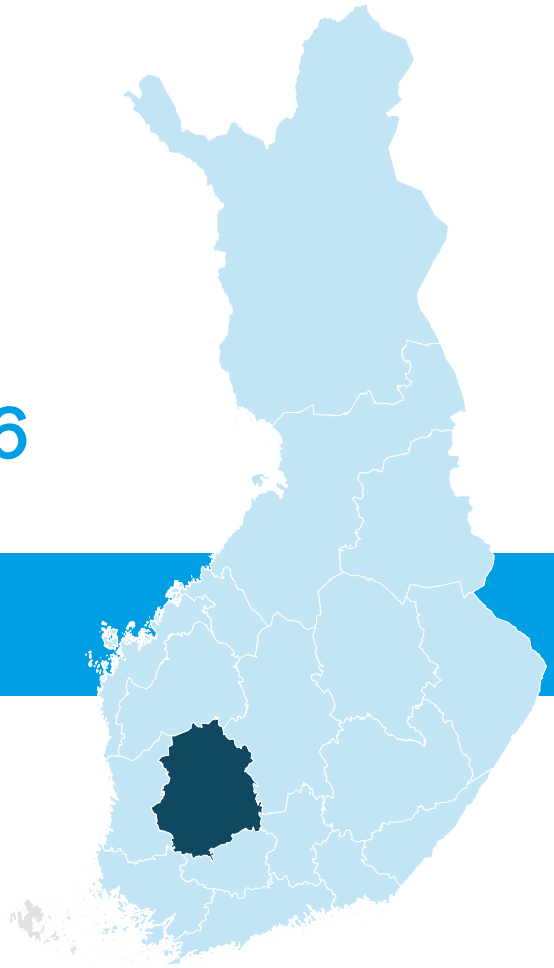
BUSINESS TAMPERE

MCJ LEMAGNEN ASSOCIATES

TechSkillsAtlas™

TechSkillsAtlas™

Finland 2026 – Tampere
Stakeholder webinar 5th May 2026



Tampere– Rich in talents

Regional Council of North Karelia

BUSINESS FINLAND

Michel Lemagnen, CEO, MCJ Lemagnen Associates Ltd
michel@mcjlemagnen.com

Contents

- artificial intelligence
- advanced technology
- agriculture, agritech
- automotive
- autonomous technology
- aerospace and aviation
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- building services, HVAC
- cleantech
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- conservation
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- financial services, fintech
- food and nutrition
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- health, biotech, medtech
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- hotels and tourism
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- logistics and transport
- maritime and shipbuilding
- media and broadcasting
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- property development
- renewable energy
- retail
- white goods

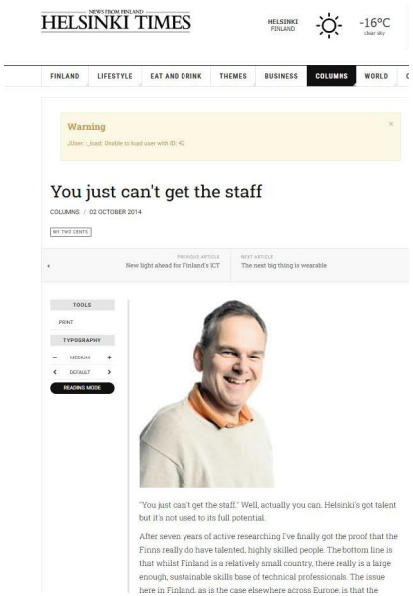
MCJ Lemagnen Associates Ltd

- Established January 2010 by Michel and Julia Lemagnen
- Headquartered in the UK, working globally through an in-house team, with a network of trusted experts
- 30+ years' experience in international business, working for companies, investment promotion & economic development agencies, charities and institutions
- Expertise in a wide range of industry sectors
- Working with our global network of Associates – experts in countries, sectors and specialist fields

"Our experience with MCJ has resulted in a greater understanding of our specific market opportunities, better and more focused sector propositions and a business plan that has already increased our pipeline by 60%."


Welcome
TechSkillsAtlas™
Finland 2023
Finland is utilising talent better


TechSkillsAtlas™
Finland 2021
Finland's Got Talent!


HELSINKI TIMES
-16°C
FINLAND
LIFESTYLE
EAT AND DRINK
THEMES
BUSINESS
COLUMNS
WORLD
Warning
You just can't get the staff
COLUMNS / 02 OCTOBER 2014
"You just can't get the staff." Well, actually you can. Helsinki's got talent but it's not used to its full potential.
After seven years of active researching I've finally got the proof that the Finns really do have talented, highly skilled people. The bottom line is that whilst Finland is a relatively small country, there really is a large enough, sustainable skills base of technical professionals. The issue here in Finland, as is the case elsewhere across Europe, is that the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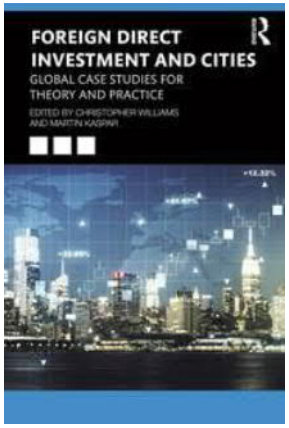
Corporate Location Estonia
Corporate Location Hamburg
Corporate Location Latvia
Investor Case Studies
Nordics & Baltic Sea Region
March 2016
Corporate Investment Opportunities in the Nordics and Baltic Sea Region 2016
Corporate Perceptions Survey Report


6Aika
EU:lta 2014–2020
BUSINESS TAMPERE
Tampere FDI soft landing services for international startups and founders study
Summary Report: March 2021
LUMINTEL
Prepared by:
Michel Lemagnen, CEO and co-founder, MCJ Lemagnen Associates Ltd
Ari Huczkowski, CEO and founder, Lumintel Oy
www.mcjlemagnen.com


FOREIGN DIRECT INVESTMENT AND CITIES
GLOBAL CASE STUDIES FOR THEORY AND PRACTICE


Specific Support for Lithuania
Fit for the future
Incentivising research and innovation partnerships and attracting innovative investment to Lithuania
Horizon 2020 Policy Support Facility

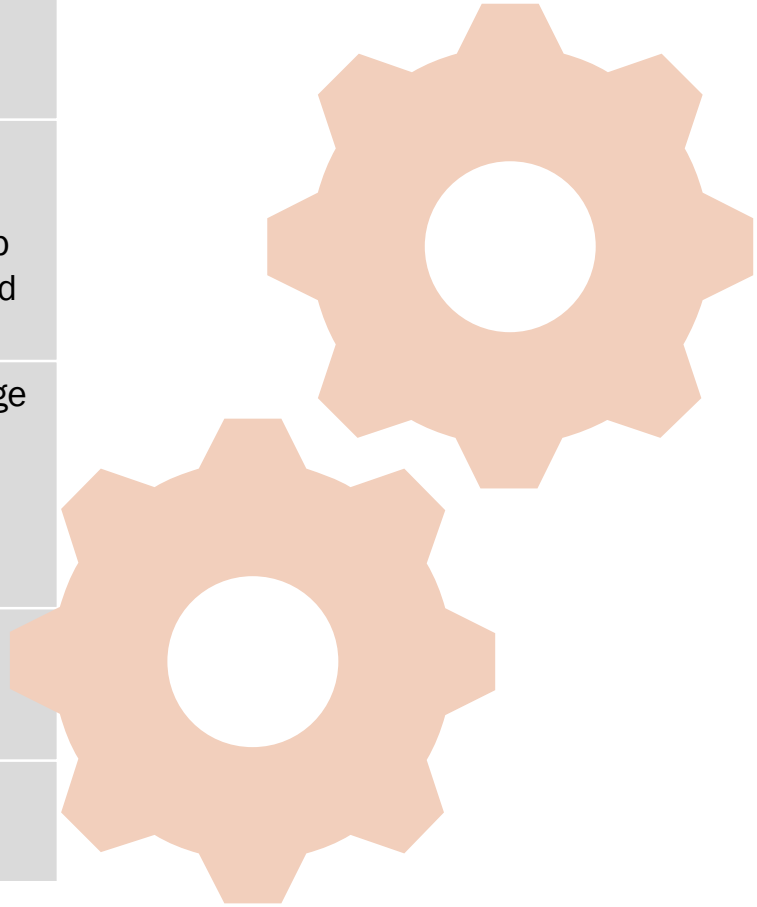

University of Helsinki
Incubator programmes continuous improvement review
Overall Summary
September 2023
Build on a very good start
www.mcjlemagnen.com Michel Lemagnen • Sanchia Kirkpatrick • Julia Lemagnen


Helsinki Region's High-tech Manufacturing FDI Opportunities: Presentation
Authors: Michel and Julia Lemagnen
Date: January 2020


TechTurku Week
Resilience and Recovery Technology FDI in Europe and Nordics
7th March 2022
www.mcjlemagnen.com

Workforce skills research and interactive mapping

Program	TechSkillsAtlas™
Aims	• Robust statistical data to quantify your available talent pool for people with technical skills • Data to use when dealing with investor enquiries and to help you develop and differentiate your marketing proposition and messages
Method	• Quantitative, representative web-based survey of working age people in your location, using MCJ's proprietary **Skills Concentration Coefficient©** methodology • Covers highly specialist technical skills • Can cross-tabulate different skills with each other
Deliverables	• Full data set and written regional and national reports • Webinar presentation of findings
Finland	• Nationally and for the 4 NUTS2 regions, with county NUTS3 data



TechSkillsAtlas™ Finland 2026

- Methodology originally designed, tested and developed by Michel Lemagnen in 2006
- Robust statistical information based on a quantitative, nationally and regionally representative web-survey
  - 4,130 interviews across mainland Finland
    - 1,032 in Pirkanmaa
  - Age range 18-64
  - Includes employed, self-employed and unemployed persons
  - Excludes those in full-time education and those unable to work for health or other reasons
- MCJ Lemagnen Associates Ltd's Finnish and global fieldwork partner is Verian, a division of one of the world's largest insights company
- The study was co-funded by:
  - Business Finland
  - Business Tampere
  - North Karelia Regional Council

Definitions

- TechSkillsAtlas™ focuses on what people do or have done – not on job titles!
- Total resource = all persons who are either working in a technical skills role now or who have done previously
- Core resource = persons who are presently working in a technical skills role
  - Technical work is a key aspect of their current job
- Lapsed resource = persons who have worked in a technical skills role in the past
  - Been promoted to managerial or sales role
  - Changed career path
  - On maternity/paternity leave
  - Unemployed

Definitions of key reported metrics

- **Skills Resource Base**
  - Size of the total, core and lapsed skills base
  - Reported in thousands
  - These are statistically weighted data
- **Skills Concentration Coefficient©**
  - The % concentration of technical skills within the Finnish/regional/county workforce
  - It shows a location's specialization in a particular skills area
  - These are the most statistically robust data

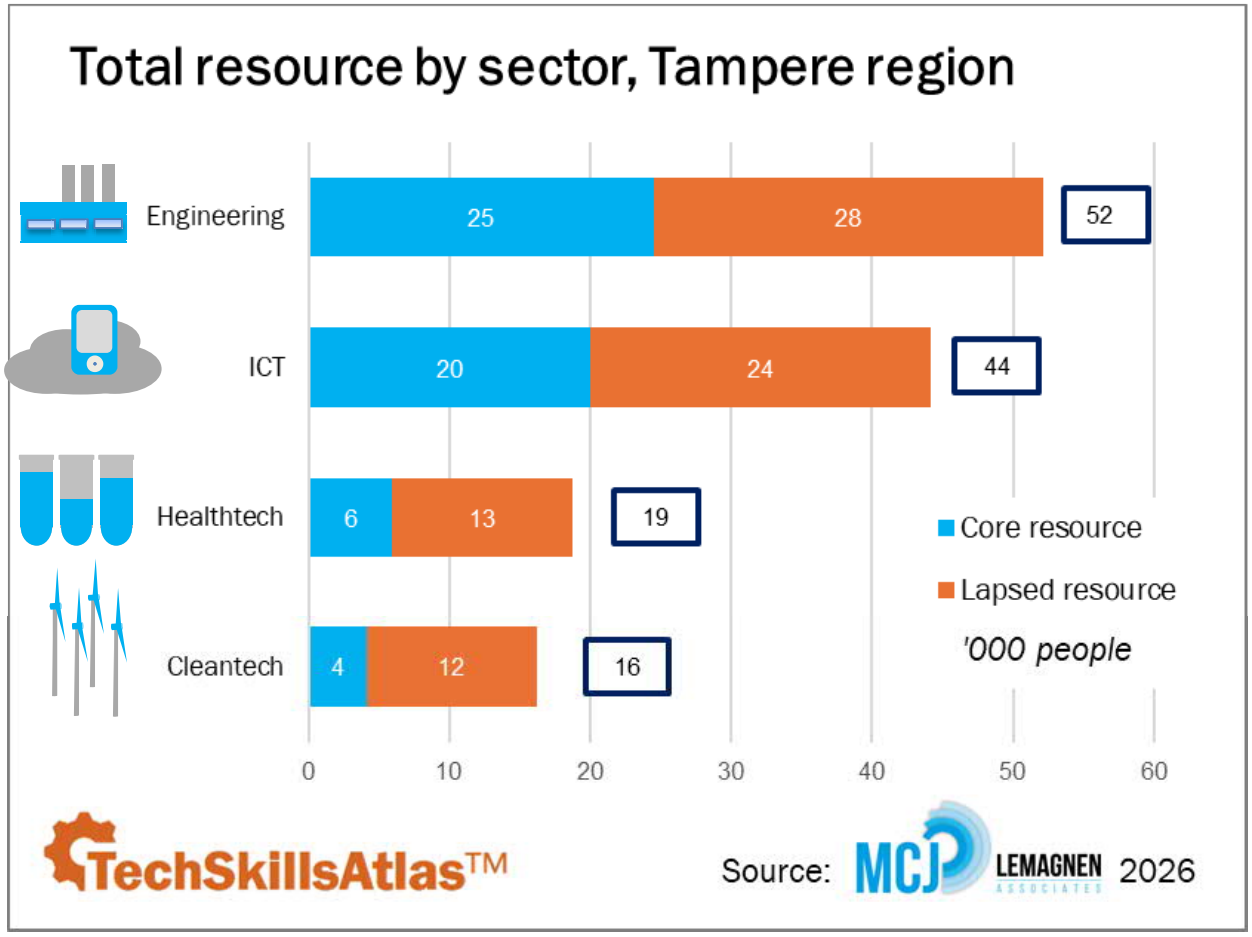
TechSkillsAtlas™ Finland: 4 technical skill sets

- ICT
- Engineering
- Healthtech
- Cleantech

- Data sets are available for:
  - *All 4 skills areas*
  - *Finland as a whole*
  - *Each of the 4 regions*
  - *Pirkanmaa and North Karelia*
- Value propositions also available for each skills set and each region
  - *ICT*
  - *Engineering*
  - *Healthtech*
  - *Cleantech*

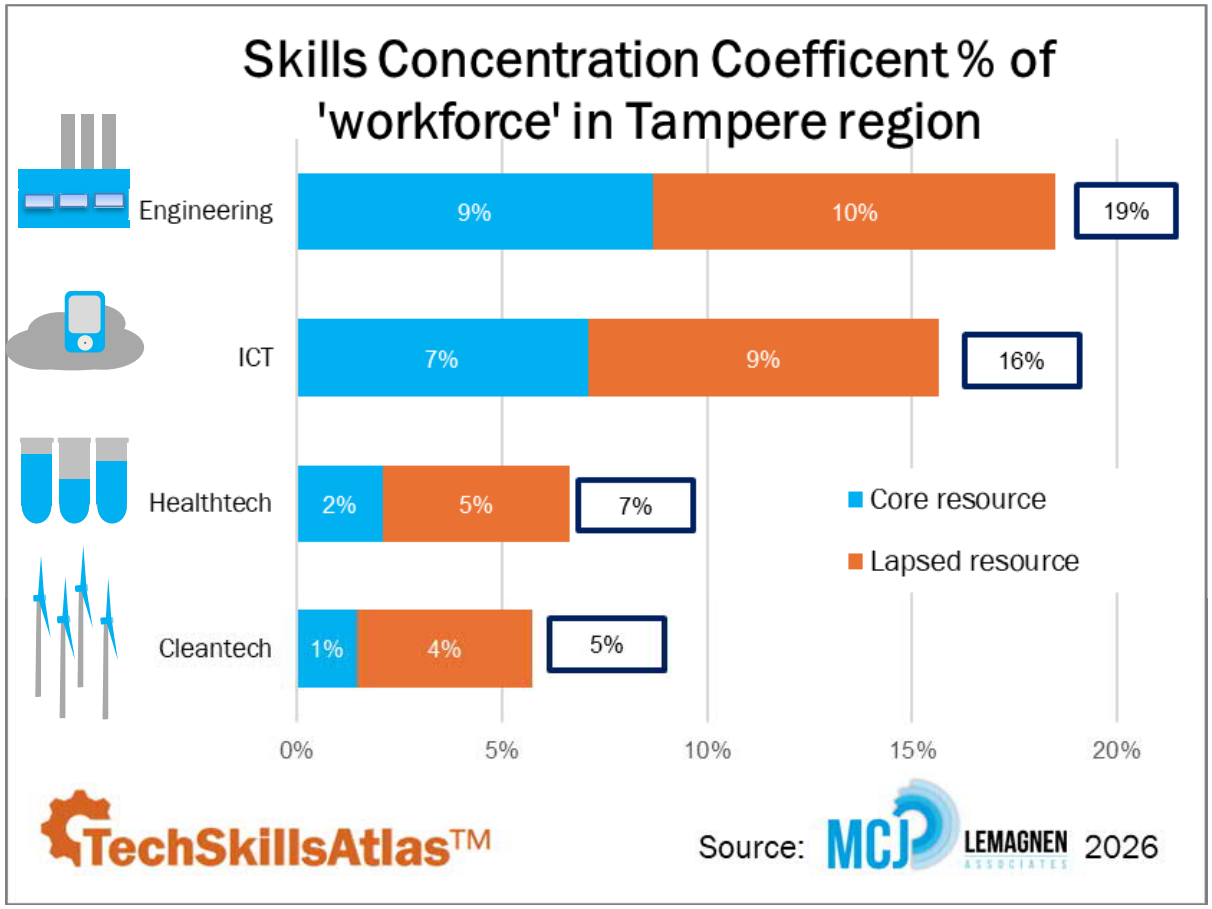
Major skills headlines

Tampere resources in thousands



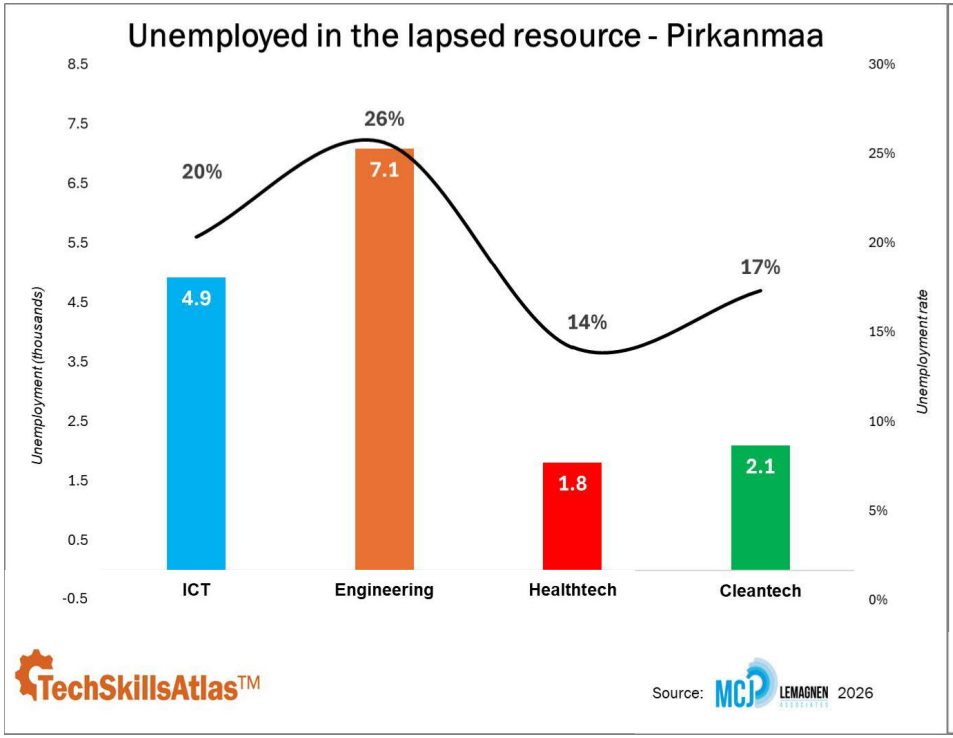
- Engineering and ICT have the largest talent pools
  - The largest core engineering and ICT resource outside of Uusimaa
  - 3rd largest core healthtech resource after Helsinki and Southwest Finland
- TechSkills resource base is under-ultilised
  - Lapsed resource share ranges from 53-75% of the total resource

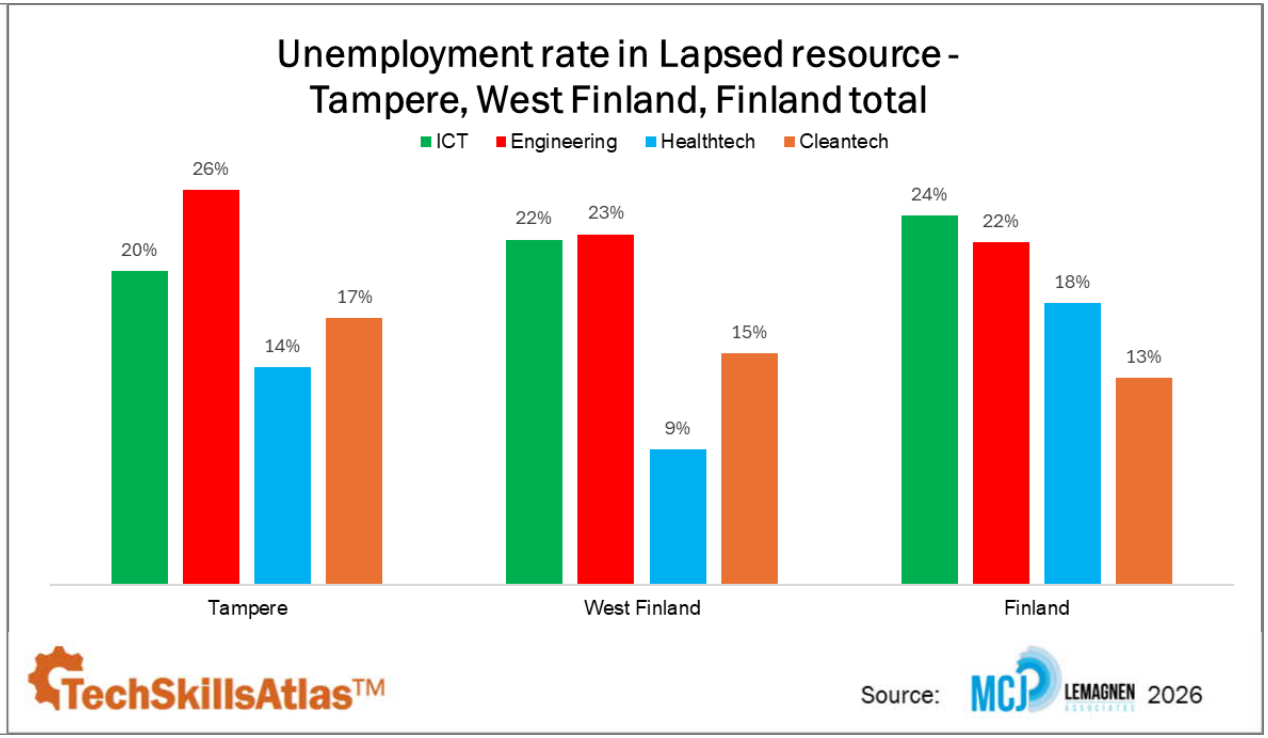
Tampere Skills Concentration Coefficient



- Overall Tampere region is
  - Above the national average for ICT and Engineering
  - At the national average for Cleantech and Healthtech
- Cleantech and Healthtech technical professionals are the scarcest

Significant unemployed but willing talent is available





- High levels of unemployment in the lapsed resource in each skills set across Finland
- And strong interest in working again in a technical role

Engineering skills deepdive

Tampere – the birthplace of Finnish industry

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Engineering skills: core resource of 25,000

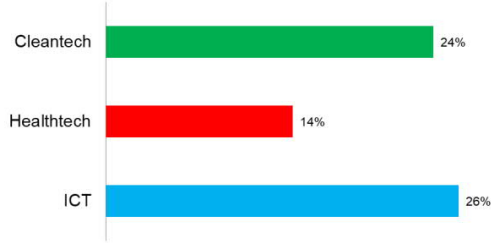
9% work in a technical ICT role

A further 10% have worked in a technical ICT role in the past

Tampere is the birthplace of Finnish industry

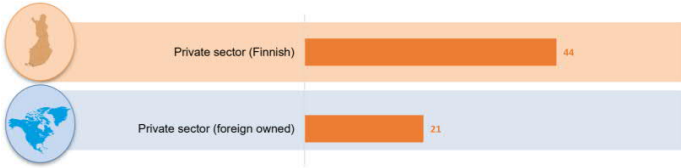
- Key specialisms in industrial & manufacturing and mechanical engineering
- 6 other fields have over 1,000 engineers
- 29 specialisms with 100-1.000 engineers
- 29% of 'lapsed' engineering talent is unemployed
- Attracting new talent 9% are aged 18-24

Interdisciplinary skills



Tampere engineering professionals have further technical expertise

21% work in a foreign-owned company



59% have Bachelor's+ level qualification

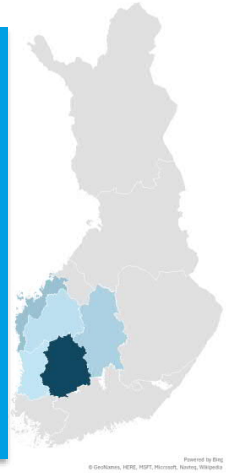
28% have vocational qualification

Key national talent hub

29% of national total live in Western Finland

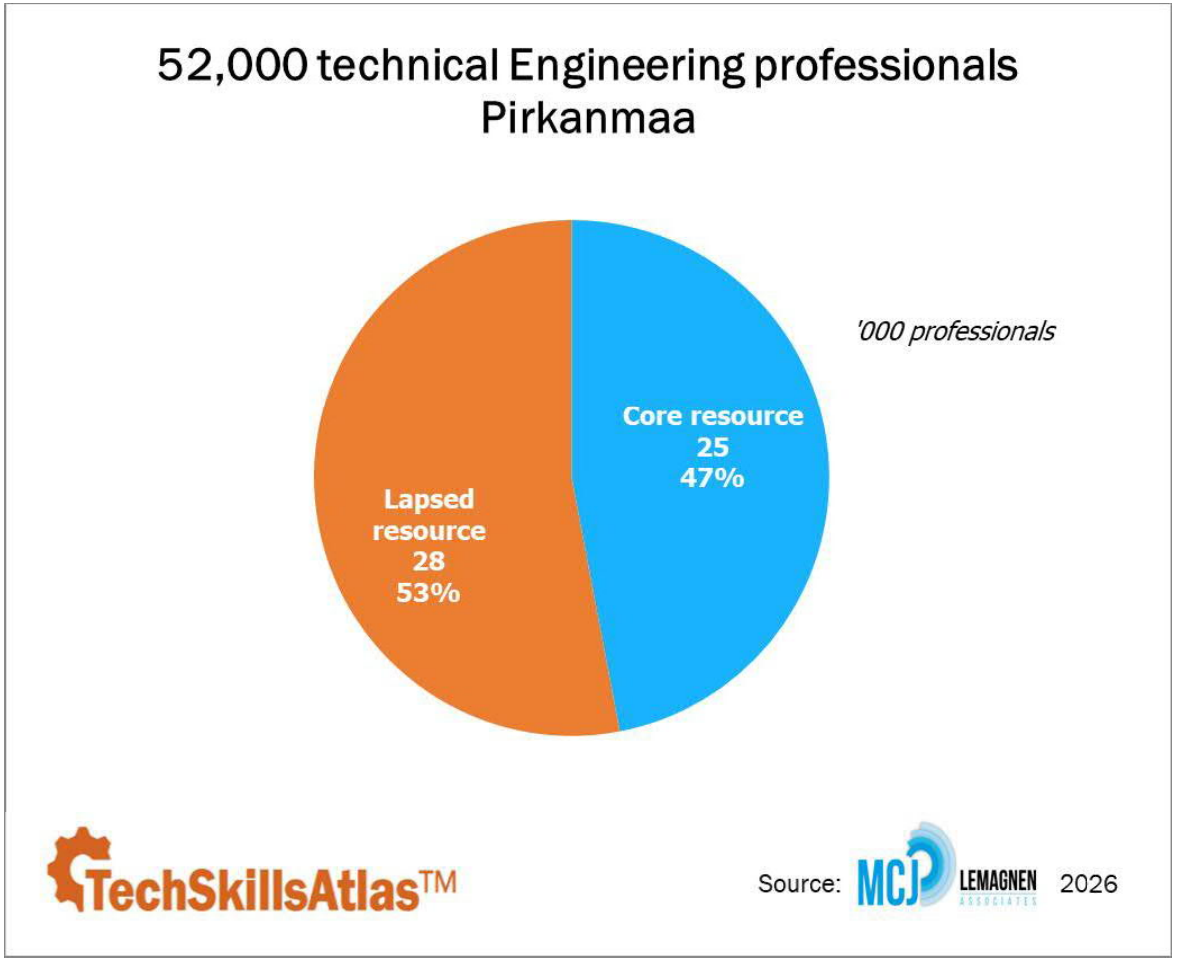
39% of Western Finland core engineering talents live in Tampere region

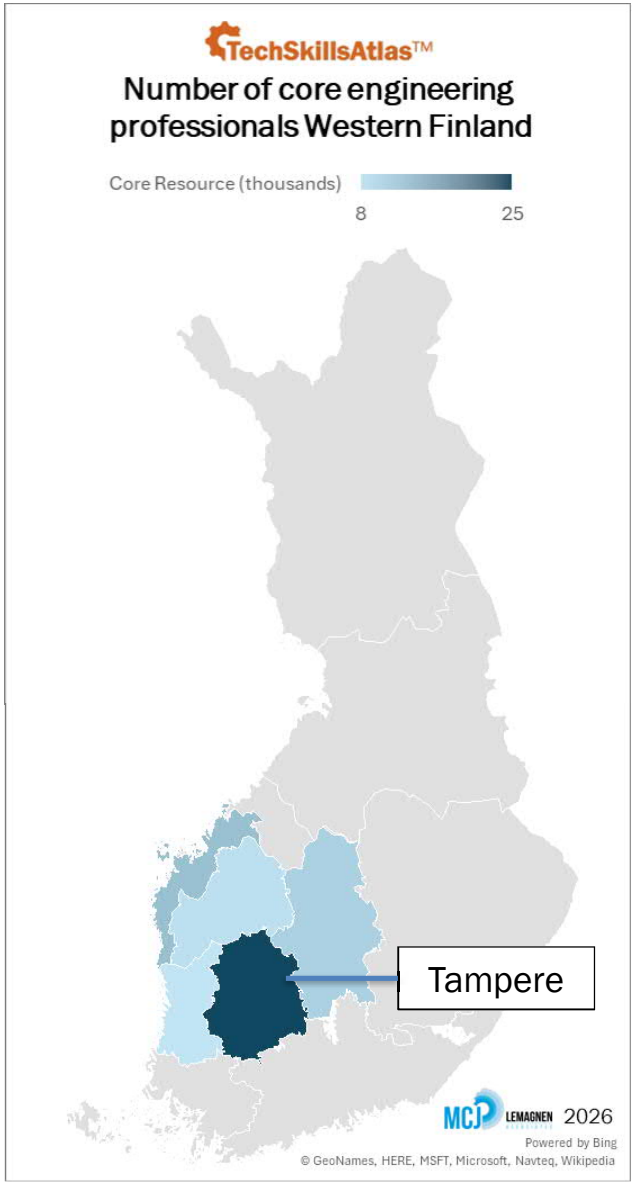
National pipeline of 31,000 tertiary and vocational graduates



Untapped potential amongst lapsed resource

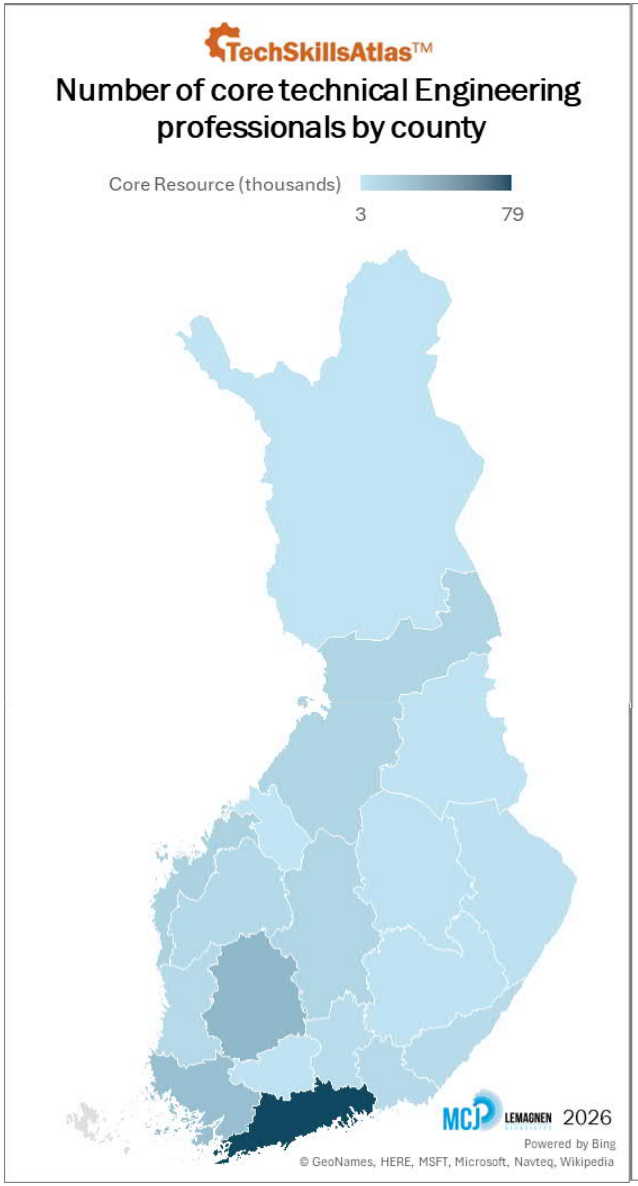
- Total resource 52,000
  - Core resource of 25,000 are currently working in technical role
  - 4,500-5,000 are of the current resource are self-employed
- But 28,000 are no longer working in technical role
  - 26% of the lapsed resource is unemployed = 7,000

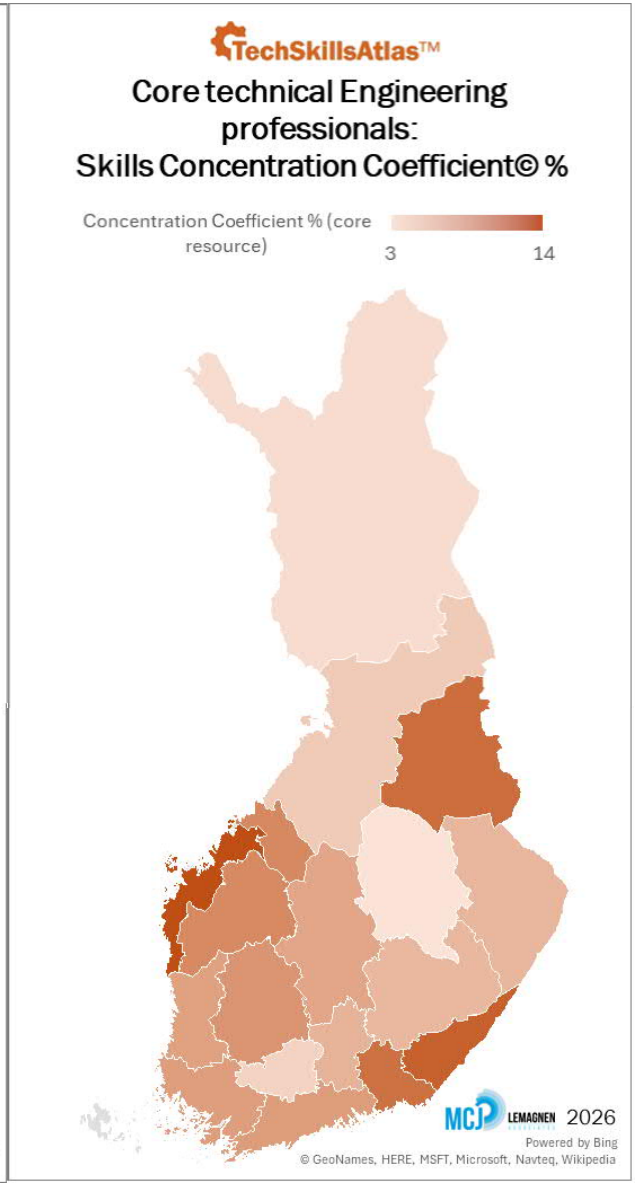




Accessible talent

- 25,000 core engineering professionals live in Tampere region
  - Tampere is the largest city in Western Finland
- 63,000 across the 5 counties of Western Finland
  - Etelä Pohjanmaa (South Ostrobothnia) - Seinäjoki
  - Keski Suomi (Central Finland) - Jyväskylä
  - Pirkanmaa- Tampere
  - Pohjanmaa (Ostrobothnia) - Vaasa
  - Satakunta - Pori
- Wider access to the talent pools in other regions
  - 1.5 hours by train from Tampere to Helsinki and Turku
  - 3.5 hours by train from Tampere to Oulu
  - Remote talent pools across Finland and internationally





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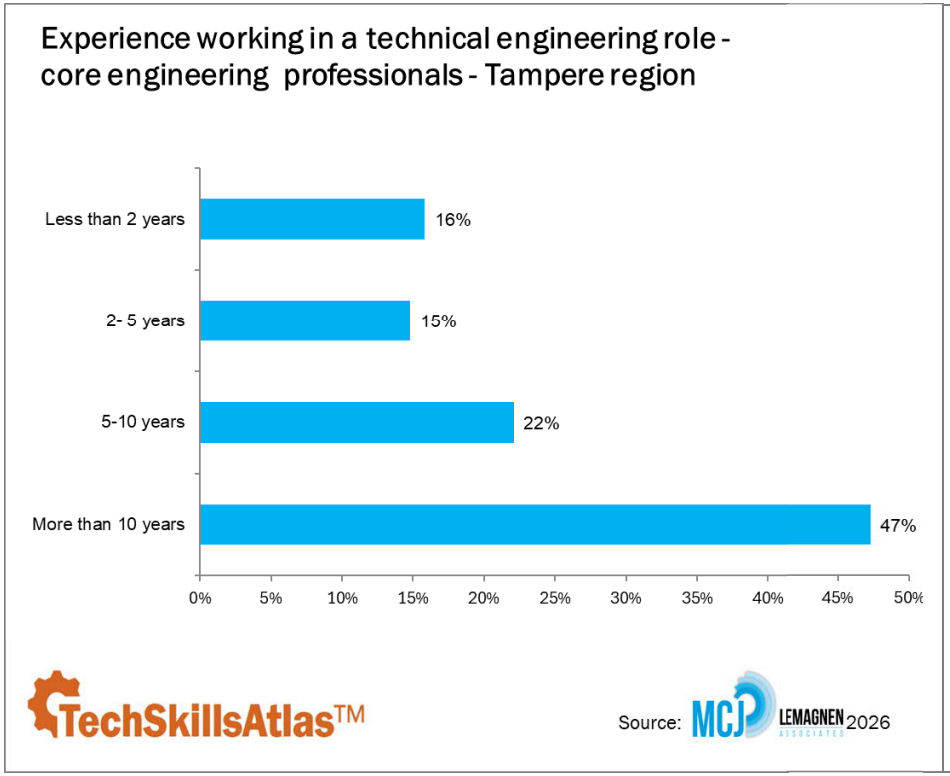
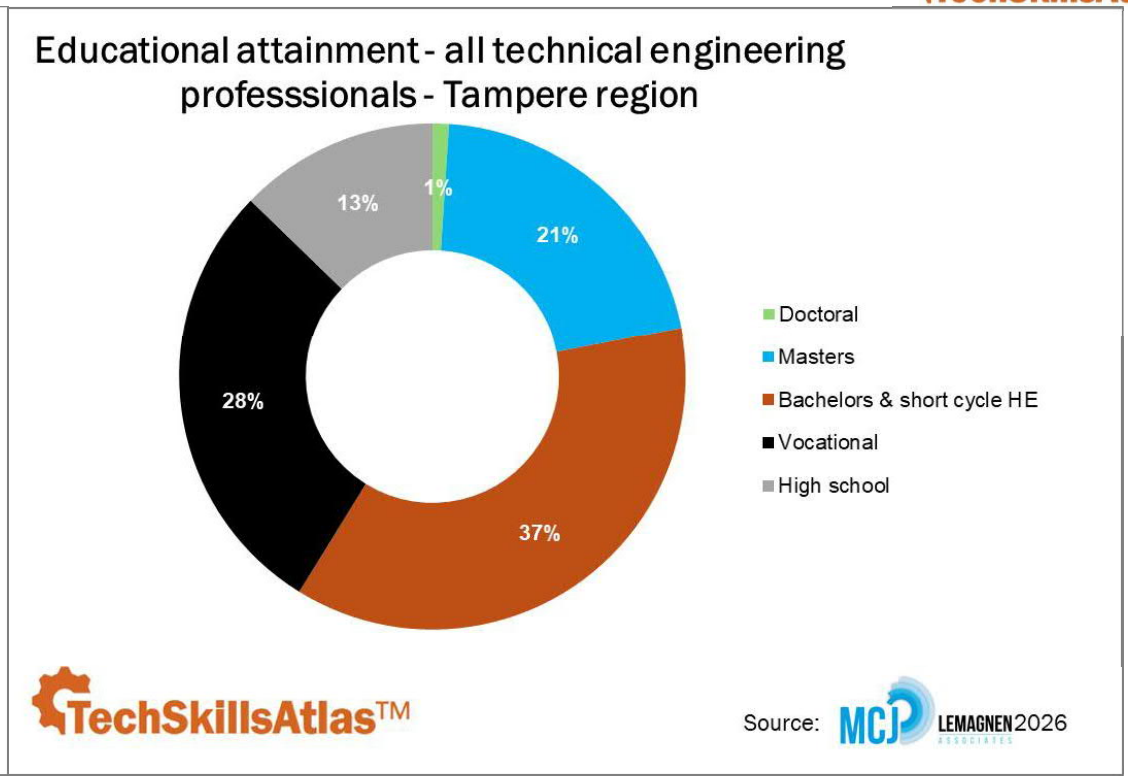
County maps (NUTS 3)

- Map on the left (blue) shows the large resource bases are found in Finland's largest city areas
- Map on the right (brown) shows there are pockets of expertise around the country

Highly qualified, experienced and younger talent

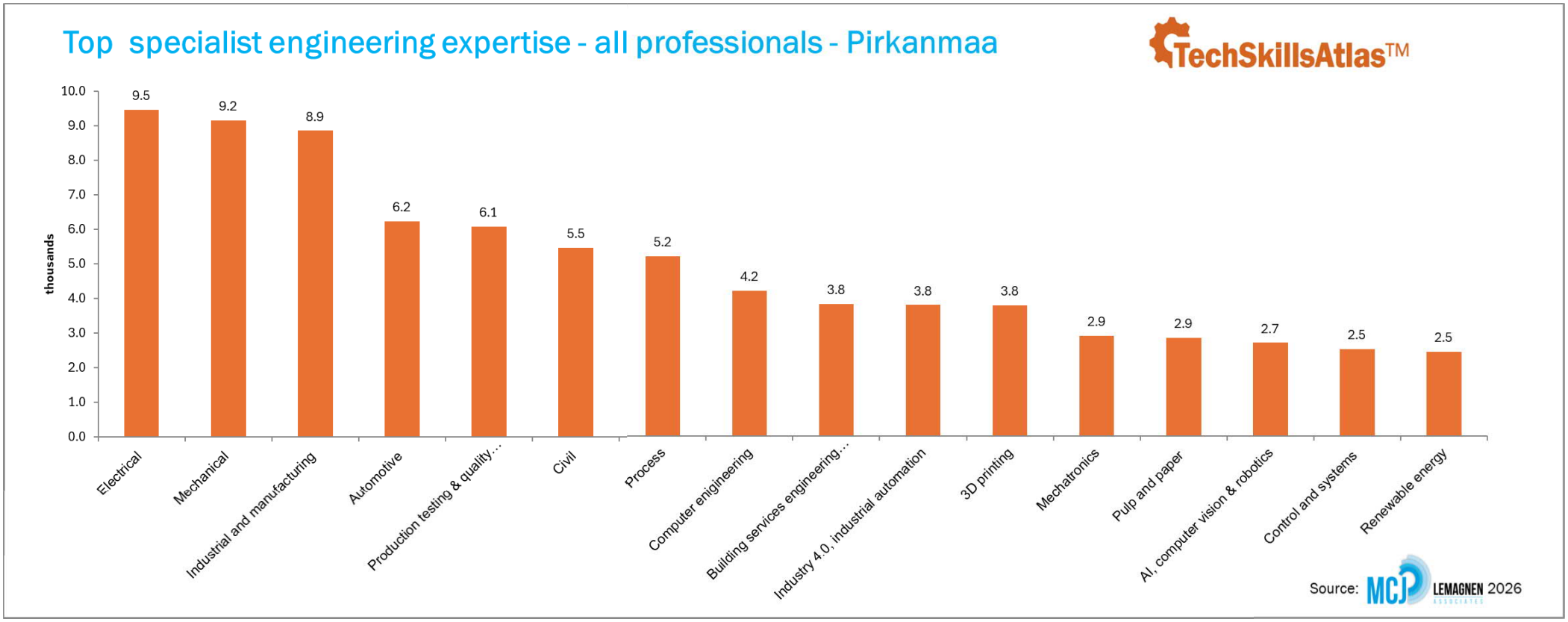




- **Experience:** 31% have worked in an engineering role for less than 5 years…47% for more than 10 years
- **Age:** 37% are aged 18-34
- **Qualified:** 59% have at least bachelors' education, 28% have vocational qualifications
- **New talent pipeline:** nationally, 31,000 new engineering education tertiary and vocational graduates per year

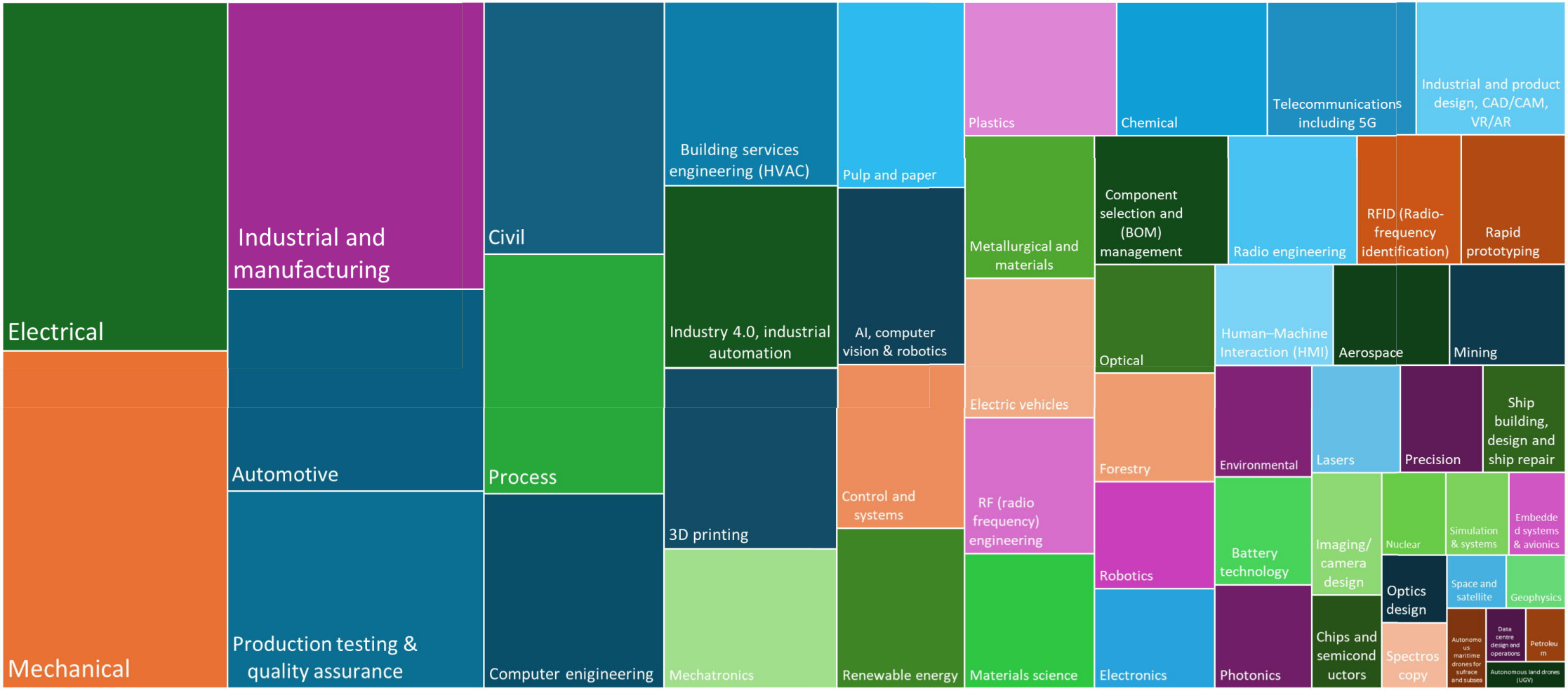
Engineering disciplines

- The top three, all over 8,500 are electrical, mechanical and industrial/manufacturing



Engineering ingenuity

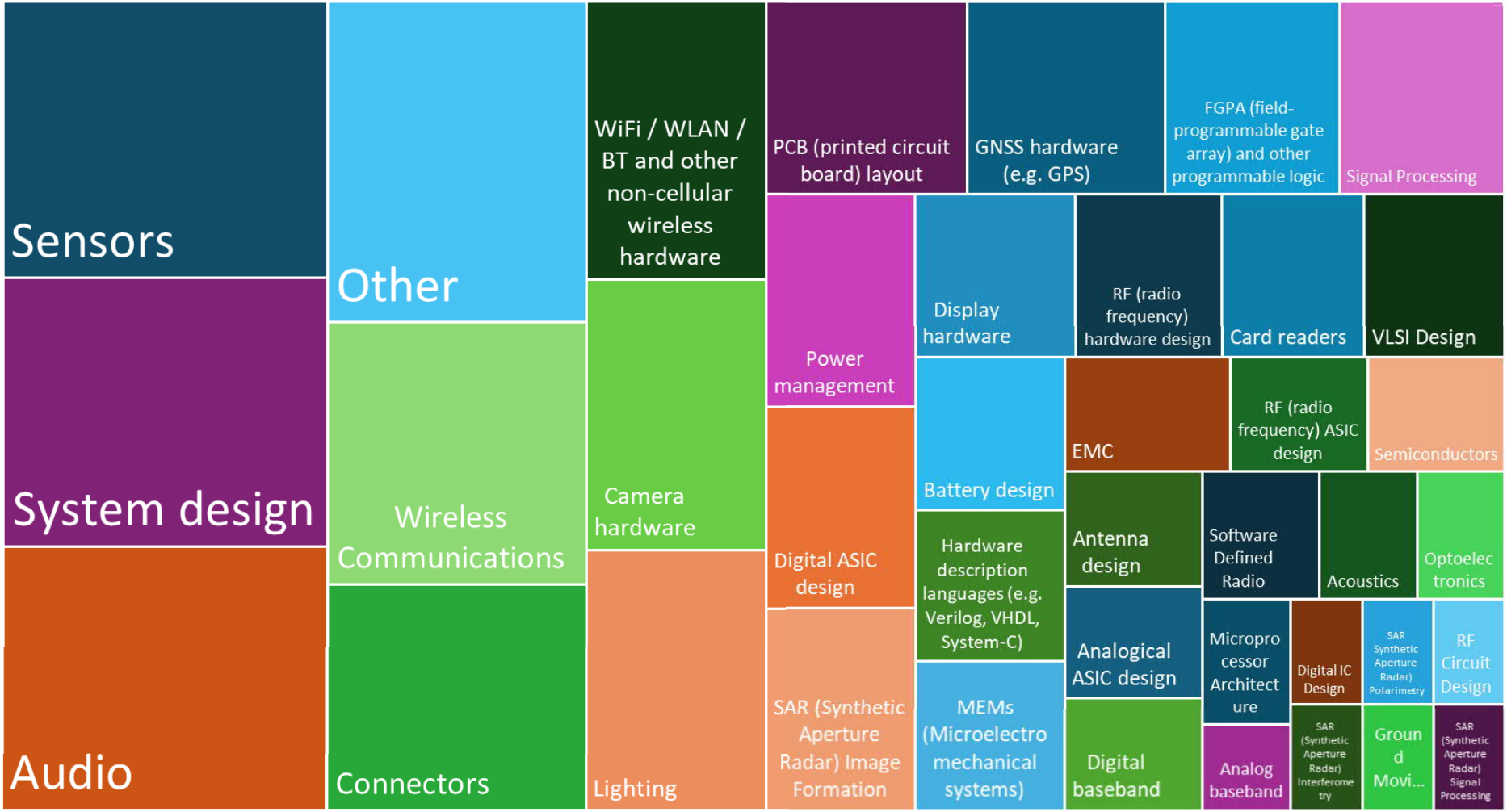
Specialist engineering expertise - all professionals - Pirkanmaa 2026



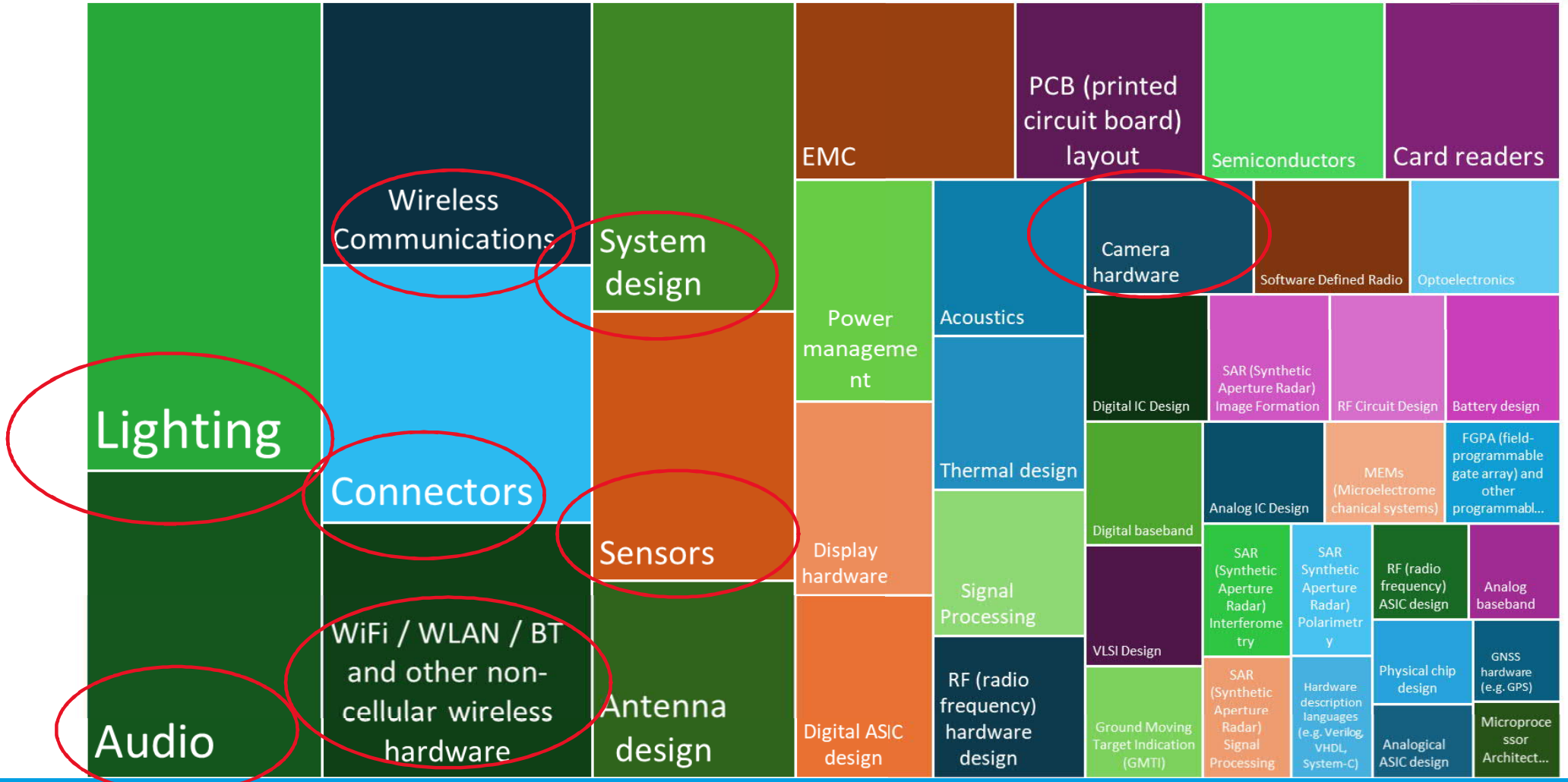
Electronics specialisms

- Additional follow-up question asked to 36% of the total engineering resource
- 4 areas had a total resource of over 2,000 engineers
- 11 fields has a total of resource from 1,000 to less than 2,000
- The remaining 24 niches had a total resource of less than 1,000

Electronics specialisms



Electronics specialisms - Finland



Autonomous drone tech

Autonmous drone expertise - all technical engineeers - Pirkanmaa

- Additional follow-up question asked to 11% of the total engineering resource
- This is a rapidly emerging niche
- 6 niches had over 1,000 professionals
- 19 fields have less than 1,000 engineers

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ICT deepdive
Tampere – a digital powerhouse

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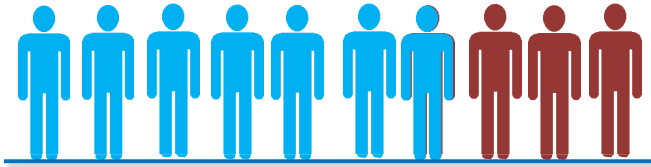
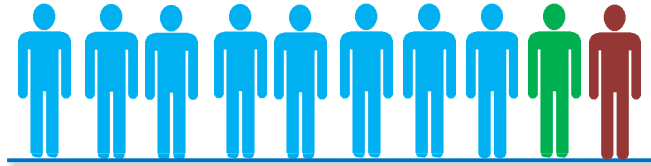
ICT skills: core resource of 20,000 technical ICT professionals



7% work in a technical ICT role

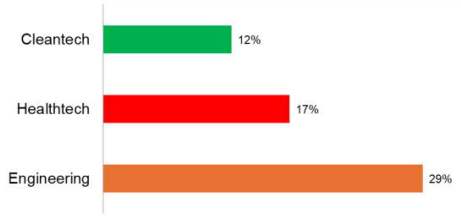


A further 8% have worked in a technical ICT role in the past

16% of the workforce in Tampere region has technical ICT skills

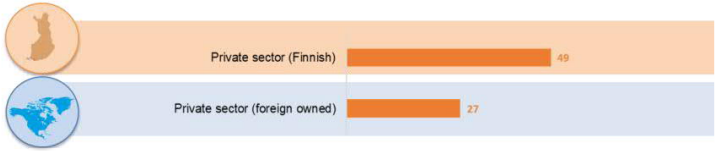
- 80% have advanced programming expertise
- 20% of 'lapsed' talent is unemployed and seeking work = 4,900 people
- Young profile (30% under 34) but plenty of experience too (55% > 10 years experience)

Interdisciplinary skills



A high percentage of the ICT workforce has other technical skills experience

27% work in a foreign-owned company



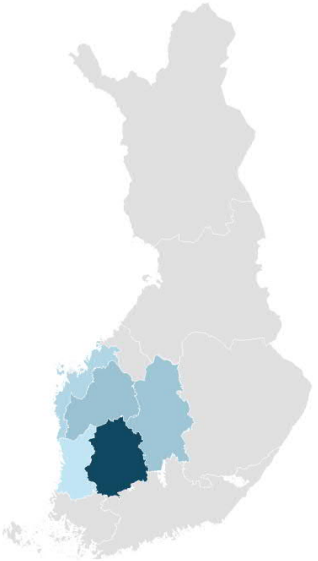
83% have at least a Bachelor's level education

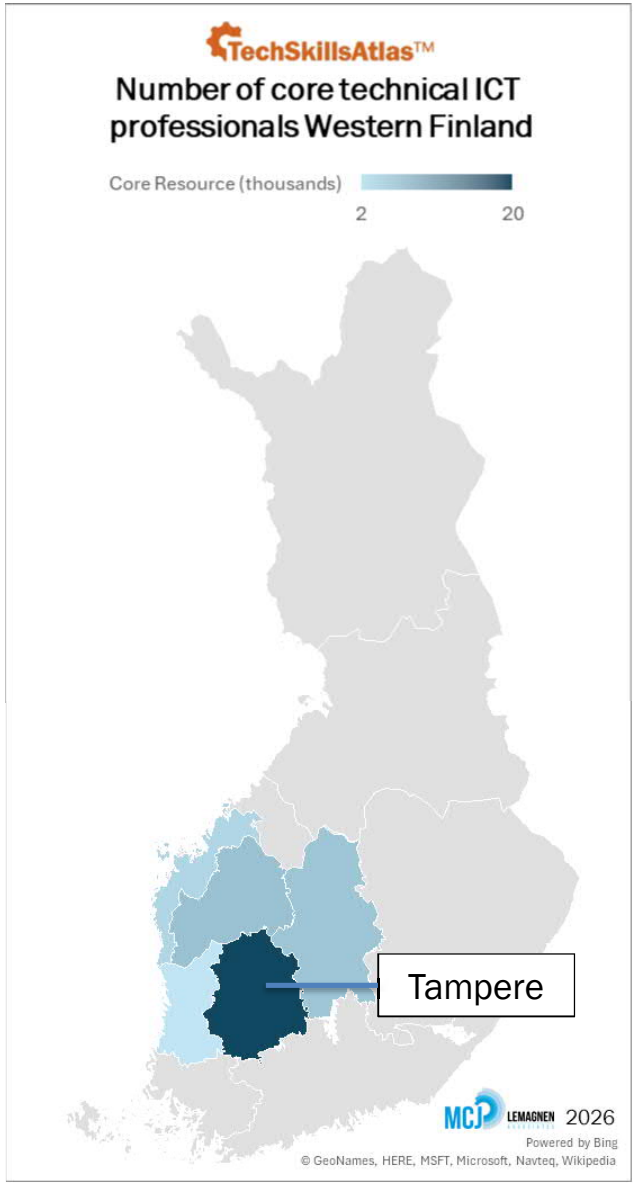
Key national talent hub

11% of national total live in Tampere region

54% of Western Finland core ICT talents live in Tampere region

Commutable talent from Uusimaa and Southwest Finland





Accessible talent

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- 37,000 across the 5 counties of Western Finland
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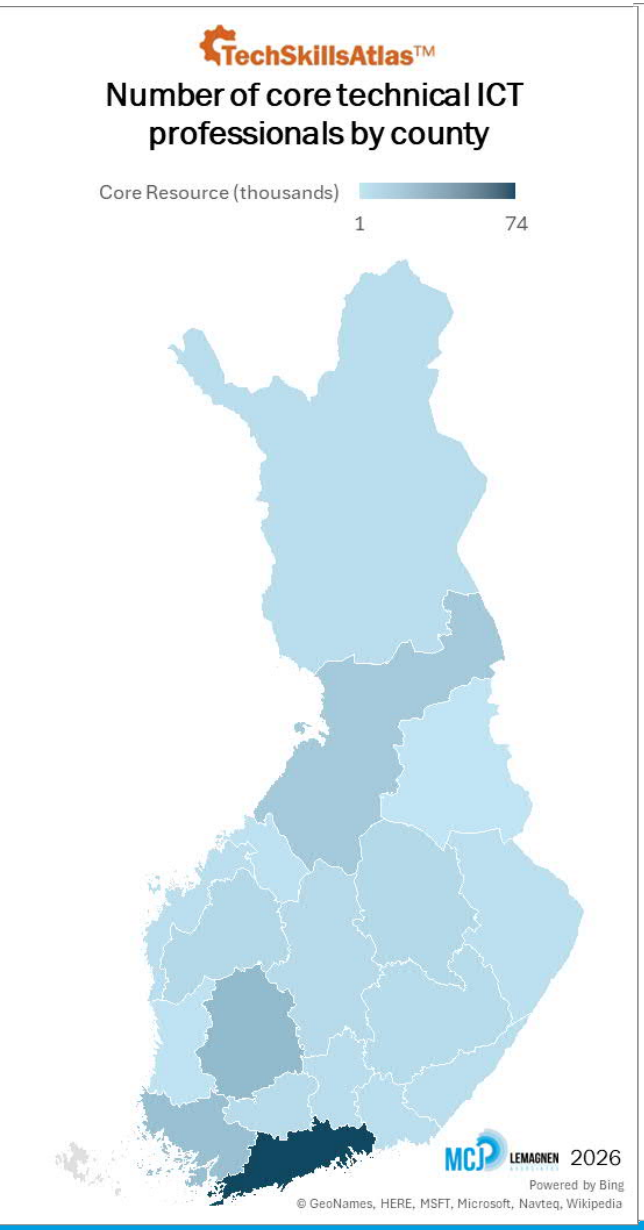

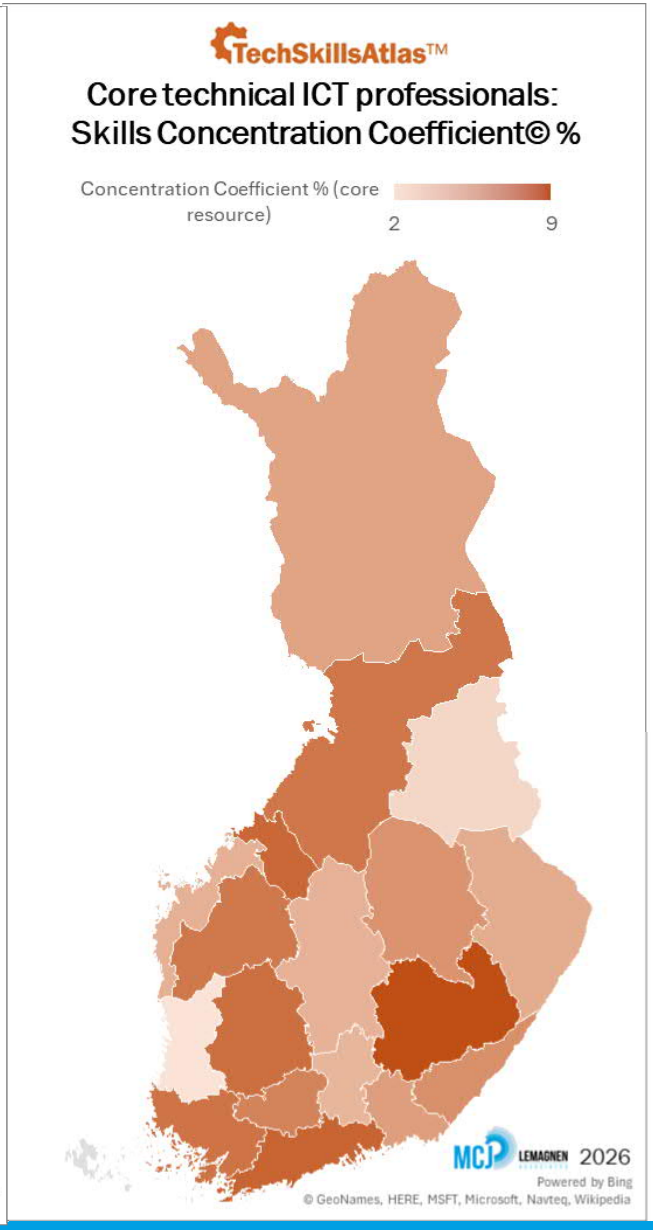

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County maps

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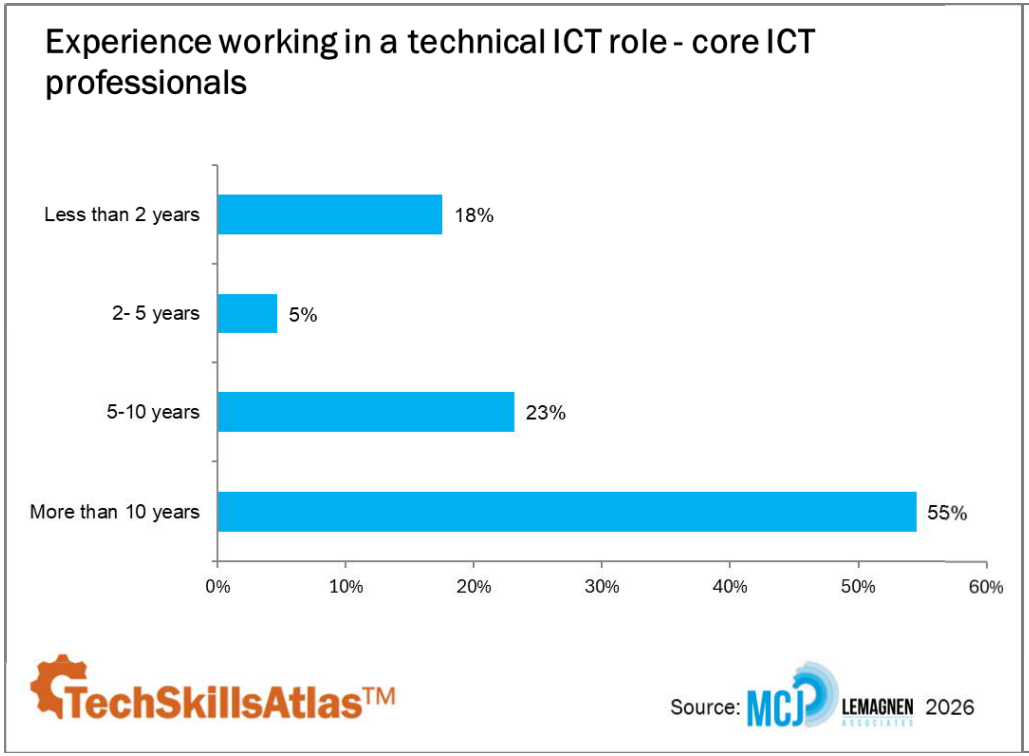
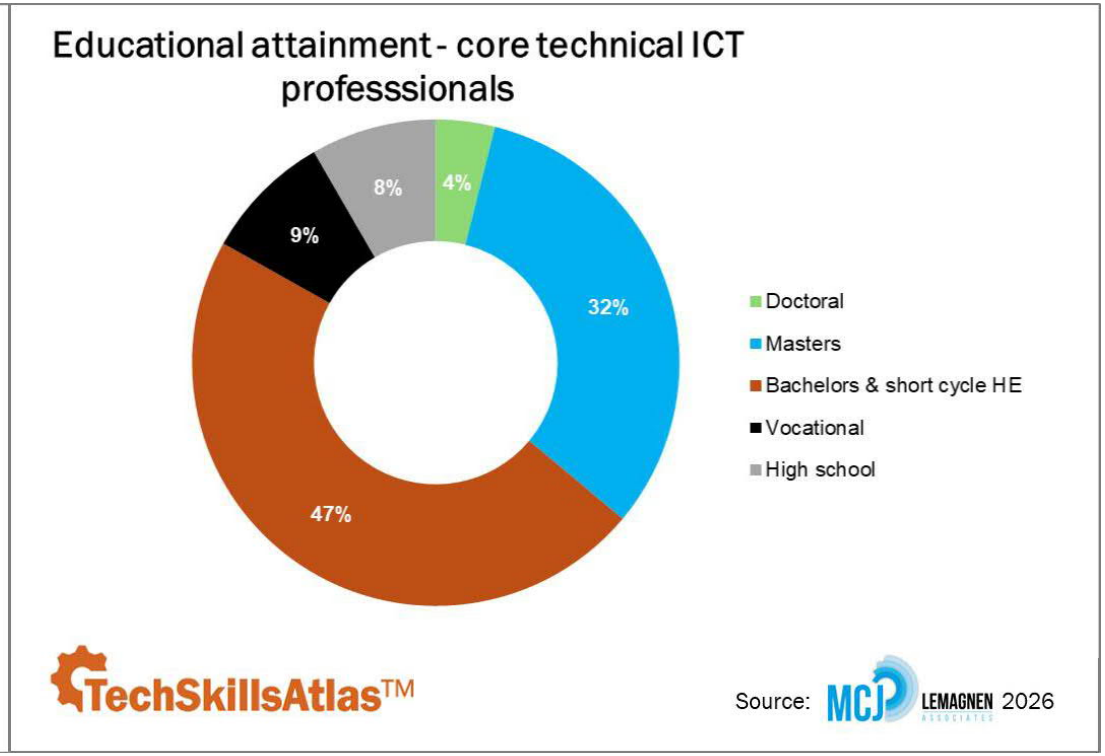
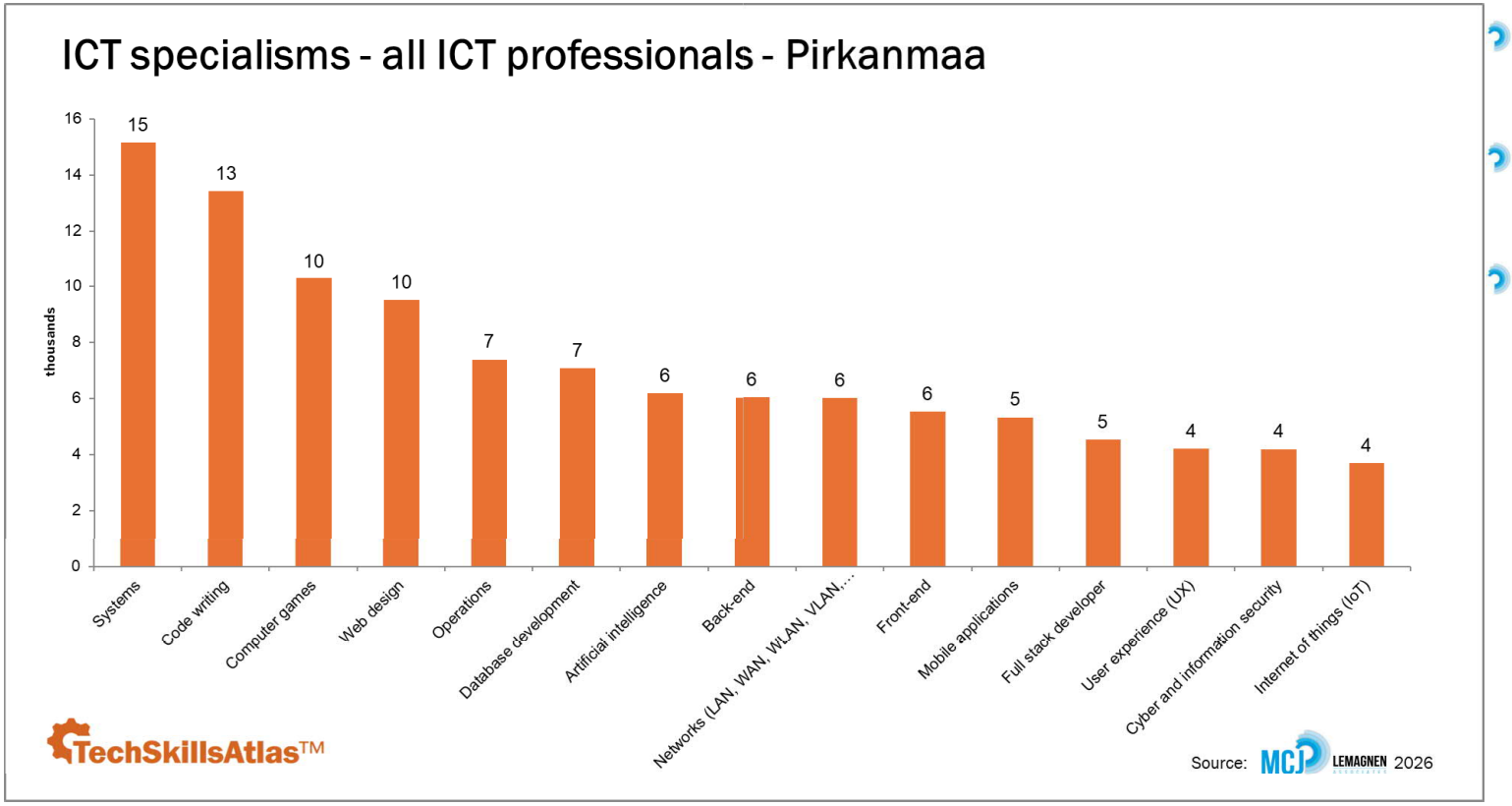
Qualified, experienced and younger talent





- **Experience**: 23% have worked in a technical IT role for 5 years or less…55% for more than 10 years
- **Age**: 30% are aged 18-34 and 50% are 35-54
- **Qualified**: 83% have at least a Bachelors degree
- **New talent pipeline**: nationally, 9,000 new ICT education tertiary and vocational graduates per year

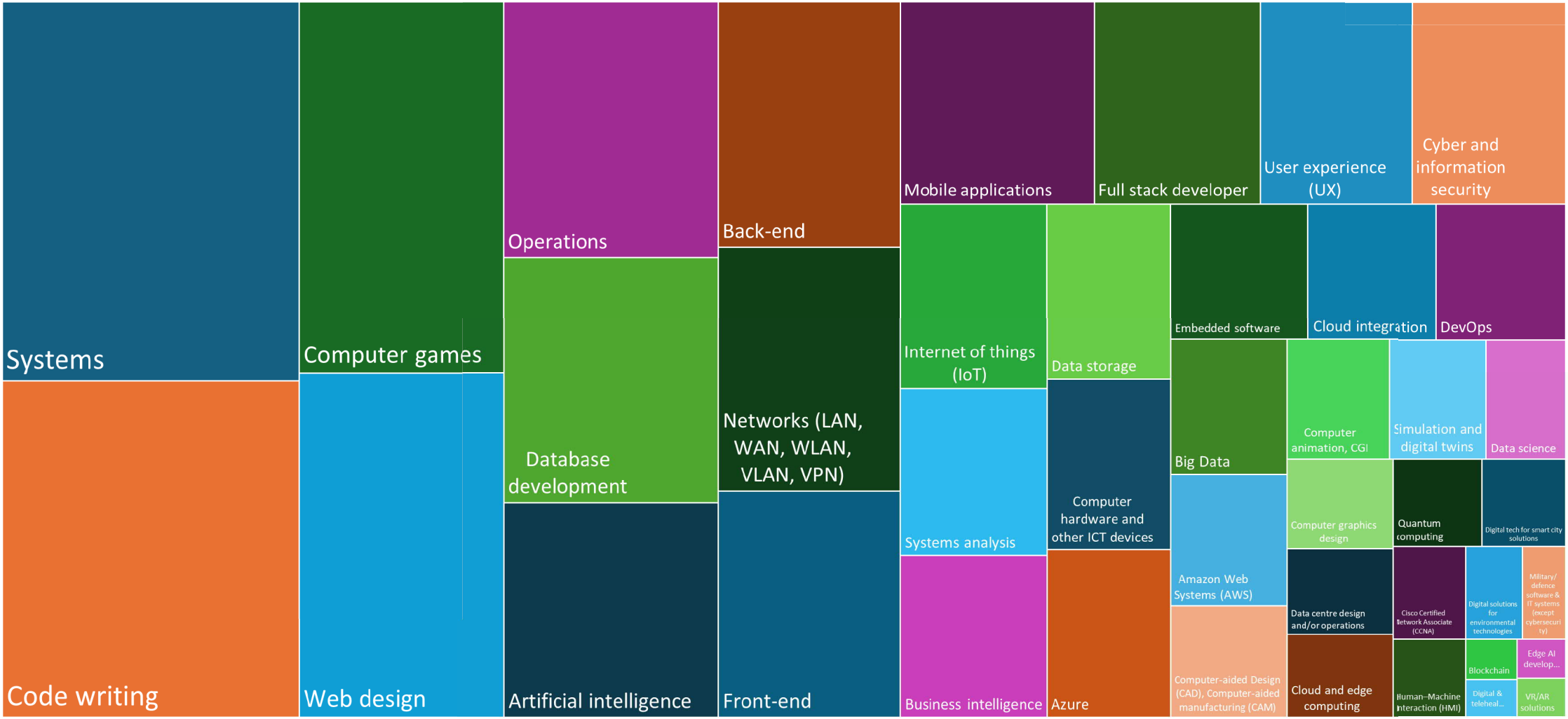
Plenty of expertise across a wide range



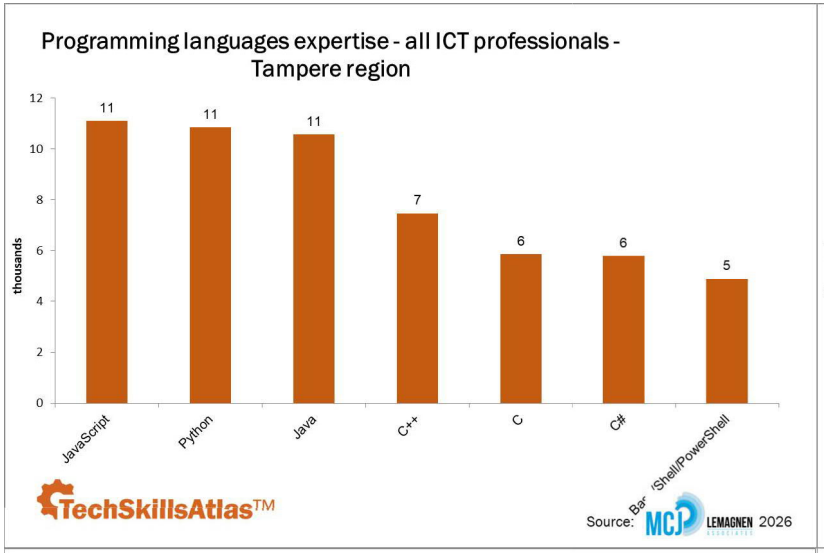
- 4,000 or more core professionals in these 15 areas
- TechSkillsAtlas© asked about 42 different specialisms
- Niche fields include:
  - Data centre design and/or operations
  - Digital health and/or telehealth solutions
  - Digital technologies for smart city applications
  - Edge AI development
  - Military/ defence software and IT systems
  - Simulation and digital twins
  - Quantum computing

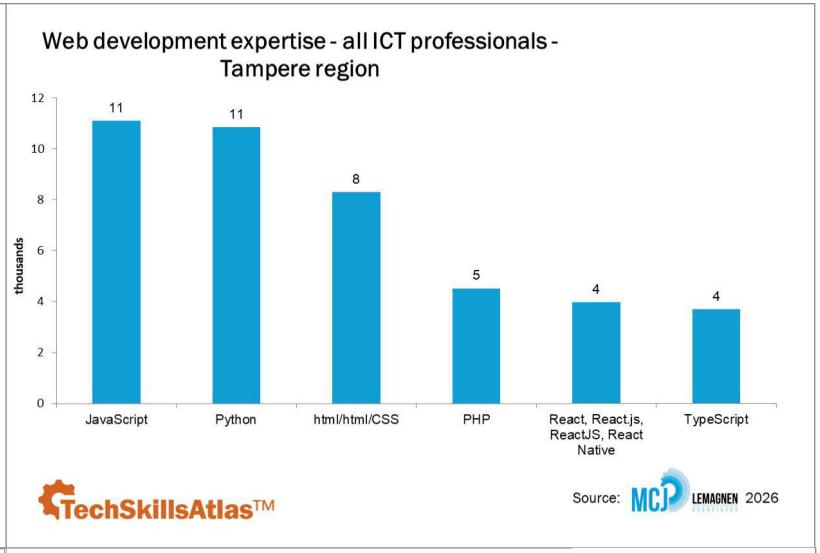
Tampere ticks all the digital talent boxes

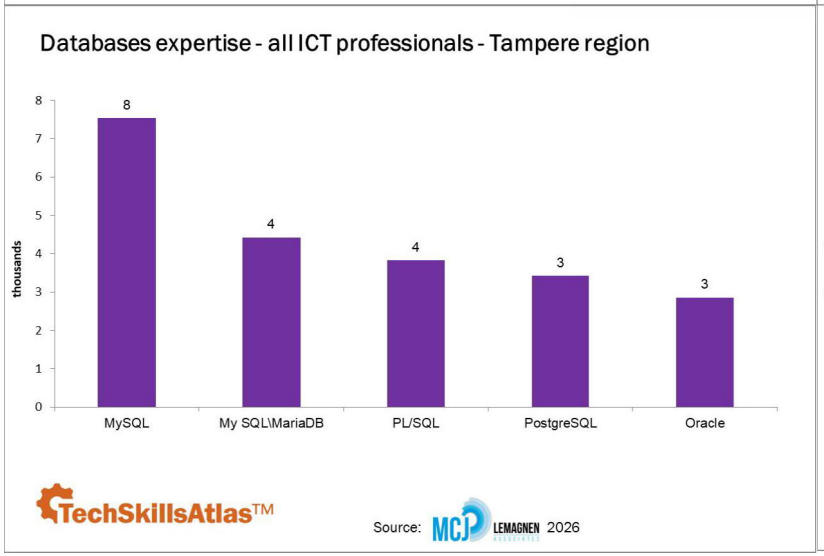
Digital **specialisms - all ICT professionals - PirkanmaaTampere region**

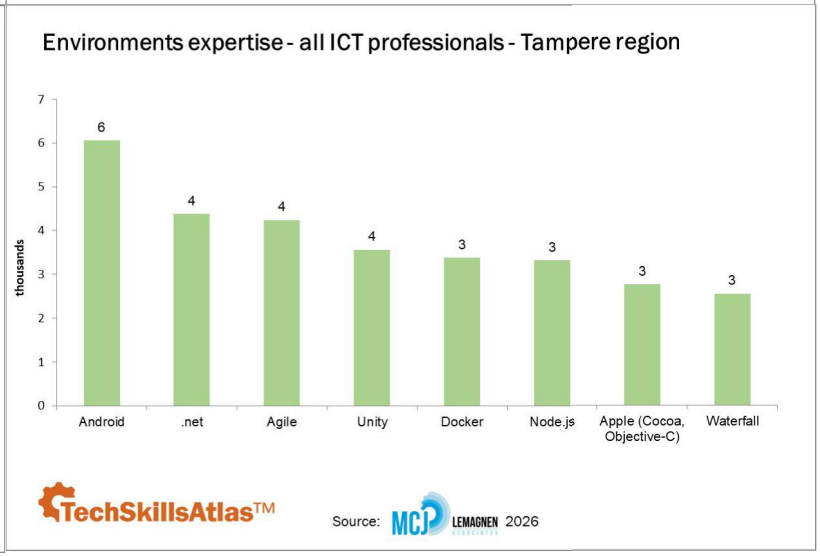


Programming resources for all needs





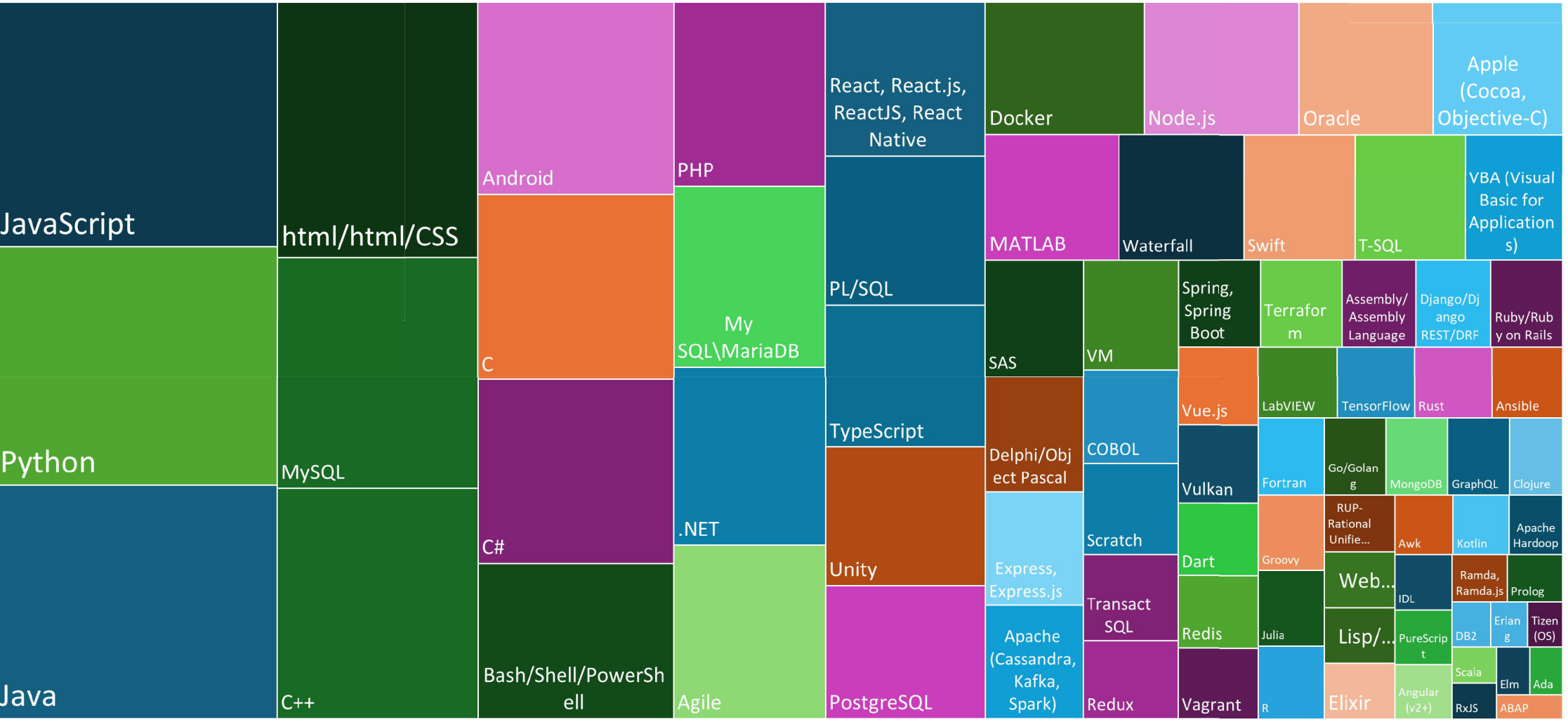




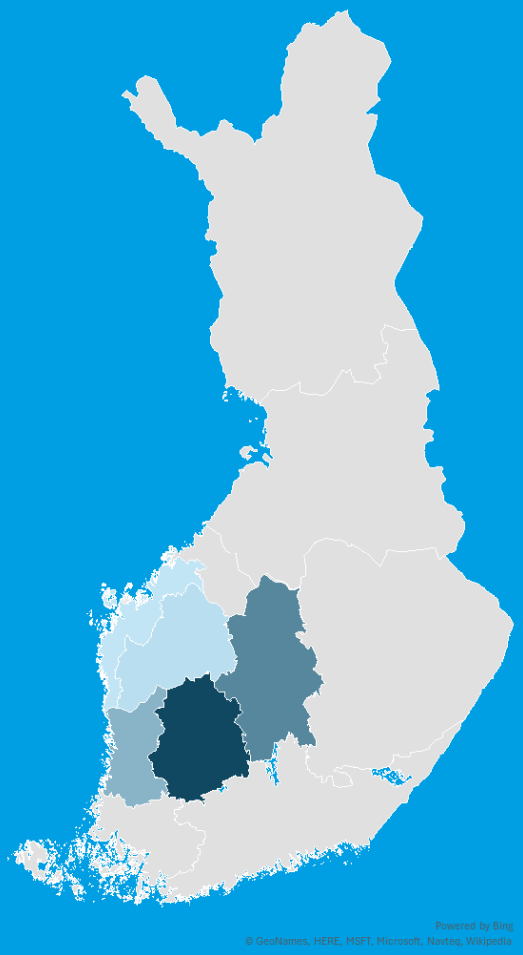
- 80% of core ICT professionals have advanced coding skills
- Talent available across a wide range of applications

Deep coding knowledge

Programming and application development expertise - **PirkanmaaTampere region**



Western Finland Healthtech snapshot



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Healthtech skills: core resource of 13,000

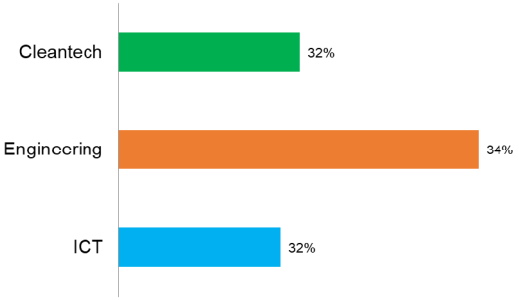
2% currently work in a healthtech role

A further 4% have worked in a healthtech role in the past

6% of the workforce in Western Finland has technical healthtech skills

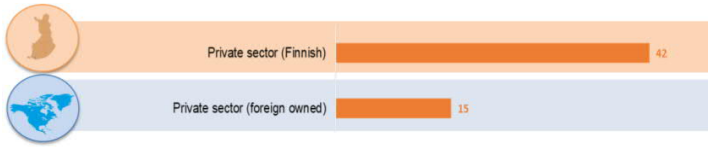
- **Key specialisms include diagnostics, endocrine, geneteics, histology, infectious diseases medical devices & equipment, medical robotics, microbiology, prosthetics, toxicology**
- **46% of healthtech professionals aged 18-34**
- **9% of 'lapsed' talent is not in work**

Interdisciplinary skills



Finnish healthtech professionals have further technical expertise

57% work in the private sector



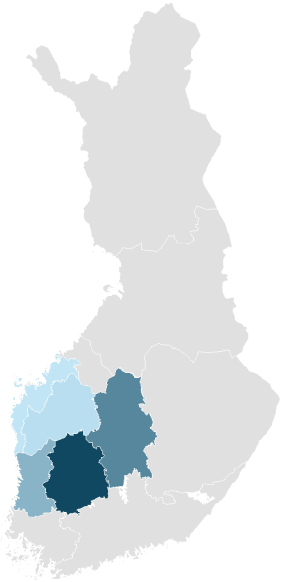
68% of Tampere healthtech professionals have Bachelor's+ level qualification

Core resource of 6,000 - available in Tampere region

20% of national total live in Western Finland

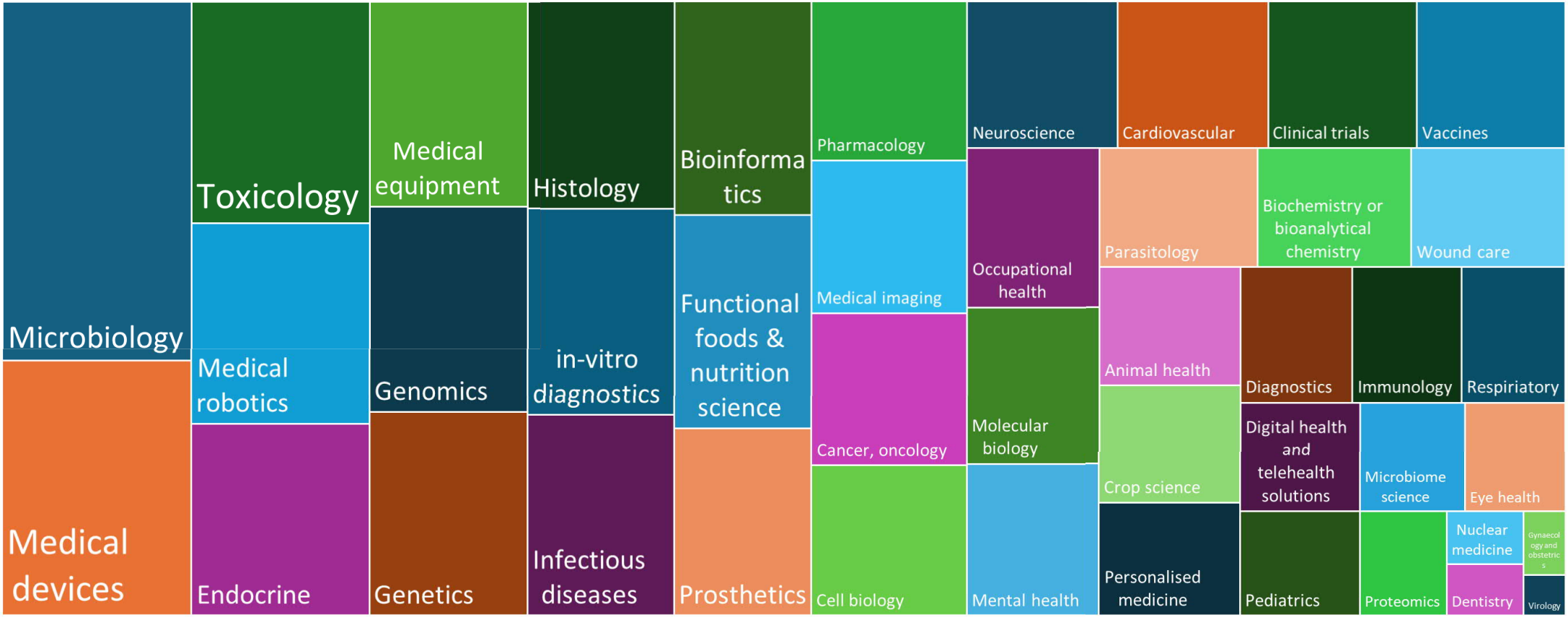
46% of Western Finland core healthtech talents live in Tampere region

National pipeline of 30,000 tertiary and vocational graduates



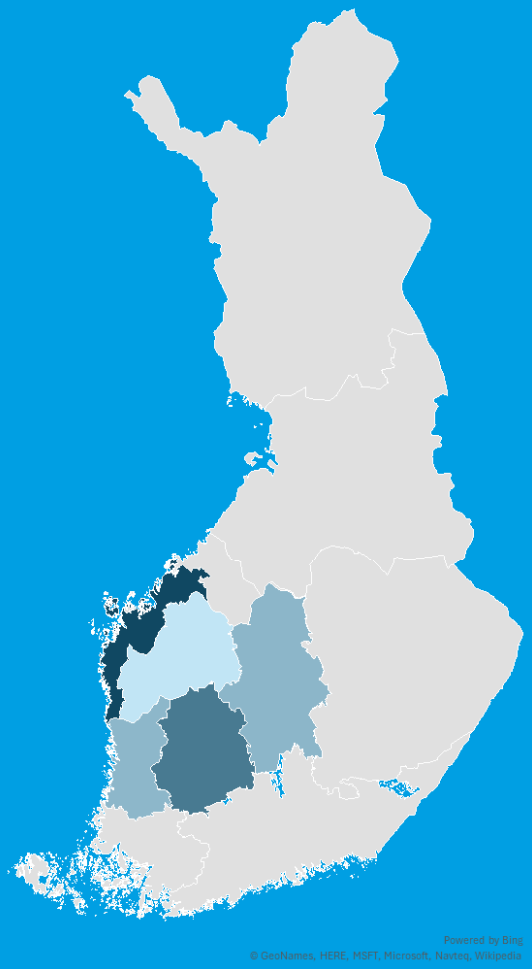
Wide range of healthtech skills

Specialist healthtech expertise - all professionals- Western Finland 2026



Western Finland Cleantech snapshot

A pillar of the Finnish cleantech ecosystem



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Cleantech skills: core resource of 15,000

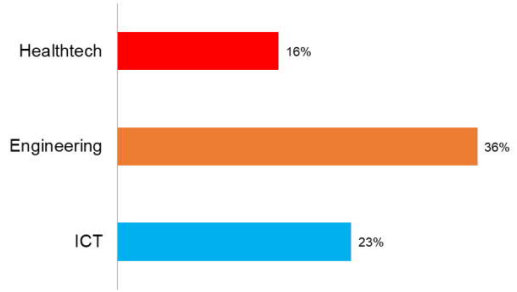
2% work in a cleantech role

A further 5% have worked in a cleantech role in the past

7% of the workforce in Western Finland has technical cleantech skills

- **Western Finland is a pillar of the Finnish cleantech ecosystem**
- **Vaasa/Pohjanmaa has the highest cleantech Skills Concentration Coefficient© in Finland**
- **Significant resources in 20 specialist cleantech disciplines**
- **15% of 'lapsed' talent is unemployed**

Interdisciplinary skills



Finnish cleantech professionals have further technical expertise

26% work for foreign-owned companies

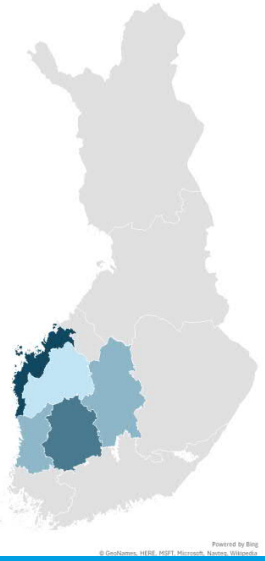
74% nationally have Bachelor's+ level qualification

Core resource of 900-5,600 available in each of the 5 counties

23% of core cleantech talents live in Western Finland

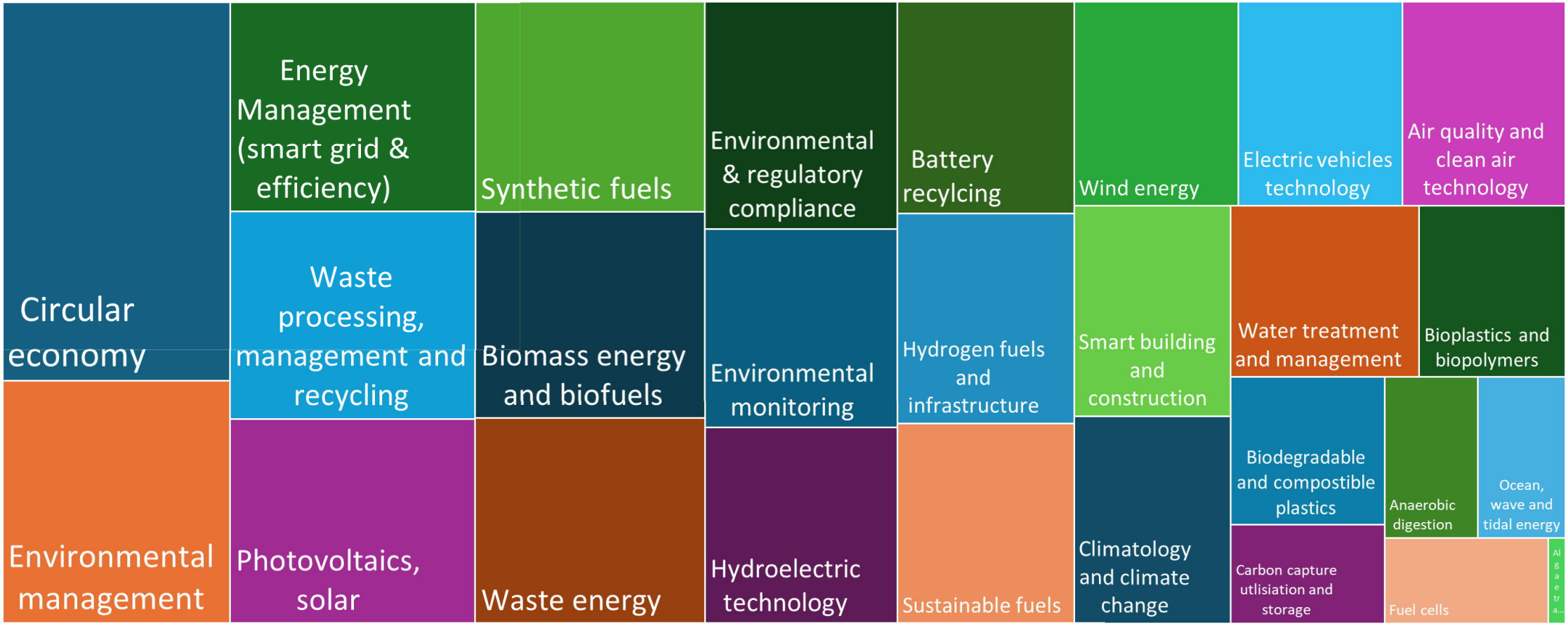
27% of Western Finland core cleantech talents live in Tampere region

National pipeline of 35,000+ tertiary and vocational graduates



Comprehensive range of cleantech skills

Specialist cleantech expertise - all professionals- Western Finland 2026



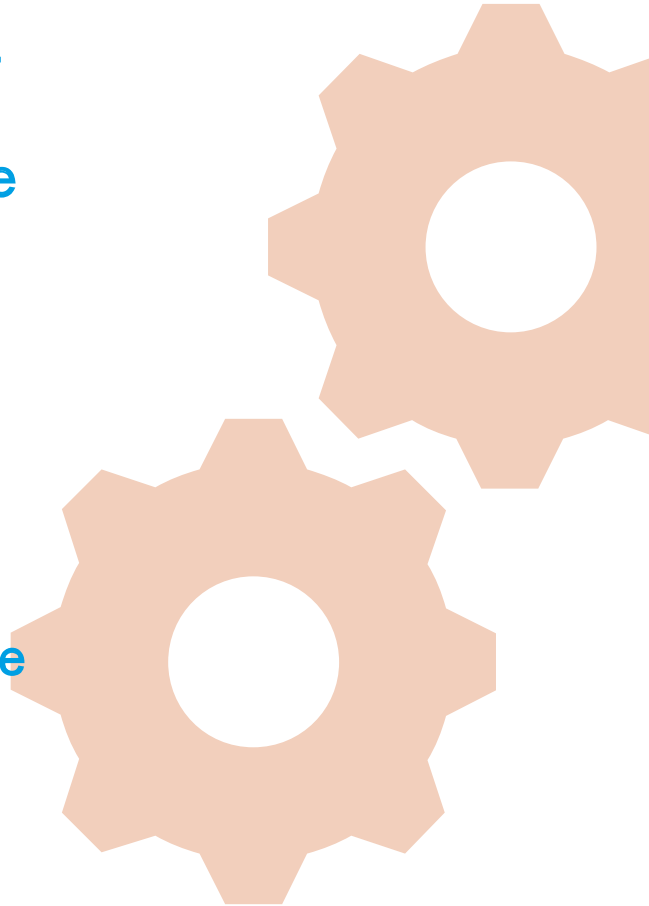
Key takeaways

Talent *is* available for all needs in Tampere

- Tampere region has core resources of 4,100 to 24,500 technical professionals currently working in each of the 4 skills areas
  - 2,000+ experts available across a wide range of niche specialisms
- Interdisciplinary skills e.g.
  - 29% of core ICT professionals also have expertise in engineering
  - 24% of core engineers also have expertise in cleantech
- Opportunity to engage the large lapsed resource base of professionals that have previously worked in a technical role
  - Lapsed resource accounts for 53-75% of the total resource in each skill set
  - Unemployment ranges from 14-26% of the lapsed resource
- The unemployed in each of the tech skills have a strong interest in working in a tech role again

Accessible talent

- A key hub national and within West Finland
  - West Finland's share ranges from 20-29% of national talent pools in each main skills area
  - Tampere region is 27-54% of the West Finland core resource
- Tampere's talent is supplemented by
  - 1.5 hours train journey to both Helsinki capital area and Turku
  - Commuters from other parts of West Finland
  - Remote talent across Finland and internationally
- New higher education and vocational graduates
  - Tampere University, Tampere University of Applied Sciences, Police University College,
  - Tredu, TAKK, SASKY
  - 63,000+ new science, technology, engineering and healthcare from across Finland



Policy guidance and priorities

Top priority is engagement with lapsed resource

- Engagement with the lapsed resource is critical to success in filling skills gaps. This is of relevance to both the unemployed and employed within the lapsed resource
  - Logically, it is easier, quicker and cheaper to 'upskill' people who already have some levels of expertise than to retrain people with no previous experience and/or knowledge
- Unemployed lapsed resource
  - What policy and support measures are available to support upskilling for the unemployed?
  - What measures are available to support individuals and employers?
  - What courses and training is offered by local formal education providers: colleges, universities and universities of applied sciences?
  - What remote learning opportunities are available from education providers across Finland?
- Employed lapsed resource
  - How do employers support their staff in continuous professional development?
  - How interested would employers be in developing these tech skills among their existing staff with previous tech skills experience?

Questions for education providers

- Education institutions are the providers of the talent pipeline
  - How invested are they in life-long learning provision?
- Checklist for education providers
  - What courses can they offer to meet these skills gaps?
  - How well are educators linked to the needs of employers, locally, regionally and nationally?
  - What courses are or could be designed and tailored for upskilling or the lapsed resource (both for employed and unemployed)
  - What courses are of could be offered for continuous professional development of the tech skills of the current resource, to ensure their skills are continuously refreshed?

Questions for employers

- Employer and employer association engagement
  - Employers should be encouraged to do their own “skills audits” to assess the full potential of their workforce
  - How do the skills gaps identified in existing employer studies and surveys compare with the findings of TechSkillsAtlas©?
  - What are employer attitudes to hiring the unemployed, especially the longer-term unemployed? What support would they value which would encourage them to hire such persons?
- What differences are there between public and private sector employers?
  - How do their needs, attitudes and policies differ in matters such as ‘life-long learning’ and opportunities of the unemployed?
  - Could public sector employers be used for pilot projects in upskilling?

Questions and answers

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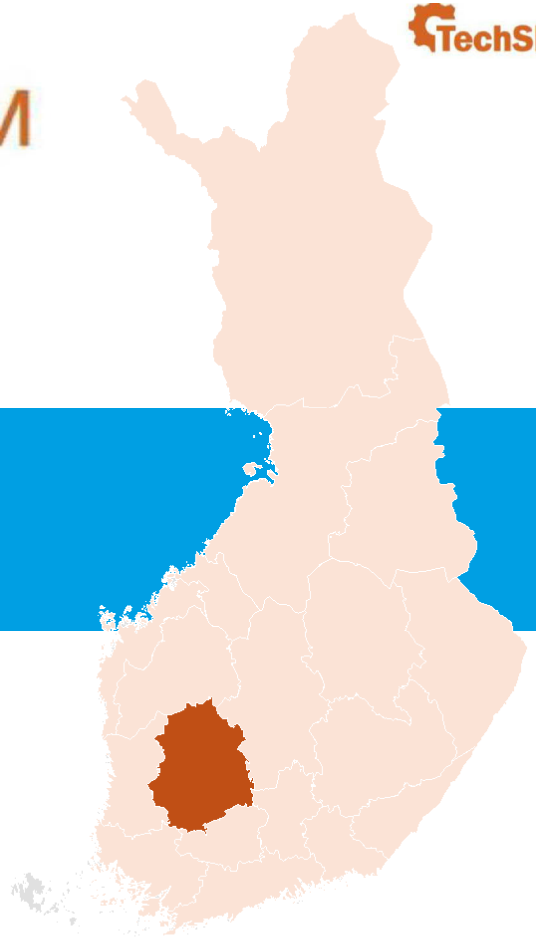
TechSkillsAtlas™

Finland 2026 Tampere

Kiitos paljon: Q&A



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