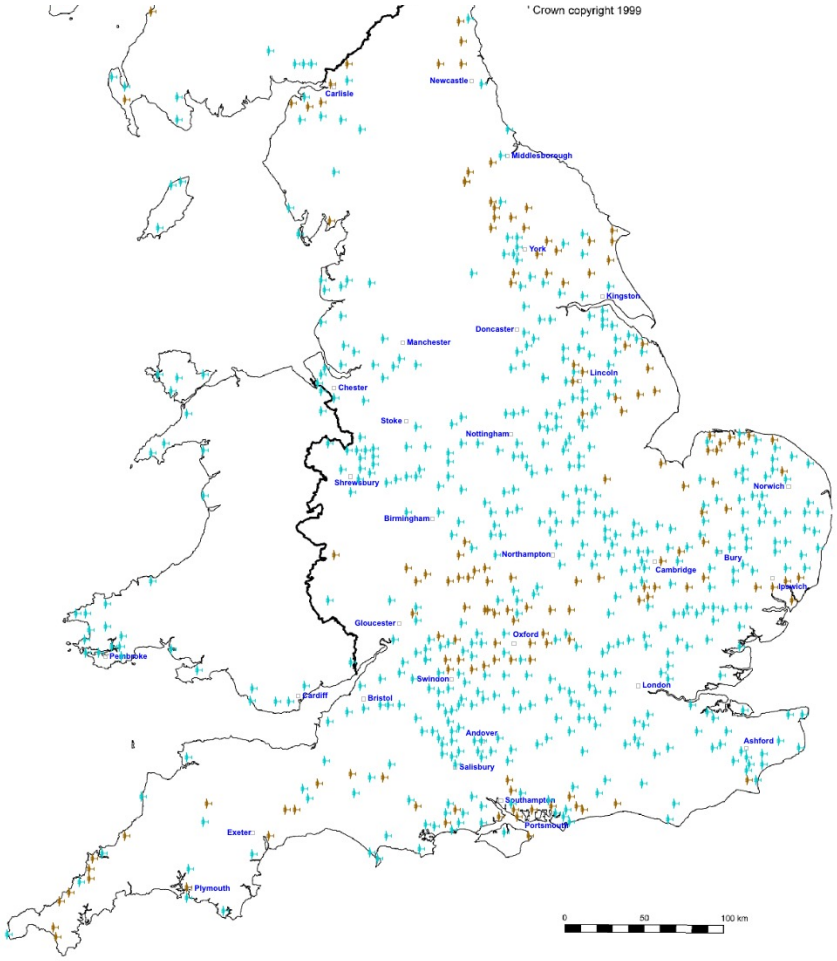
(Henry & Pinch, 2000; Henry, Angus & jenkins, 2021)

- The UK is the world leader in global motorsport, most of the teams are based in the UK
  - 4300 companies
  - Over £ 9bn sales turnover worldwide
  - 41,000 staff
  - 6 universities
  - R&D at around 25–30% of turnover
- Solutions also to pharmaceuticals, marine and aerospace, for example
  - Integrated systems, telemetery, telematics, etc.

Knowledge spillovers - of primary importance:

- rapid turnover of staff
- information leakage through links with suppliers
- new firm formation by insiders
- informal collaboration
- gossip and rumour
- personal contact network
- observation in the pit lane during races

Its location is a result of the Second World War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Nottingham
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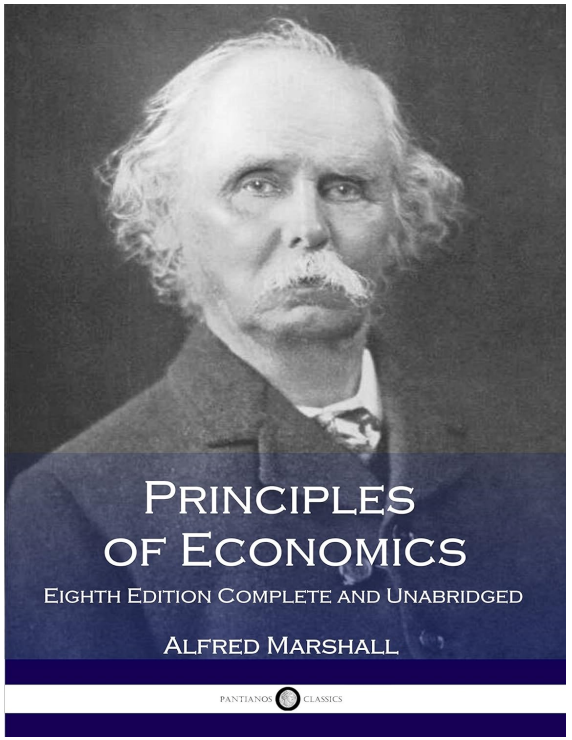
Birmingham
Northampton
Bury
Cambridge
Ipswich
Gloucester
Oxford
Pembroke
Swindon
London
Cardiff
Bristol
Andover
Ashford
Salisbury
Southampton
Portsmouth
Exeter
Plymouth
0
50
100 km

Agglomeration economies

- are the benefits that come when firms and people locate near one another together in cities and industrial clusters
- exist when production is cheaper because of clustering
- support learning and knowledge sharing
- make possible to establish other businesses that may take advantage of clustered economies without joining any big organisation.

(Marshall in the late 19th century; Glaeser, 2010; and many others)



Why – traditional explanations

Large scale internal economies

- Firms locate their activities in one place to reduce costs
- But also, firms locate their activities in different parts of the world to reduce costs, access markets and/or tap into expertise

Localisation economies

- Many firms and other organisations may take advantage of local economies of scale when important resources (labour, information, etc) are located close to the organisation.

Urbanisation economies

- Economies of scale related to urbanisation; concentrations of assets that 'everybody' can exploit
  - advanced labour markets, infrastructure, logistics, services, educational services, local demand etc.
- "Pick and mix" –model
- How does AI change the regional development landscape – does it level the opportunities or concentrate them to specific places?

Since the 1990s, we have believed and still do

"Regions [cities] are becoming focal points for knowledge creation and learning in the new age of global, knowledge-intensive capitalism"

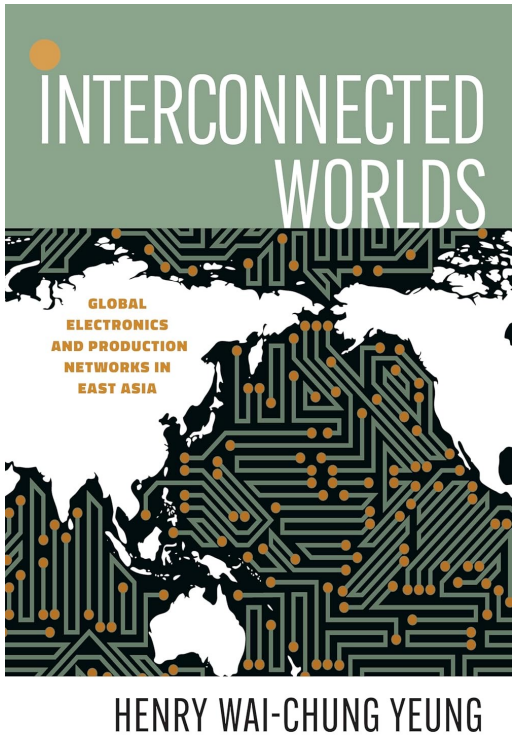
"In fact, despite continued predictions of the end of geography, regions [cities] are becoming more important nodes of economic and technological organization on a global scale."

"Regions [cities] function as collectors and repositories of knowledge and ideas and provide the underlying environment or infrastructure which facilitates the flow of knowledge, ideas and learning."

Today we speak more about cities, but logic is more or less the same.

Now – geopolitical shifts and challenges – one example

- Geopolitical tensions
  - US-China trade wars
  - War in Ukraine
- Technological competition and rapidly evolving markets
  - US sanctions on Chinese semiconductors; leading-edge chip making; global chip shortage in automotives some years ago; etc.
- Manufacturing dependency on China
  - Not easy to move production from place to place – an entire ecosystem needed



A Chip War?

It’s hard to imagine a world without microchips. They’re at the heart of the devices that we use to work, travel, stay fit and entertain ourselves – from cars to smartphones and from MRI scanners to industrial robots and data centers.

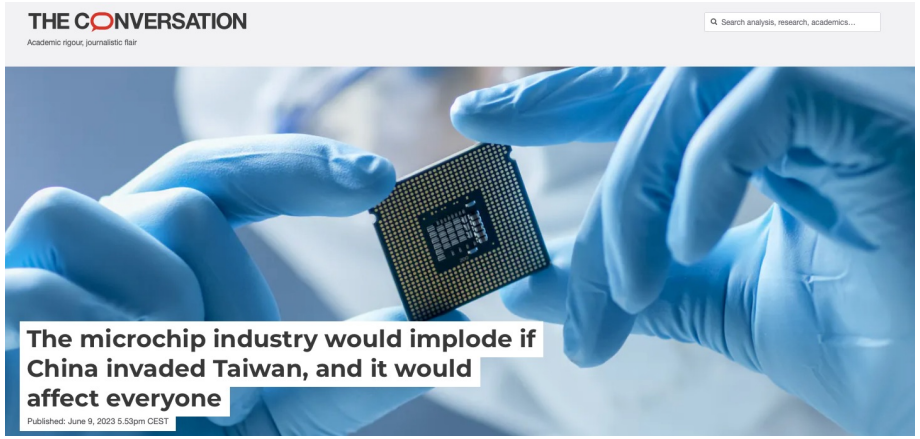
Chip features are measured in nanometers.

A nanometer is one billionth of a meter, or a millionth of a millimeter.

The smallest chip at the moment is 2 nm

A hair is 100,000 nm

Why are we so worried about China/Taiwan relationships?

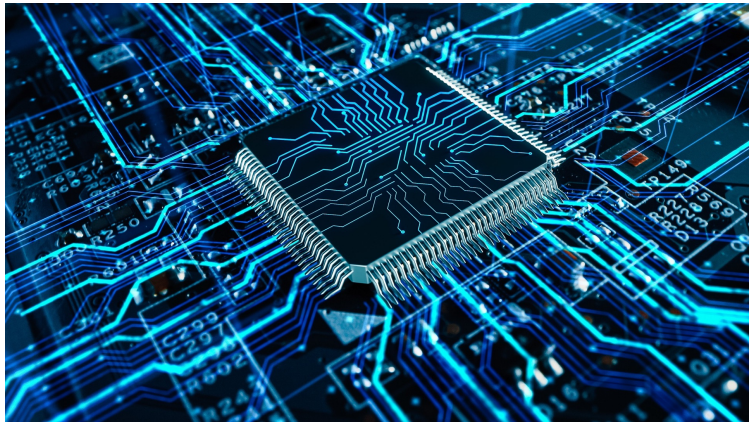


- Design often stemming from US, Japanese or European firms
- Manufacturing taking place in Taiwan and South Korea
- Manufacturing extremely complex – advanced machines and skilled labour called for
- Close collaboration between Silicon Valley and Taiwan
- Taiwan alone manufactures more than 60% of the world's semiconductors — and crucially, 90% of the most advanced ones

  Taiwan Semiconductor Manufacturing Company (TSMC)

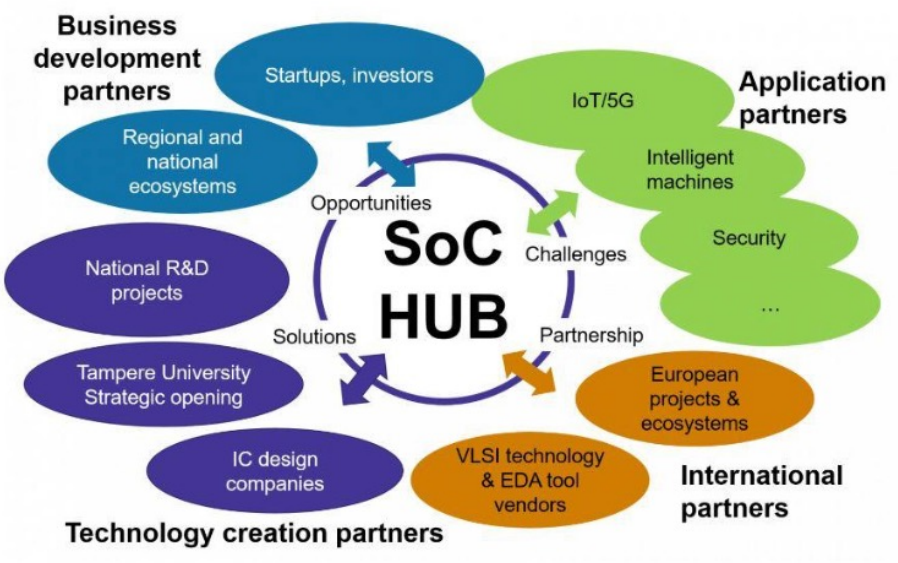
Geopolitical shifts and challenges in chip economy

- Defensive and protectionist interventions
  - CHIPS for America Act / $52 billion
  - Integrated Circuit investment Fund of China / €150 billion
  - European Chips Act (Pillar 1) / €46 billion (€90 billion in total)
- TSMC (Taiwan), Samsung, SK Hynix (South Korea) each spending €100-150 billion over the next 3-5 years



Overcapacity in making?
Demand for mobile phones decreasing

70 companies currently operate in the Finnish semiconductor sector, employing approximately 5,000 people with a combined turnover of almost EUR 2 billion



NOKIA Tampere University VLSI SOLUTION Wapice

CARGOTEC CoreHW FLEXIBILIS procemex

'Chips from Finland' Initiative: The World is Fighting for Microchips – Finland Can Become Top in Europe

News item | 17.3.2023 14.10

While the world's superpowers are fighting for domination over microchips, Finland has excellent chances to become the top in European microchip expertise. To this end, the Semiconductors branch group Technology Industries of Finland, other corporate partners, VTT Technical Research Centre of Finland, Tampere University and Aalto University together with the cities of Tampere and Espoo are proposing a national microchip programme in Finland.

Microchips are used for example in many consumer devices, such as cell phones.

BUSINESS TAMPERE

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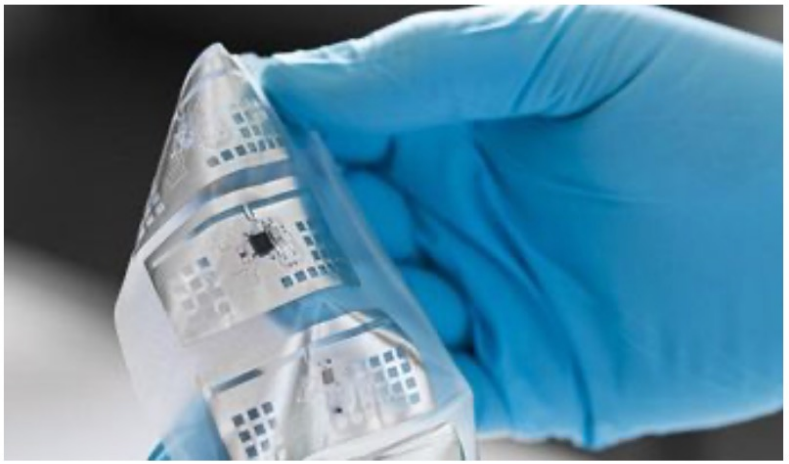
News

A pilot line for semiconductor chip packaging to be built in Tampere – University receives €40 million funding

15.4.2024



Part of the €40 million funding comes from the European Union and part from the Finnish government. In total, the EU has selected four pilot line proposals to significantly enhance Europe's self-sufficiency in microchips in the coming years.

Lue seuraavaksi

Would you rather have a match-box or a Tic Tac under your skin? A Tampere-based company aims to dominate the world of small smart implants

News | 17.5.2024

Winse Power from Tampere, Finland admitted into the European Space Agency Business Incubator program

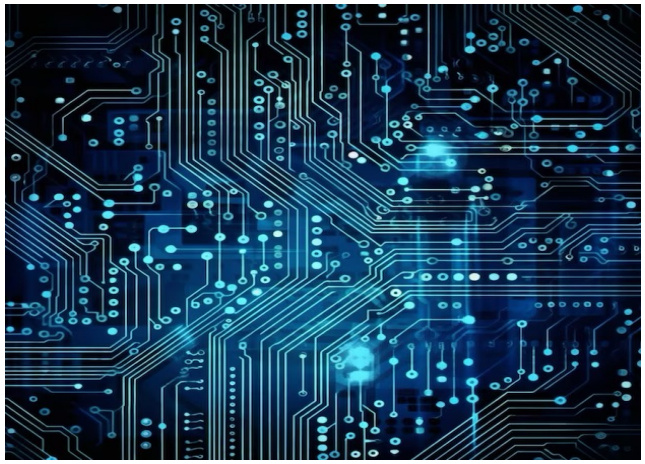
News | 11.12.2023

Tampere region strengthens its investment in the chip industry

News | 22.6.2023

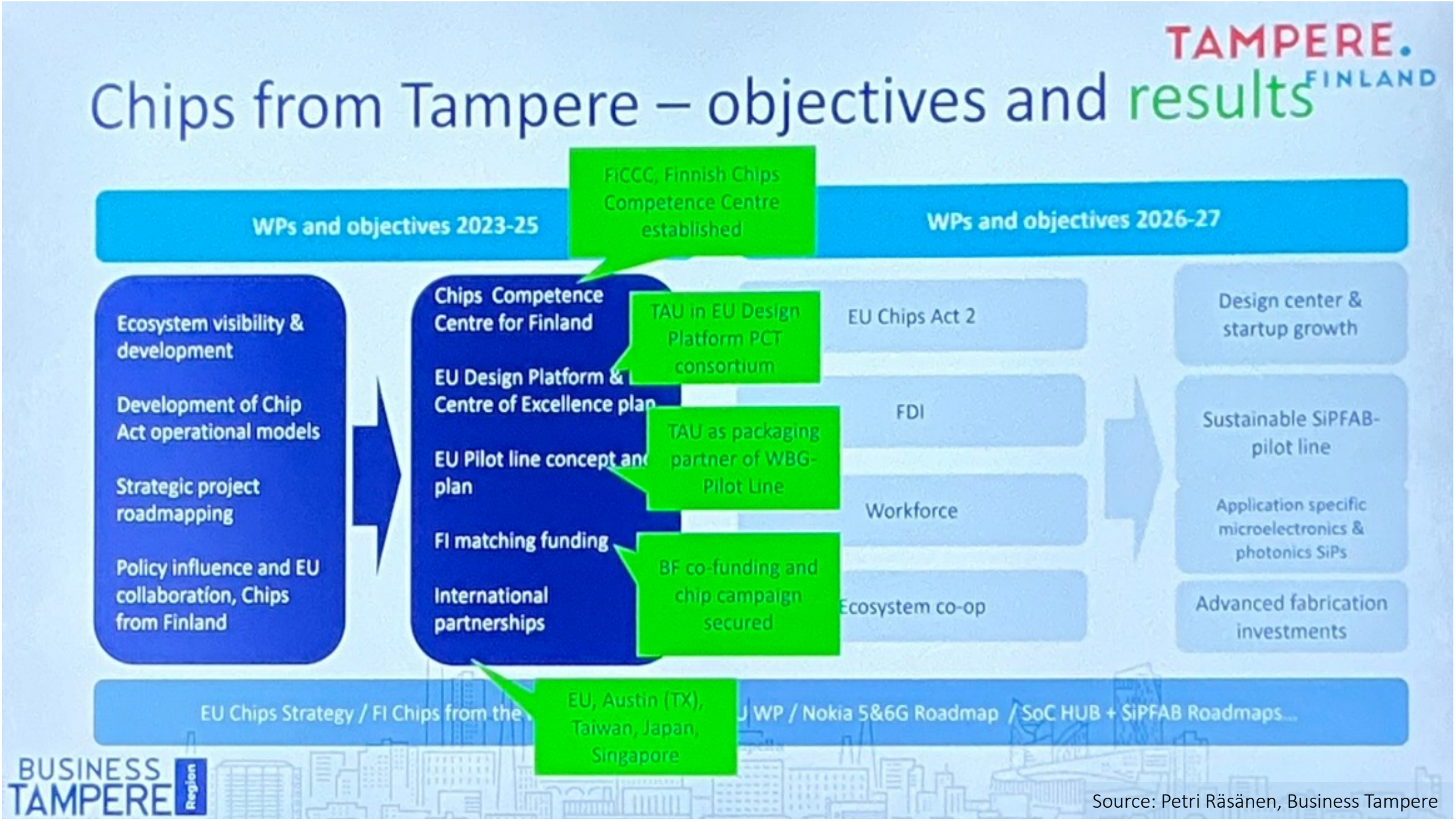
Tampere University is a partner in the WBG Pilot Line. It focuses on developing wide bandgap (WBG) semiconductors and testing and integrating WBG chips

WBG is next-generation semiconductor technology with a wide range of applications (in motor control systems, battery management systems, fast charging systems, photovoltaic inverters, power supply systems and 5G base stations)



Chips from Tampere – objectives and results

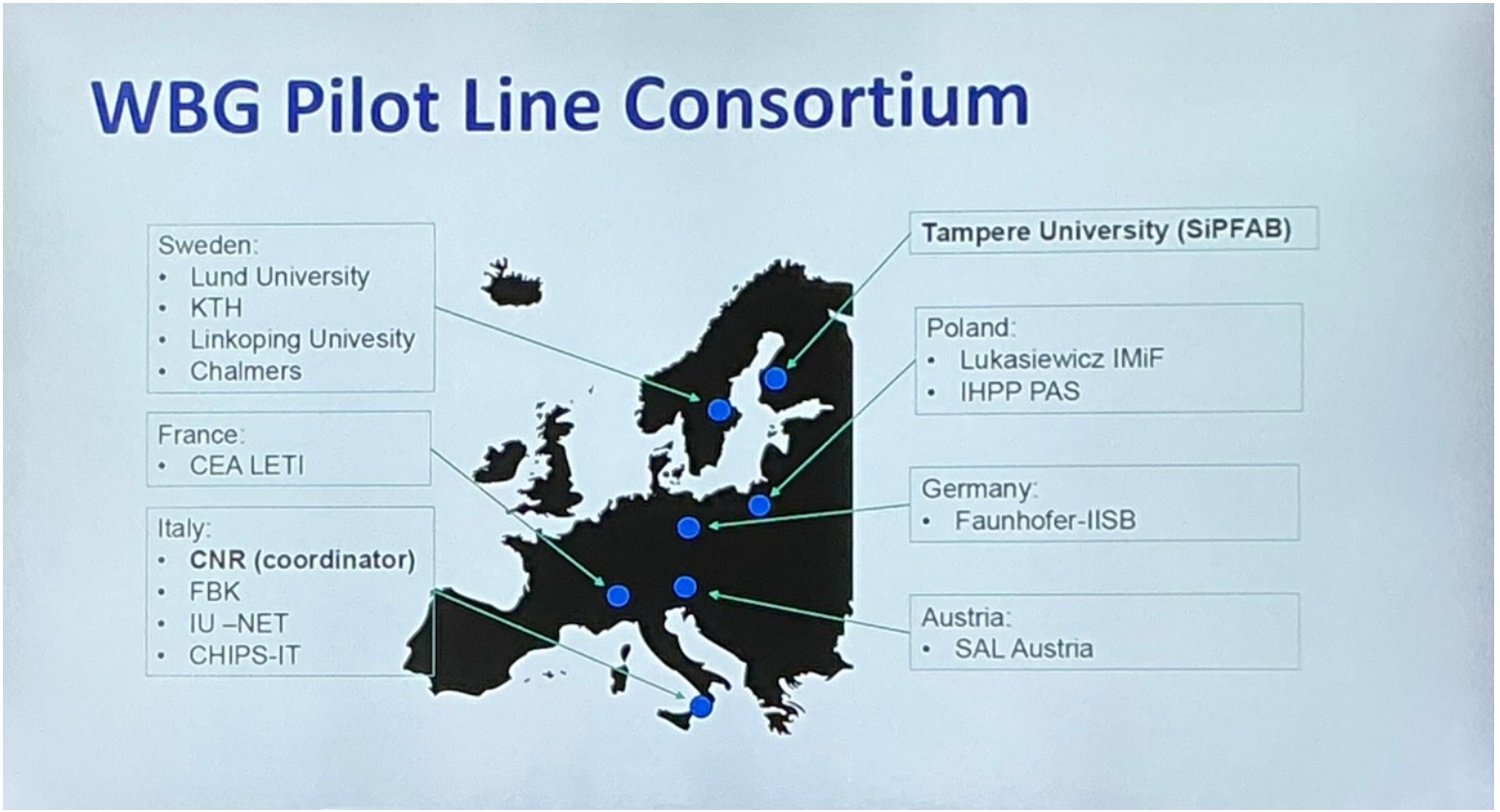
TAMPERE. FINLAND



BUSINESS TAMPERE Region

Source: Petri Räsänen, Business Tampere

WBG Pilot Line Consortium

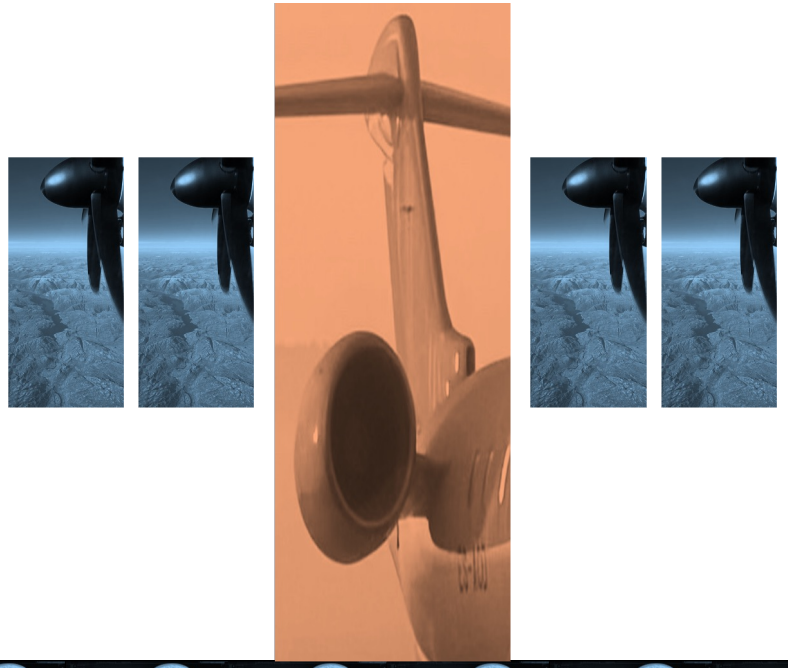


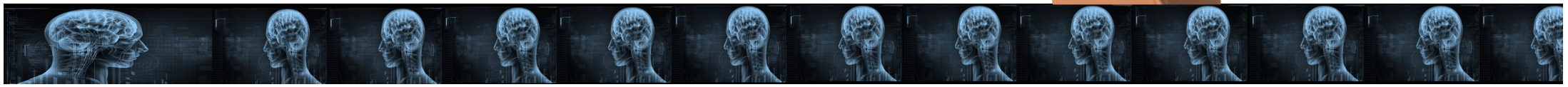
Source: Petri Räsänen, Business Tampere

Knowledge economy

- Knowledge ages rapidly and new knowledge is constantly replacing the old one
- Scientific (including social scientific) knowledge is highly valued
  - The scale and economic penetration of scientific knowledge exceeds distinctly the previous economic development phases

- Knowledge economies are especially characterized by exploitation of new knowledge to create more new knowledge





Spiky or flat?

Centralised or decentralised

Thomas Friedman: Flat world (2005)

- Digitalisation enables -> “anything is possible anywhere”
- Based on anecdotal evidence

Manuel Castells: Network Society (1996)

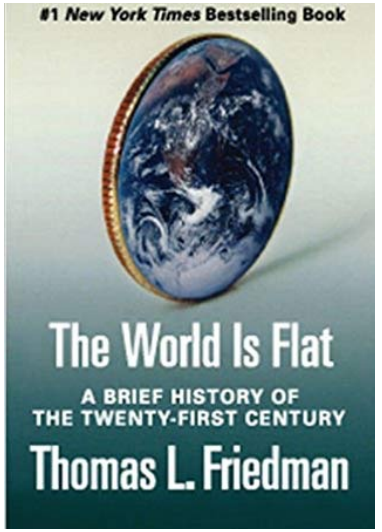
- Global network between cities

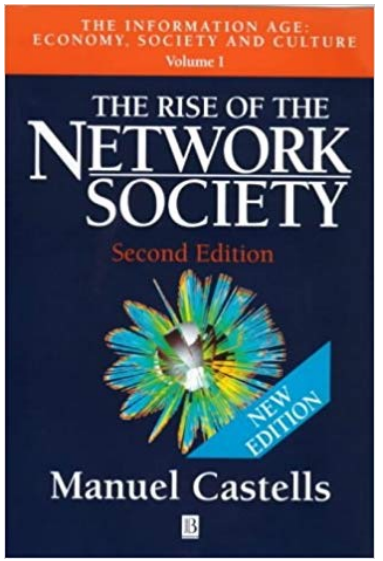
Richard Florida (and many others): Spiky World (the rise of… 2002)

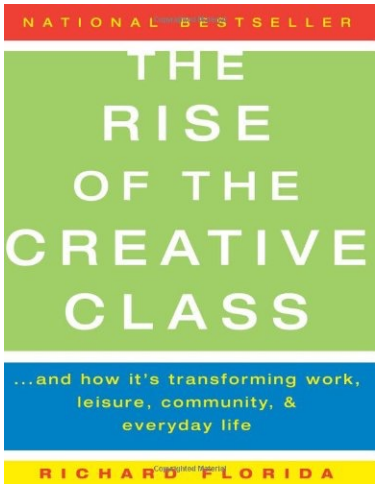
- Innovation emerges somewhere; local conditions important
- New knowledge production tends to concentrate

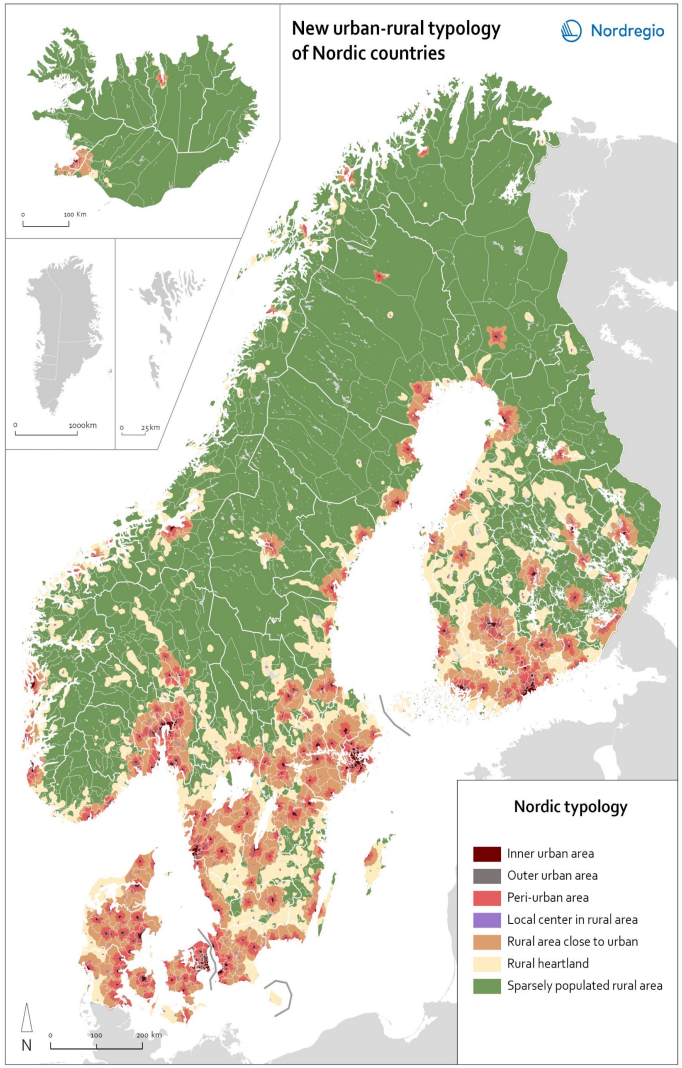
Consensus

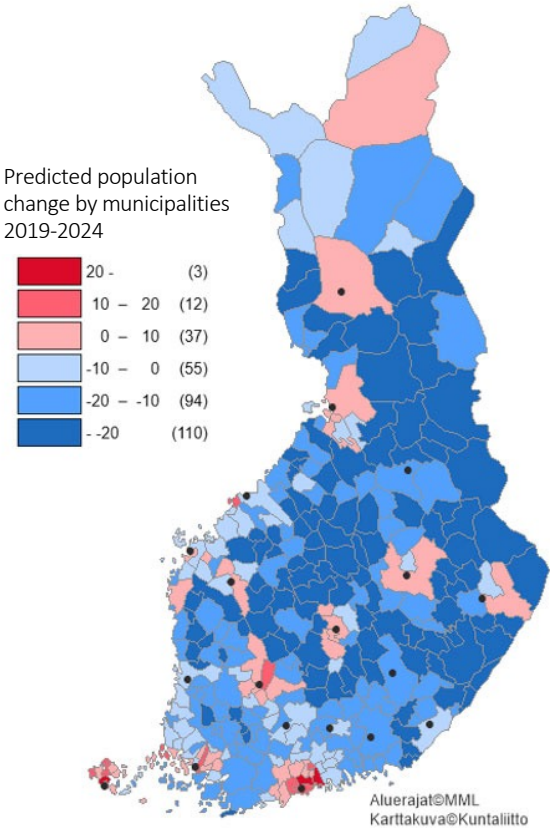
- Geography matters

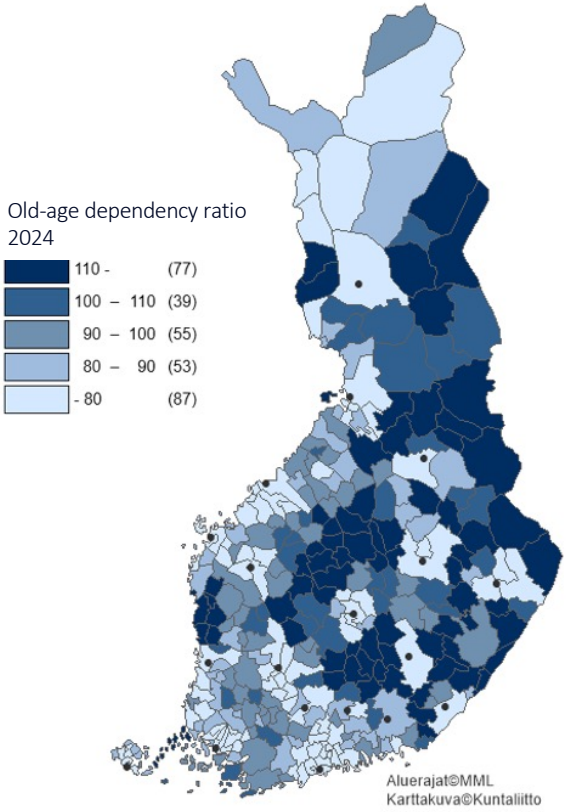






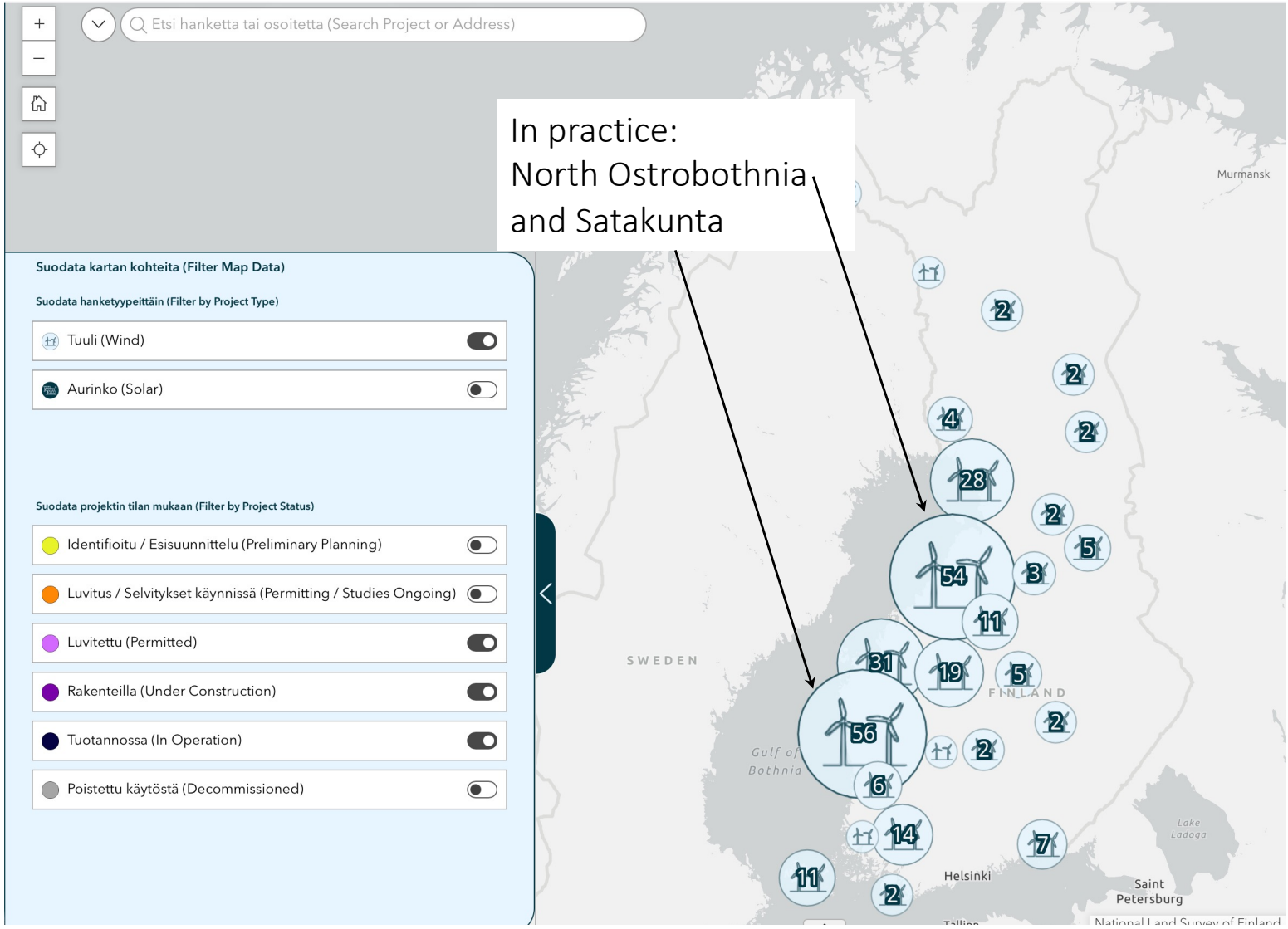




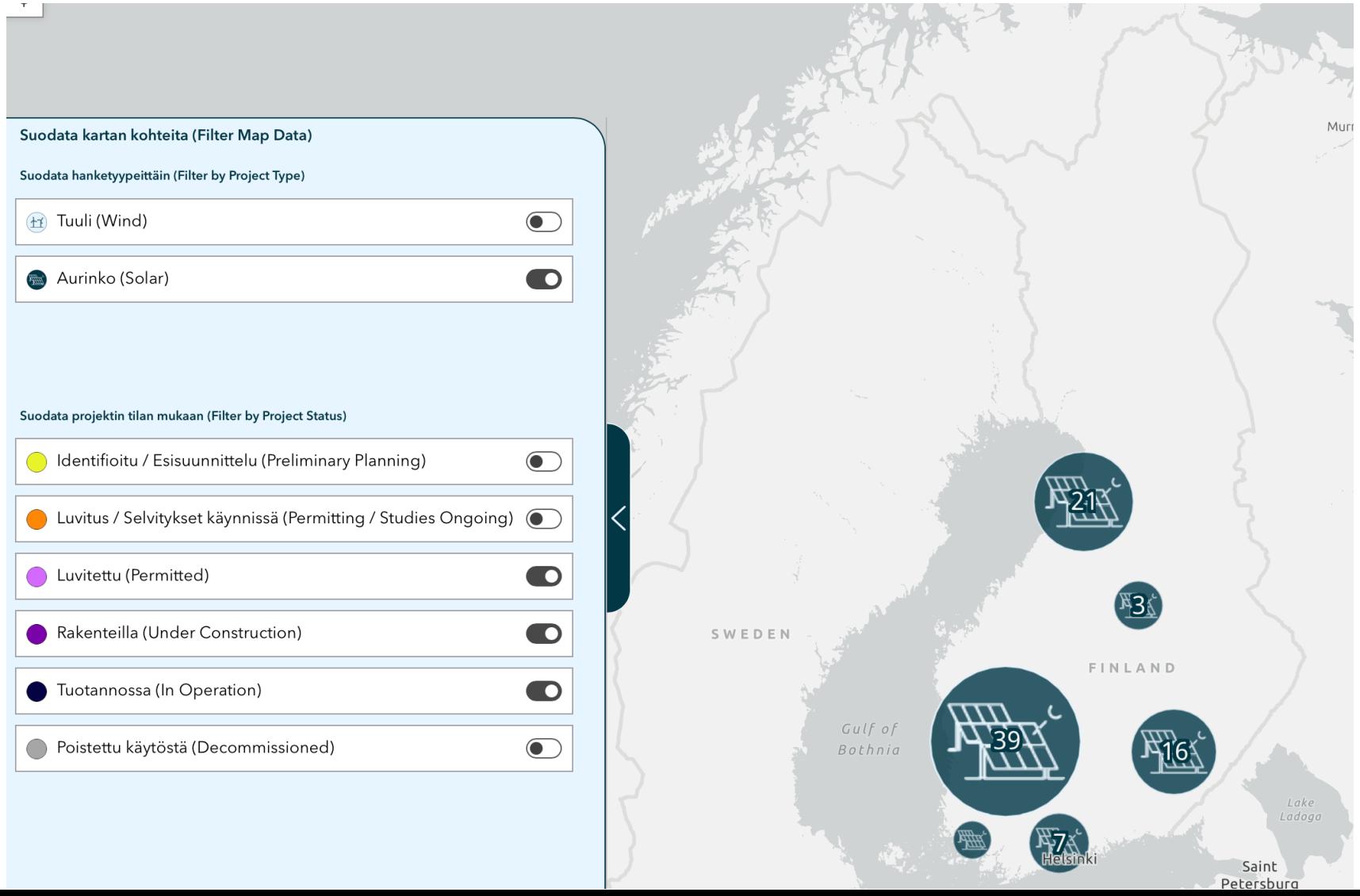


Old-age dependency ratio is the number of individuals aged 65 or older per 100 people of working age, defined as those aged between 20 to 64 years old.

Wind power


Etsi hanketta tai osoitetta (Search Project or Address)
In practice:
North Ostrobothnia
and Satakunta
Suodata kartan kohteita (Filter Map Data)
Suodata hanketyypeittäin (Filter by Project Type)
Tuuli (Wind)
Aurinko (Solar)
Suodata projektin tilan mukaan (Filter by Project Status)
Identifioitu / Esisuunnittelu (Preliminary Planning)
Luvitus / Selvitykset käynnissä (Permitting / Studies Ongoing)
Luvitettu (Permitted)
Rakenteilla (Under Construction)
Tuotannossa (In Operation)
Poistettu käytöstä (Decommissioned)
Murmansk
SWEDEN
FINLAND
Gulf of Bothnia
Helsinki
Saint Petersburg
Lake Ladoga
National Land Survey of Finland

Solar power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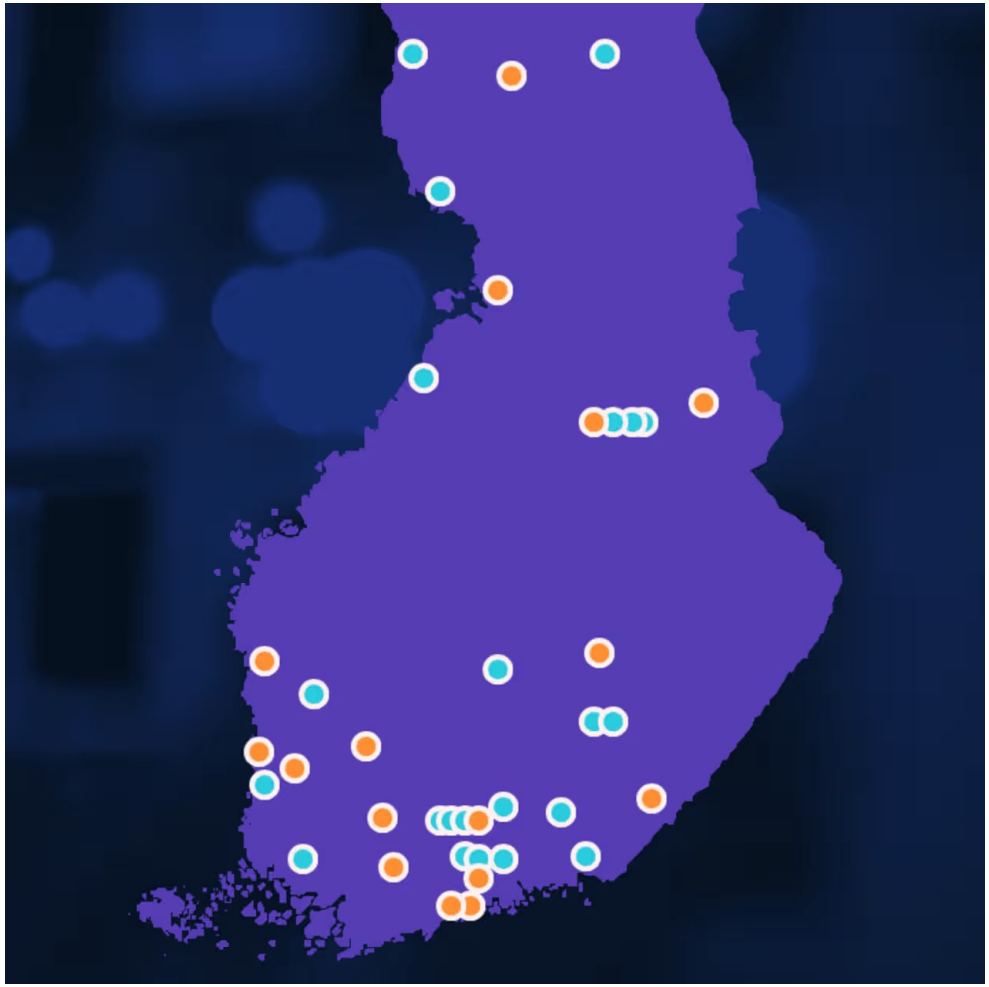
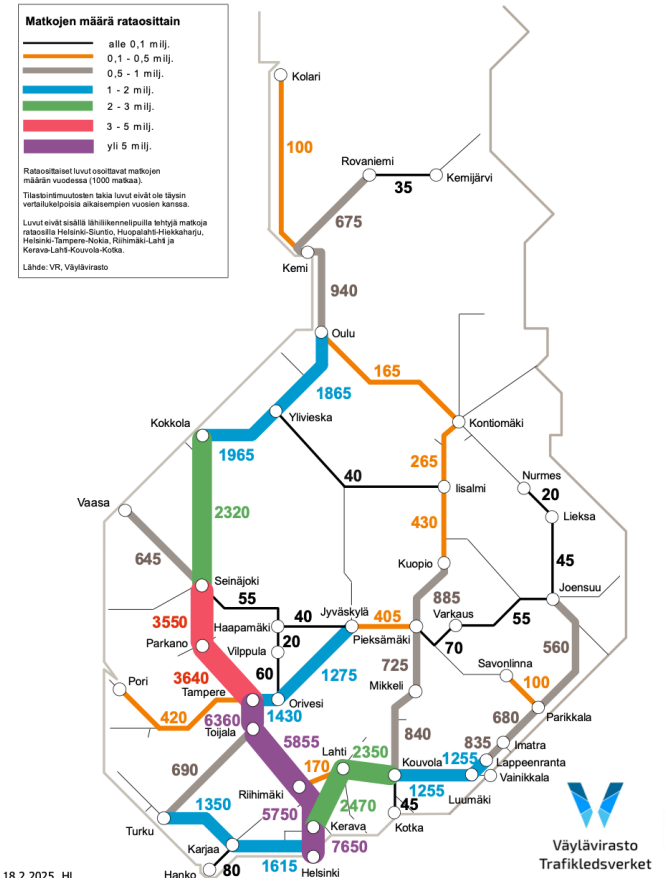
Data Centres in Finland – projects in 2024 and 2025



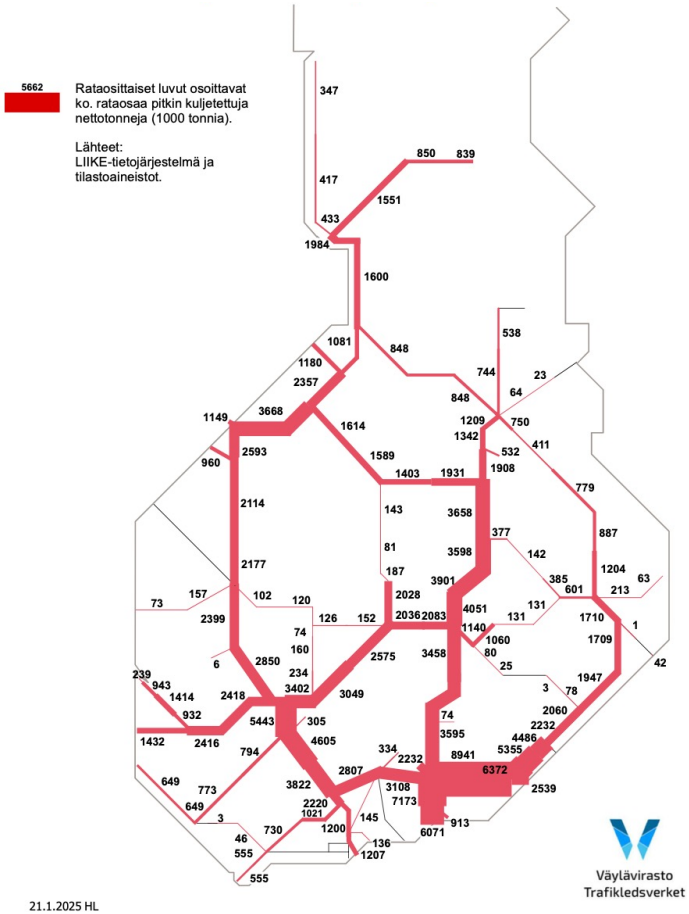
Railway traffic in Finland in 2024

In total 15,4 million travels



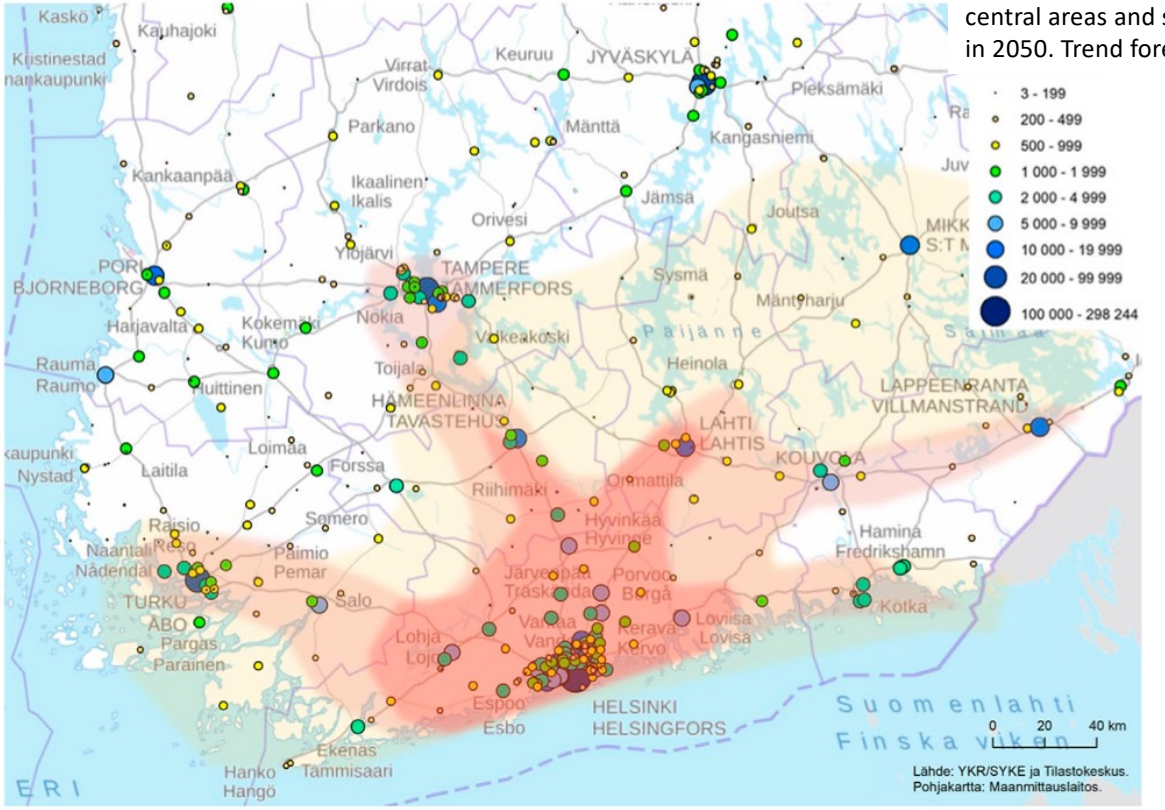
Freight transport flows in 2024

In total 27 million tons and 8 billion kilometers



21.1.2025 HL

Southern Finland network metropolis according to the land use development plan (Ministry of the Environment 2024:1).



Daily commute to work

Weekly commute to work

Weekly trips to the second home

The golden triangle of Finland

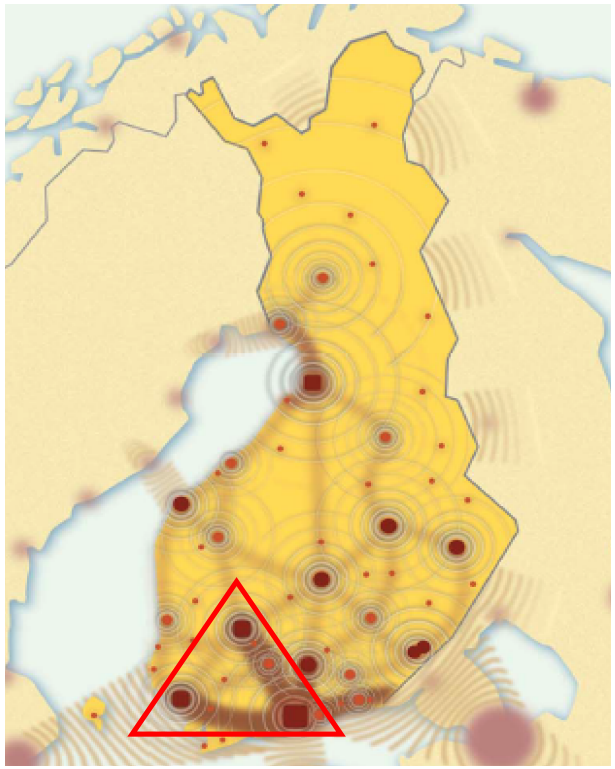
Appr. 50 % of polulation

More than 50 % of firms

Close to 60 % of the GDP

Appr. 65 % of academically educated

Appr. 70 % Research and development (+ Oulu = appr 80%)



A vision from the late 1990s

The Ministry of the Environment

There are no significant differences in subjective wellbeing between Finnish regions and localities

(Source Tomas Hanell)

Overly centralised (spiky) spatial structure is harmful both for a country and its cities

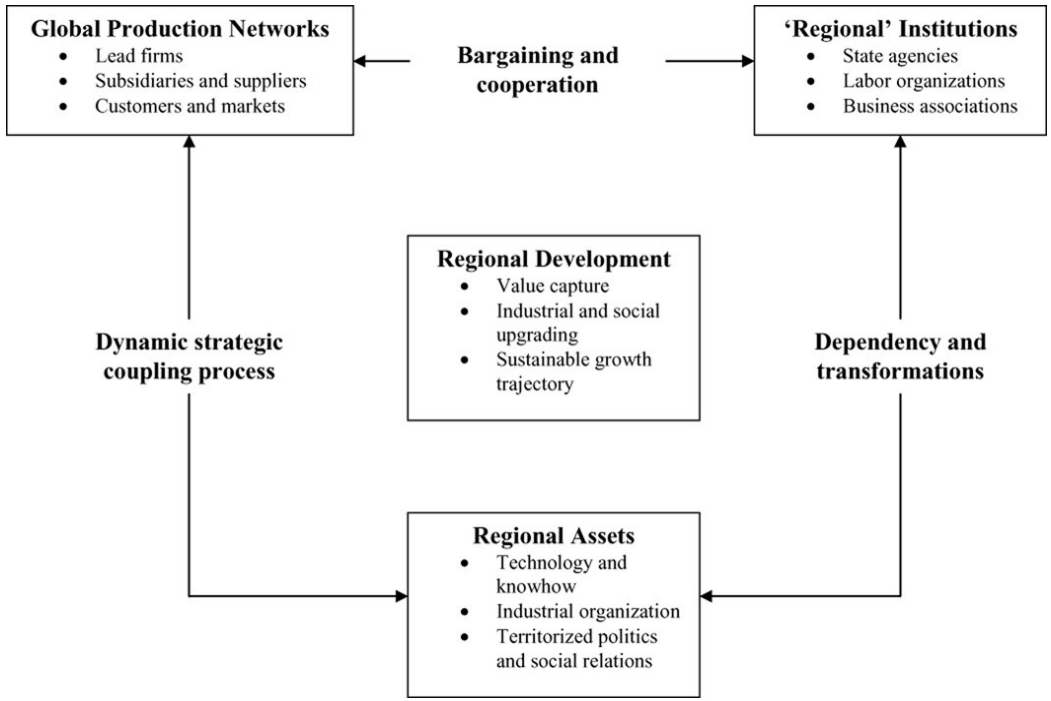
- Balanced spatial structure with several strong cities seems to be the best
- City-regions are the core

(Source: Second Tier Cities and Territorial Development in Europe: Performance, Policies and Prospects –project)

The philosophy of this course

We cannot talk about local/regional development without understanding global changes

We cannot talk about economic development at national level without understandig what's going on in our localities and regions



Questions, comments?