



Green transition in uncertain times – Attracting and training workers

**Technical Regional Forum
12-13 March 2025
Region Gotland**

Agenda

09:00 – 09:10	Opening of the event
09:10 – 09:30	Welcome by the organisers
09:30 – 10:30	The Just Transition Platform: Supporting JTF regions in Sweden
10:30 – 11:15	Coffee Break
11:15 – 12:00	A green future: Labour market needs and skills development for the green transition
12:00 – 13:15	Skills development: Experiences, lessons learnt and strategies
13:15 – 14:15	Lunch and networking
14:15 – 16:00	Building a regional capacity to plan development and attraction of labour for the green transition Coffee during workshop
16:00 – 16:15	Conclusions from the workshop and closing of the first day
17:30 – 20:00	Networking dinner



Welcome by the organisers

09:10 – 09:30

Speakers



Meit Fohlin
Mayor, Region of
Gotland



Myriam Bovéda
DG REGIO,
European
Commission

Welcome to Gotland!



Gotland in the middle of Baltic sea – in the middle of the World!



Vision Gotland 2040

Gotland – a creative island with room for a full life

Gotland is brimming with vitality and creativity. People and businesses can develop here and contribute to a better world. There is a sense of community with room for all parts of life and all ages.



Vision goals achieved by 2040



- Gotland is a safe and inclusive society with good quality of life for all
- Gotland is a role model in the energy and climate transition
- Gotland is an innovative growth region with development capacity

Heidelberg Materials CCS – largest investment ever on Gotland!

Slite CCS 2030

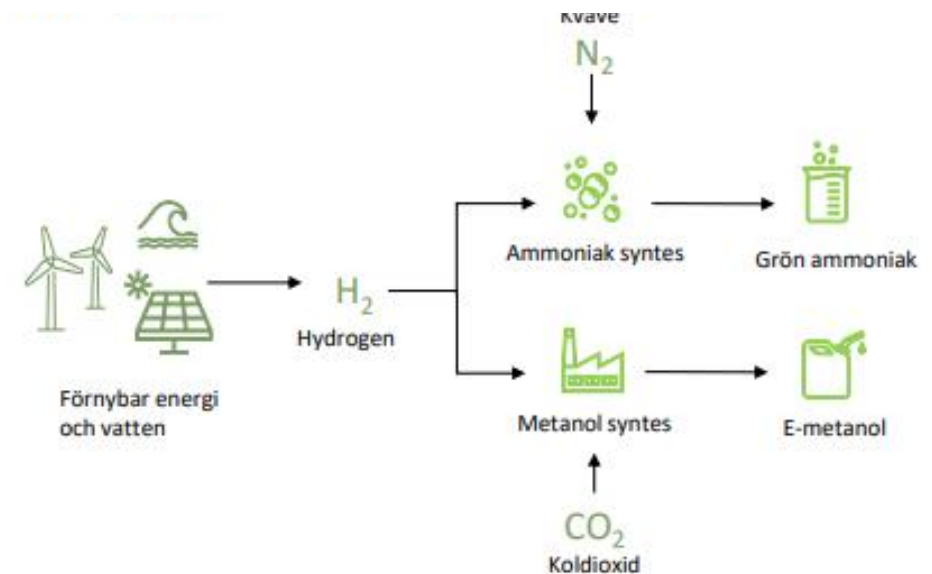
- Up to 1.8 million tones of fossil and biogenic CO₂ will be captured annually
- This corresponds to 4% of Sweden's emissions today
- Investment in the order of SEK 10 billion
- Completed in 2030
- Needs 1.5 – 2.0 TWh of electricity



Nordkalk + OX2 have big plans



- CCS
- Hydrogen
- Green Ammonia
- E-methanol



Destination Gotland is a fore-runner!

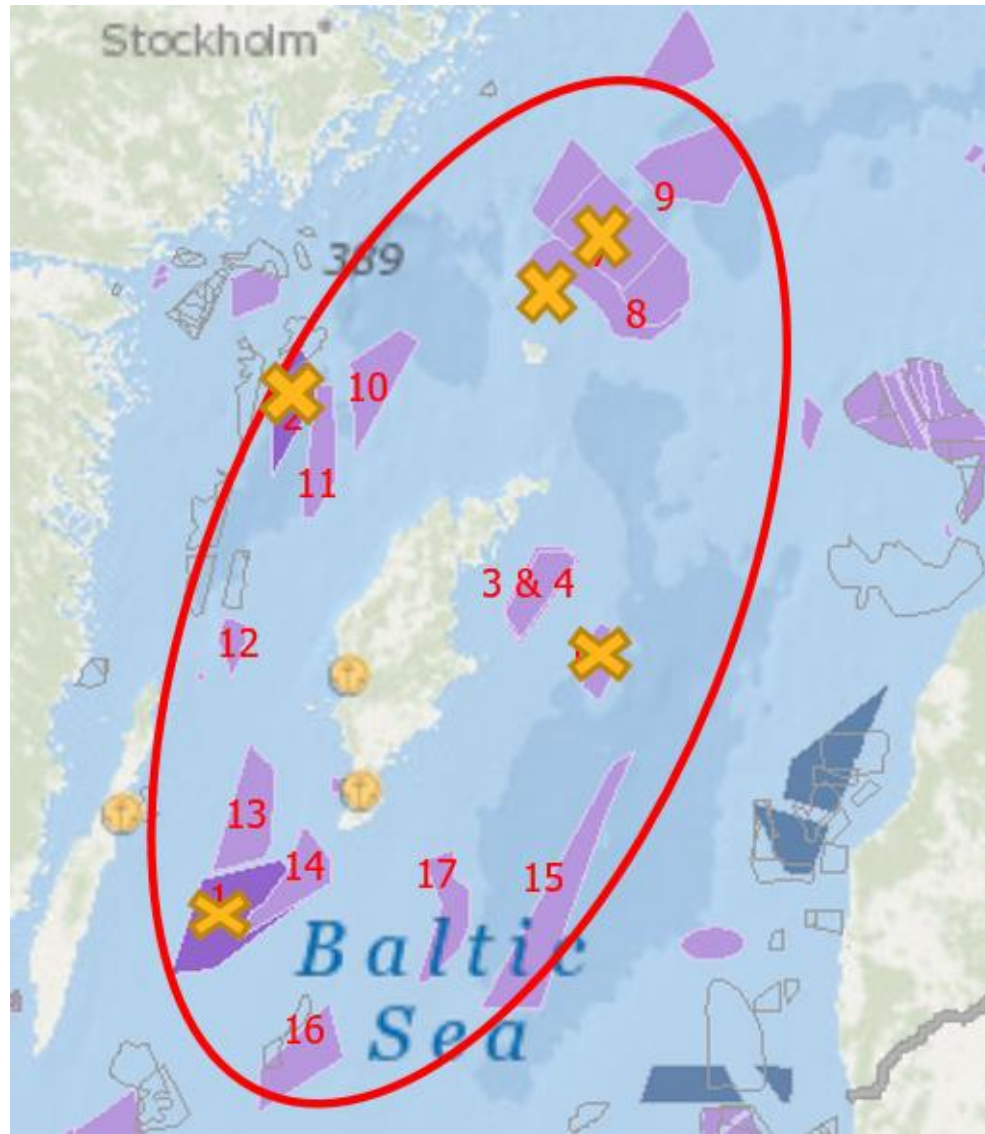
- Investing in biogas
- Ordered a new ferry for hydrogen/biogas to 2029
- Needs 1 TWh electricity for producing hydrogen

Gotlandsbolaget investerar i tillverkning av biogas

13 januari 2025 av Bioenergi



Planned wind projects until the Swedish government's decision, November 4th 2024



Tillståndsfas	MW	TWh
1. Aurora, OX2	5500	22
2. Dyning, Freja	2500	10
Tidigt samråd/samråd		
3. Ran, OX2	1800	7
4. Slite, LandInfra, konkurrerande yta		
5. Pleione, OX2	1000	4
6. Skidbladner, Eolus	2200	9
7. Erik Segersäll I-III, Deep Wind	2000	8
8. Baltic Epsilon, Statkraft, k.y		
9. Baltic Delta South, Statkraft	3200	13
10. Baltic Offshore Alpha, Statkraft	1900	7
11. Kapheira, Zephyr	2700	11
12. Neptuni, RWE,	1300	5
13. Kultje, Freja	1000	4
14. Gotlands Havsvindpark, Örsted k.y	750	3
15. Herkules, Eolus	2700	11
16. Öland-Hoburg II, LandInfra	750	3
17. Öland-Hoburg III, LandInfra	750	3

Summa: 30 GW 120 TWh

Started Energy Island Gotland

- Operated by Region Gotland
- Coordinate to facilitate the transition
- 25 stakeholders; wind projectors, grid company's, off takers



Established GAIST (local for “wind”)

- Collaboration forum for Climate and Energy issues run by the County Administrative Board and Region Gotland
- The aim is to accelerate the transition through close dialogue
- Government authorities, the Armed Forces, grid companies, energy companies and the major energy consumers are included



Baltic Energy Island Connect - BEIC

We believe that in the future, the energy islands in the Baltic Sea are connected to essential energy infrastructure, necessary to unlock the renewable energy potential as well as the growth potential for the communities



- Bornholm, Åland, Saaremaa and Gotland is working together since 2024
- These four energy island have the same context
- Together we try to:
 - Enable the Baltic Sea as a energy-sea
 - Maximize the local benefit
 - Create local engagement

Energy Centre Gotland - a part of Region Gotland

- Region Gotland finances Energy Centre Gotland
- Operate 10 climate and energy projects
- A lot of focus on local commitment and acceptance
- Focus on local development on Gotland





Welcome to Gotland!



Speakers



Meit Fohlin

Mayor, Region of
Gotland



Myriam Bovéda

DG REGIO,
European Commission



The Just Transition Platform: Supporting JTF regions in Sweden

09.30 – 10.30

Speakers



**Balbina Gluza-
Czyczerska**

DG REGIO,
European
Commission



Alice Arnaldi

DG REGIO,
European
Commission



Bettina Rafaelsen

JTP Groundwork

Just Transition Platform

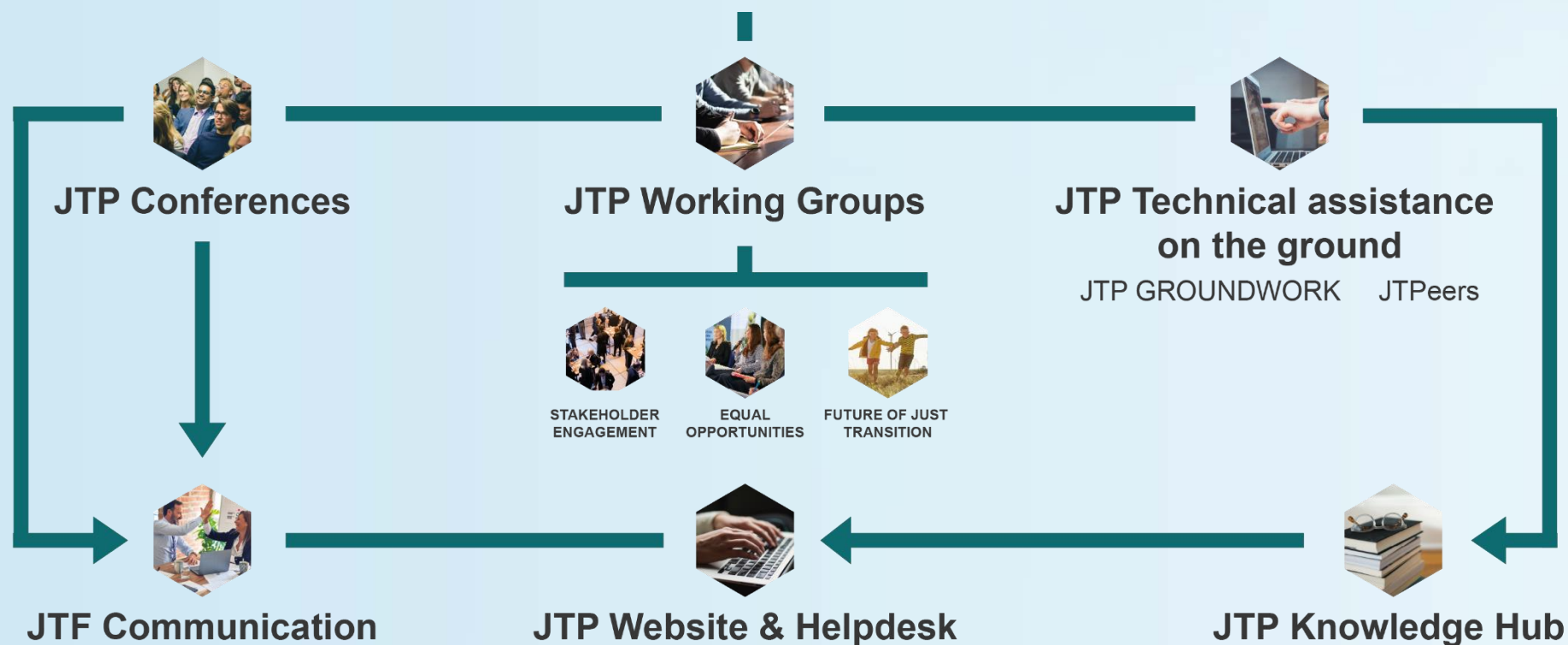
Balbina Gluza-Czyczerska

Just Transition Platform (JTP)

- **unlocks the support from Just Transition Mechanism**
- **launched in 2020 and led by DG REGIO**
- based on Recital 18 of Regulation (EU) 2021/1056 establishing the Just Transition Fund (JTF)
- Access **available to all stakeholders** from Just Transition Fund regions

Just Transition Platform – support for stakeholders

A single access point to support and knowledge on just transition



Website: ec.europa.eu/regional_policy/funding/just-transition-fund/just-transition-platform_en

Newsletter: ec.europa.eu/newsroom/regio/user-subscriptions/2511/create

Helpdesk: secretariat@justtransitionplatform.eu

Just Transition Platform events

➤ JTP Conferences in Brussels

- Organised every year, accessible to all stakeholders
- Discussions on ongoing just transition challenges, sharing success stories, experiences and knowledge on implementation
- Translated into national languages and web-streamed
- Next JTP Conference in October 2025

➤ JTP Technical Regional Forums in regions

- Organised every year in different JTF territories
- One guiding theme per event to discuss challenges and opportunities for JTF investments in specific sectors and territory
- Available for local and regional stakeholders



JTP Working Groups 2024-onwards

- Forum for **strategic exchange on achievements and challenges** shared by stakeholders in the transition process
- 3 Working Groups in total:
 - JTP Working Group on Stakeholder Engagement
 - JTP Working Group on Equal Opportunities
 - NEW!** JTP Working Group on future of just transition
- Networking opportunities of stakeholders
- Drafting recommendations and position papers to ensure just transition in relevant sector/territory



Support services on the ground



JTP Groundwork

Delivering technical assistances to regions in implementing their just transition plans. Accompanied by Technical Regional Forums



Insights from JTP Groundwork

- The **first two editions** of JTP Groundwork consisted of 18 projects and benefitted **20 JTF territories**.
- Consult the **lessons learned** from the technical assistance and deliverables here



JTPeers

Creating a database of just transition experts & facilitating region-to-region and region-expert exchanges

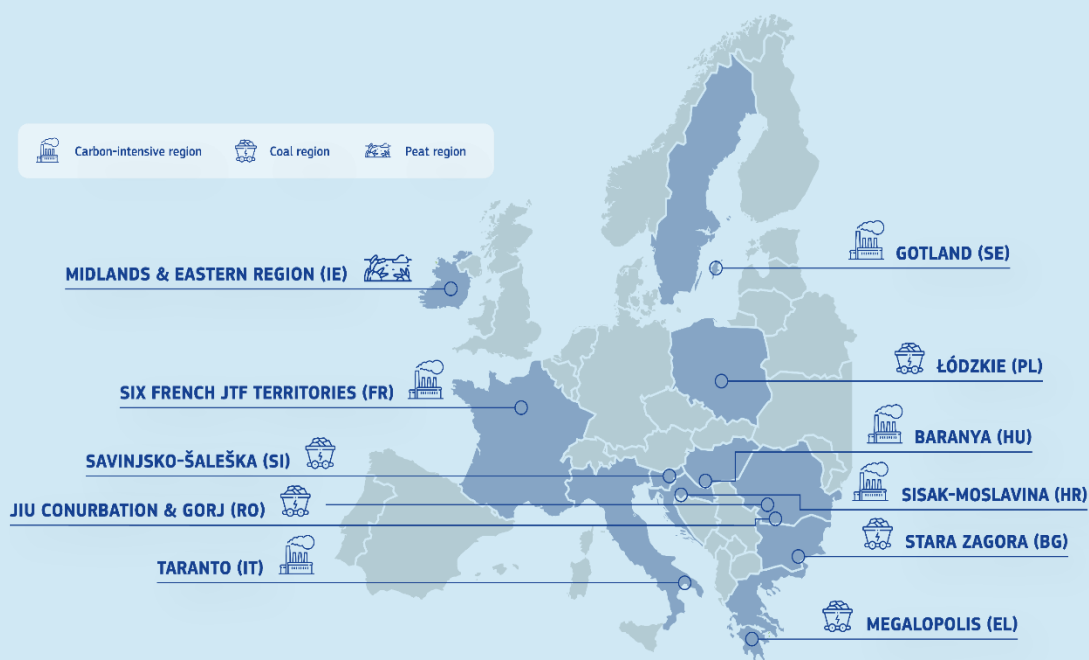


Insights from JTPeers

- JTPeers has implemented a total of **23 exchanges**, benefitting **24 JTF territories**
- Discover more on the website



JTP Groundwork - 2024



Stara Zagora (BG)

'Capacity building – energy efficiency in public buildings'



Baranya (HU)

'Mobilization of SMEs for project calls on circular economy and green technologies'



Sisak-Moslavina (HR)

'Project development – gaming industry center'



Midlands & Eastern Region (IE)

'Project development – community-owned electricity generation'



Six French JTF regions (FR)

'Project analysis and brownfield sites development'



Taranto (IT)

'Project development – IT industry and bioremediation'



Gorj county (RO)

'Supporting universities and youth in Just Transition implementation'



Megalopolis (EL)

'Identification of projects to be financed under the Just transition Mechanism'



Jiu Conurbation (RO)

'Programme management for Just Transition implementation'



Łódzkie (PL)

'Capacity building on renewables acceleration areas'



Savinjsko-Šaleška (SI)

'Communication support – district heating systems decarbonisation'



Gotland (SE)

'Assessing skill & labour needs under renewables expansion scenarios'

The call for applications for next edition has been closed on 10 March.

JTPeers Exchange 2025 – 5 exchanges benefitting 10 JTF territories



**South Ostrobothnia (FI) + Central Ostrobothnia (FI) +
Midlands (IE)**

Peatland restoration



Sisak-Moslavina (HR) + Ida-Virumaa (EE)

Upskilling youth to decrease brain drain



Silesia (PL) + Moravia-Silesia (CZ)

Re- and upskilling for green and digital jobs



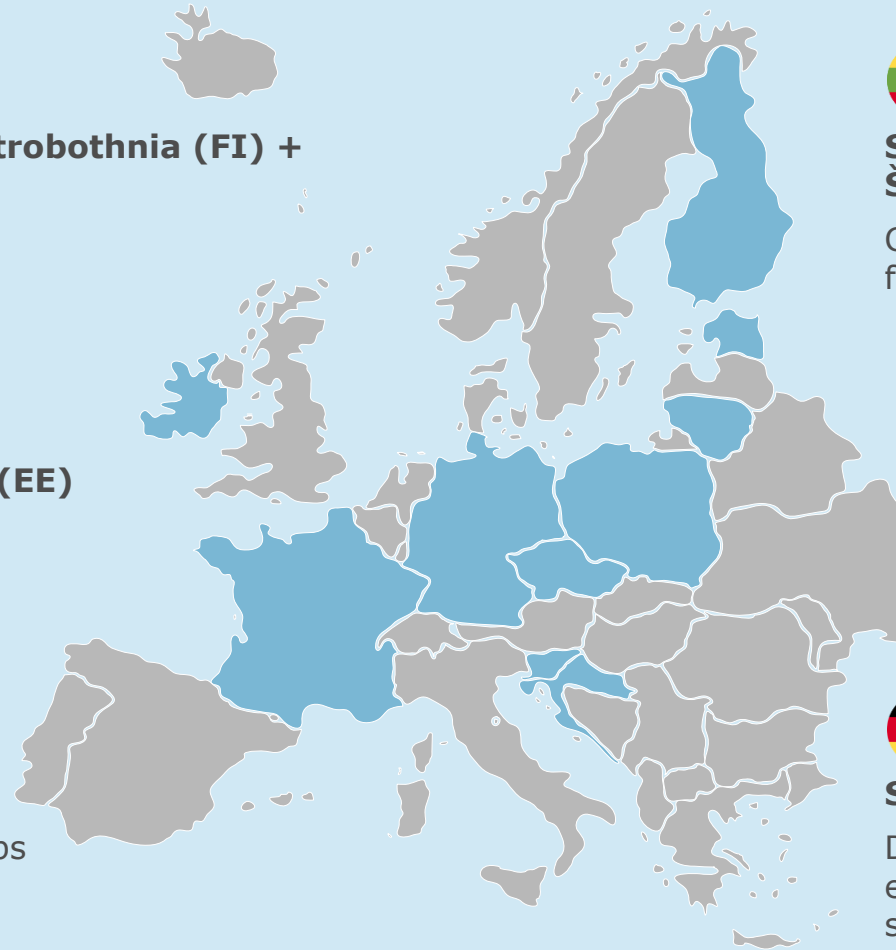
**Sialuoi (LT) + JTPeers Expert Martin
Šikovec**

Creating an innovation ecosystem by
fostering academic collaboration



Saxony (DE) + Bouches-du-Rhône (FR)

Decarbonising industry through circular
economy and hydrogen approaches, and
state aid



Speakers



**Balbina Gluza-
Czyczerska**

DG REGIO,
European
Commission



Alice Arnaldi

DG REGIO,
European
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Bettina Rafaelsen

JTP Groundwork

Skills development and just transition in Sweden

Alice Arnaldi

Agenda

- Brief introduction – Skilled labour shortages in Sweden
- Just Transition Fund and support to skills development

The Just Transition Fund in Sweden



- Sweden wants to be climate neutral by 2045
- Focus on **industrial transformation** while **maintaining competitiveness**
- Total budget of **EUR 311 million** (50% EU)
- **3 eligible counties:**
 - Norrbotten (steel industry)
 - Västerbotten (metal industry)
 - Gotland (cement industry)
- R&I activities, deployment of clean energy technologies and infrastructure, renewable energy and energy efficiency, **upskilling and reskilling of workers**, etc.
- Investments to **reduce greenhouse gas emissions** in activities covered by the Emissions Trading System
- Measures to strengthen **Gotland's electricity grid**

Skills development under the JTF

- About **11% of the JTF budget** supports skills development for enterprises to change in Norrbotten and Västerbotten
- **Some examples of ongoing skills projects:**
 - Norrbotten: SSAB Academy, Skills boost in the steel industry value chain
 - Västerbotten: KUHL, Vocational growth for the metal industry in Skellefteå Municipality
- More information (and a nice video) available on the Managing Authority's website:
[Fonden för en rättvis omställning - Tillväxtverket](#)

Tack! Questions?



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@EUinmyRegion
@RegioSweden

Speakers



**Balbina Gluza-
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DG REGIO,
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Bettina Rafaelsen
JTP Groundwork



Presentation of findings of the study 'Labour Market Consequences of the Green Transition'

Bettina Rafaelsen

JTP Technical Regional Forum in Visby

Introductory note

- The **study of labour market consequences of the green transition** was conducted from June to October 2024.
- The analysis is based on extensive **desk study** of labour market data and comparable processes, as well as **interviews** with stakeholders on Gotland and in Sweden
- The analysis was concluded before the decision of the Swedish government **not to approve** a number of off-shore wind project applications in the Baltic Sea.
- The **forecasts** of the analysis with regard to labour market needs should be seen in this light.
- The **final report** as well as this presentation were, to the extent possible, adapted to the changing circumstances.

Overview

1. Background for the study
2. Labour marked indicators for Gotland
3. The green transition and labour marked impacts
4. Challenges and opportunities for the labour market
5. Recommendations

1. Background

- Gotland faces major investments in the **green transformation** of its cement and mineral industry
- The green transition will affect the **cement and mineral industry**, the **energy sector** (grid and renewables) on and around Gotland, as well as other sectors on Gotland, especially the **transport sector**
- The large investments will have an impact on the **labour market**; both in the short and in the long term
- Gotland is a recipient of the **Just Transition Fund** to address these challenges. This study is a part of the support provided under the **Just Transition Platform**.



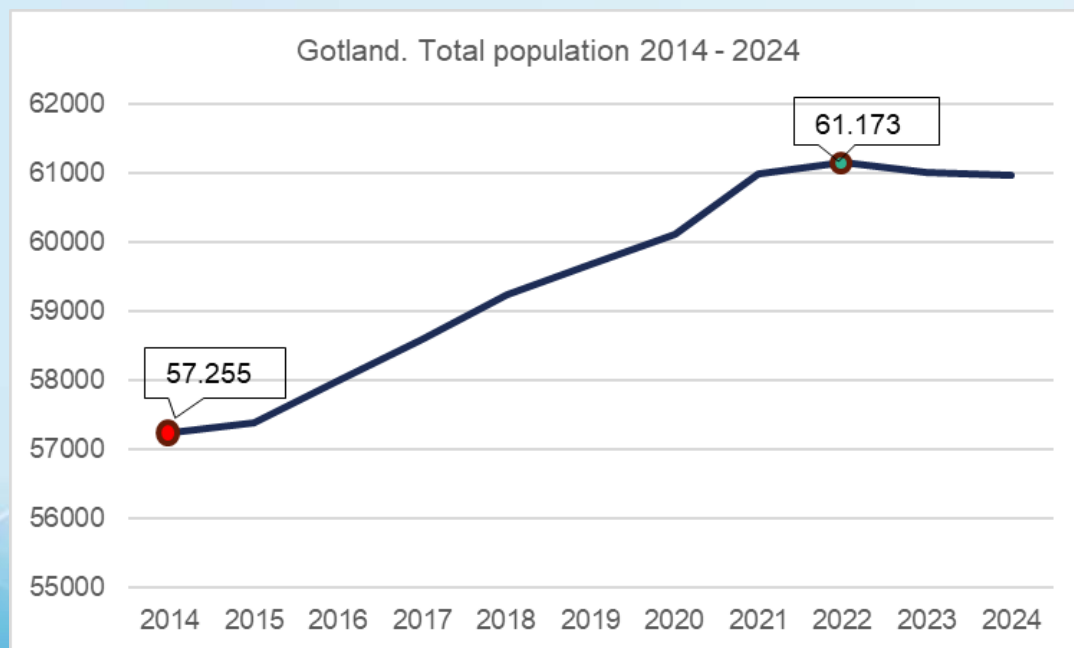
2. Labour market indicators

Gotland is a small labour market and as an island very dependent on the local population (size), and the local labour force

Population

Population development:

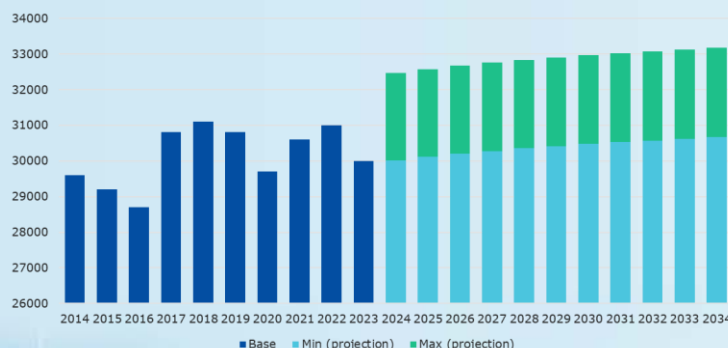
- Upwards trend - but a slight decrease in 2023 and 2024
- An increasing share of elderly persons



Labour force, education and unemployment

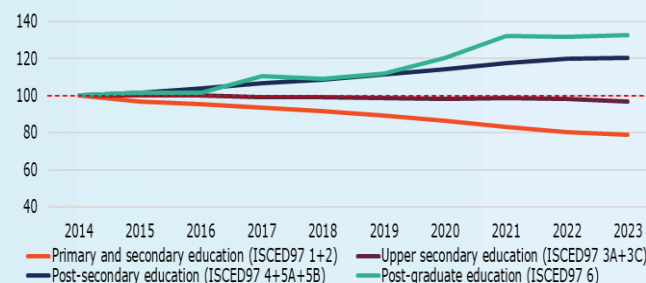
Active labour force (projection 2014-2034)

- Remains at current level – possibly higher - between 30,500 - 33,100 people
- Depending on population development (see before)



Level of education

- Fewer unskilled workers
- Stable number of skilled workers and of upper secondary
- Increase in higher education (post-secondary education)

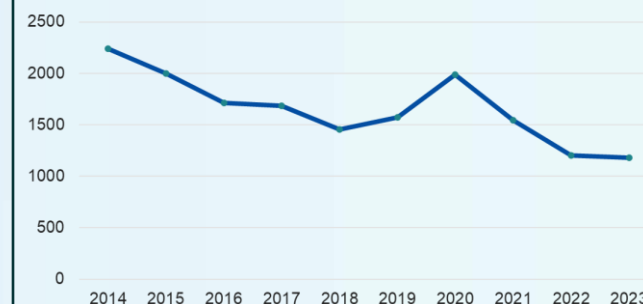


Unemployment:

Fewer **unemployed** on Gotland than the rest of Sweden

August 2024:

- 4.1% on Gotland
- 6.8% in Sweden



Labour force - cement & mineral industry

Current situation in the cement and mineral industry

- Direct employment:
 - 428 employed persons (WSP Consultants (2022))
 - most at Gotland's two largest companies (cement and mineral industry)
- Indirect employment:
 - Estimate: 278 employed persons in:
 - transport and communication
 - trade, business service,
 - public services,
 - building/construction industry





3. The green transition and labour marked impacts

Investments in green transition

At least **12 projects** linked to the green transition:

- 2 major industry projects (CCS)
- 2 infrastructure projects (Grid)
- 8 energy production projects:
 - 7 offshore wind farms
 - 1 onshore windfarm
- Other infrastructure investments to follow;
 - investments in ports,
 - hydrogen etc.

INDUSTRY

Heidelberg Materials	Carbon Capture and Storage from cement production
Nordkalk	Carbon capture and e-fuel production based on windpower

INFRASTRUCTURE

GEAB grid upgrade	Upgrading the local power grid on Gotland
Kraftnett Mainland connection	Establishing a high-capacity high voltage link to the mainland

ENERGY SUPPLY

RWE	1 offshore windfarm (not approved)
OX2	3 offshore windfarms (not approved)
Freja Offshore	1 offshore windfarm (not approved)
Eulos	2 offshore windfarms (not approved)
SR Energy	1 onshore windfarm

Investments: Construction and operation

Construction phase:

- Short, intensive construction works (CCS equipment, cable connections, **offshore-windfarms**, etc.)
- Major part of activities between 2027 and 2030
- Large requirements for capital, special skills, material and equipment, labour for construction, etc.
- Will (most likely) be carried out by mainland contractors and suppliers from abroad
- **Local impacts:** related construction tasks (earthworks), support functions, repairs, supply, accommodation, service etc.

Operational phase:

- Operation of the facilities in the entire lifespan of the projects
- Fewer, but permanent jobs
- Some experts will commute from mainland or other places
- Less specialised skills needed – can be developed over time
 - Daily operation of the Carbon Capture projects, e-fuel production, windfarms etc.
 - Staffing of production, operation and maintenance, service, supply, etc.
- **Local impact:** Takes place locally and with local labour

Tasks and skills needed

Projects/tasks	Construction phase	Operational phase	Local skills and jobs
Industry projects	<ul style="list-style-type: none"> Building and construction, installation tasks Earthworks, transport 	<ul style="list-style-type: none"> Daily operation of the Carbon Capture projects Staffing of production, operation and maintenance, service, supply, etc. 	<ul style="list-style-type: none"> Blacksmiths, electricians and process operators Control and monitoring of fuel production, Control room staffing, testing and sampling of products, Maintenance and repairs of production facilities
Cable projects	<ul style="list-style-type: none"> Earthworks, installation 	<ul style="list-style-type: none"> As currently 	<ul style="list-style-type: none"> As currently
Offshore windfarms	<ul style="list-style-type: none"> Transport and logistics, port service Catering and accommodation Supply of goods 	<ul style="list-style-type: none"> Daily operation* of the e-fuel production, windfarms etc. 	<ul style="list-style-type: none"> Electricians, mechanics (maintenance of wind turbines) Warehouse workers, office workers Crew members for service vessels

*Note: The operation will mainly take place locally and with local labour (if possible): Fewer costs and higher quality

Local contribution — construction and operational phases

Projects	Construction phase (FTEs)	Operational phase (FTEs)
Cement and mineral industry		
CCS facilities, e-fuel production facility	200 - 300 ¹	100 - 120
Cable projects		
Upgrading local power grid + mainland connection	500 - 700	0
Offshore and onshore windfarms		
Installation of windfarms, substations, cabling	1,300 - 2,000 ²	700 - 1,400
Total	2,500 - 3,000⁴	800 - 1,500²

- 1) Heidelberg Material expect up to 1,500 external workers in short periods at the factory in Slite
- 2) Figures are uncertain and will depend on the contractors' decisions
- 3) The workforce brought in can be extensive and can place high demands on accommodation facilities.
- 4) Rough estimates – based on limited experiences

Summary of potential effects

- The green transition investments will imply significant activities the coming years – especially **construction activities** planned for 2027 - 2032
- Local tasks will include **support, supplies, accommodation, transport and logistics**
- New permanent jobs in an operation & maintenance port, staff on CCS facilities, **e-fuel production, crew on vessels,**
- Derived jobs: Transport and travel industry (air and sea), hotel accommodation, catering and other supplies





4. Challenges and opportunities for the labour market

Potential challenges on the labour market

Industry	Forecast for Gotland until 2035	Results of green transition
Transport and logistics	The labour market in this industry is expected to be in balance for the coming years.	An increase in the demand, related to the investment projects might result in a deficit of labour in this area.
Accommodation and catering (hotels and restaurant etc.)	Risk of deficit in trained labour.	The deficit of labour may be increased by the investment projects.
Building and construction	Expected shortage of trained labour the coming years	The labour deficit may further increase .
Purchase and supply of goods and necessities, trade etc.	Expected surplus of labour	Potential new job possibilities
Industry and production (process industry etc.)	Expected shortage of trained labour the coming years	The workforce deficit may develop further
Electrical engineering, automation, computer or communication technology.	There is a deficit of trained labour in this area today.	The workforce deficit may develop further

Labour market report: '**Regional education and labour market forecasts, Forecast results for Gotland in 2035**' The report points to expected labour market challenges in the long term.

Attracting competencies to Gotland

- The green transition of the industry (cement/mineral), and possible renewable energy projects:
 - will **increase demand for labour**, including labour with special skills.
- New jobs will be a noticeable proportion of total employment:
 - some jobs will be created in industries where **labour shortages are expected**.
- Due to population development and low level of unemployment:
 - necessary to **attract international/national labour** to secure skills and an adequate labour force.
- Attractiveness of Gotland for relocation and work, needs to be further emphasized:
 - in order to be able to **recruit for the new jobs** that will be available.
 - to keep and **maintain the current level** of labour force.

Key factors

A number of themes have been highlighted in relation to attracting new labour to Gotland:

- **access to education**, especially higher education
- well-functioning **public services** (healthcare, public schools etc.),
- **energy infrastructure** (electricity grid)
- **transport infrastructure** (ports and airports). good and affordable traffic connections to the mainland (ferry and air connections),
- Availability of (affordable) housing.



Factors impacting attractiveness on Gotland

Individual factors that can attract labour to Gotland	Individual factors that may be barriers to attracting labour to Gotland
<p>Better job opportunities in general (more jobs to choose from).</p> <p>Attractive job possibilities (potential for more interesting jobs) within green transition.</p> <p>Attractive environment (nature, landscape, cultural history)</p> <p>Dissemination of information about interesting employment opportunities on Gotland</p>	<p>Long travel time and high transportation costs to and from Gotland</p> <p>Relatively high housing prices and a general housing shortage on Gotland</p> <p>Higher personal income taxes than on the mainland</p>
Structural factors that can attract labour to Gotland	Structural factors that may be barriers to attracting labour to Gotland
<p>Infrastructure that supports commuting: Investment in better transport options between Gotland and the mainland</p> <p>Attractive educational opportunities, especially within continuous education.</p> <p>Attractive housing possibilities (more interesting housing options than on the mainland).</p>	<p>Fewer opportunities to choose different jobs in the labour market, compared to the mainland</p> <p>Fewer educational opportunities compared to the mainland</p>

5. Recommendations



Green transition focus on Gotland – the way ahead

- Ensuring a **Sustainable Energy** Supply – to have sufficient energy for CCS (and other)
- Strategy to pursue **Opportunities** –focus on relevant projects, potential for local business
- **Monitoring** of potential projects – to be able to plan the development
- **Dialogue** with developers/project owners – understand the needs for skills and labour
- **Education and Training** – to have access training and reskilling (on Gotland and mainland)
- **Attracting and retaining** – development of





Questions?

The report was prepared by

- JTP GROUNDWORK TEAM
- Bettina Rafaelsen bera@viegandmaagoe.dk
- Poul Sørensen pos@cowi.com





A green future: Labour market needs and skills development for the green transition

11:15 – 12:00

Speakers



Myriam Boveda

DG REGIO,
European
Commission



Tina Weber

Eurofound,
Research
officer



Financing skills development in the green transition

Myriam Bovéda

European Commission, Directorate-General for Regional and Urban Policy,

JTP Groundwork Technical Regional Forum
Visby, 12 March 2025

Skills for the green transition

- The green transition can **create up to 1 million additional jobs** in the EU **by 2030**; and 2.5 million by 2050 – provided that the right policies are in place.
 - **Green jobs** offer significant opportunities for job creation
 - The **European Green Deal** (launched in 2019) is a transformative agenda foreseeing **massive investment, including in training, and skills**
 - But today only at 37% of the workforce participates in training yearly - and 10% in energy-intensive industries.
- **Skills needs:** The Commission estimates that the **Net-Zero Industry Act** (2023) has the potential to create around **350.000 jobs by 2030 in clean technology manufacturing (including batteries, solar and wind power, and heat pumps)**
 - **This will require investments of more than €3 billion** for reskilling and upskilling in manufacturing strategic net-zero technologies.

Financing green skills from cohesion policy

- **EUR 44.2 billion** are allocated to skills under Cohesion Policy for the period 2021-2027
- This is complemented by **Member States co-financing**: a total allocation of **EUR 67.7 billion**
- This amount which will be **boosted in the upcoming EU budget**, as highlighted in the Political Guidelines for the next European Commission.
- EU must focus on:
 - supporting **skills** development
 - **job-to-job transitions**
 - quality **job creation**
 - **anticipation and management of change**
 - affordable access to all services and in particular **essential services**

Cohesion policy supporting green transition in Sweden (2021-2027)

- **Sweden aims to achieve climate neutrality by 2045.**
- For this, Sweden needs to transform its energy use; adapt its society to climate changes; and develop new green skills, innovative business models with circular and fossil-free production processes and recycling techniques.
- **ERDF: EUR 863 million for investments in growth, skills and jobs**
- **JTF: EUR 156 million, 1 stand-alone JTF programme with 3 plans (Norrbotten, Västerbotten, Gotland).** Investments supported: **green skills - upskilling and reskilling of people**, economic diversification, renewable energy, sustainable local mobility, digitalisation, soil regeneration, circular economy, social infrastructure

Examples of JTF project supporting green skills in other Member States

1. Green skills projects in Czechia

➤ **Black Cube: Research Library in Ostrava**

- 66.811.393 EUR from JTF
- Promoting education and innovation, climate education centre
- From "coal mining to data mining"
- Not only a scientific library, but also a centre of digitisation and education
- For professionals and public: to learn about new trends in the field of smart technologies, librarianship, creative culture, and environmental education.

Examples of JTF project supporting green skills in other Member States

- **CEPIS: Centre for Business, Professional and International Studies** at the School of Business Administration in Karviná
 - 23.307.694 EUR from JTF
 - Facilities for the **support of innovation and teaching of attractive study programmes** in relation to the needs, development, and transformation of the Moravian-Silesian Region
 - A new **higher education infrastructure** with a focus on business and economics
 - Numerous benefits:
 - support for entrepreneurship and innovation
 - linking study and practice
 - increasing the qualification of employees
 - creating a space for sharing and inspiration
 - attracting and retaining talents
 - increasing the number of students and their readiness for the labour market
 - creating jobs and cultivating public space

2 . Green skills project in Greece

➤ Action '**Skills Development and Employment Centers**'

- Integrated support services for the promotion of employment for workers, people at risk of job loss and unemployed
- Creating new jobs and new high skills jobs, safeguarding equal opportunities, inclusion and non-discrimination
- Programmes supporting human resources and enterprises, career guidance and counselling services in green and digital jobs

3 . Green skills project in Croatia

➤ **Croatia's Master's School in Sisak**

- Reskilling for digital and green transitions
- 39.500.000 EUR (phase 1)
- Infrastructure and re- and upskilling programs in line with the needs resulting from digital and green transitions.
- Expected users: unemployed and employees who seek reskilling.
- It is expected that by 2029 there will be over 8500 people involved and trained in the school's programs.

Conclusion

- **Skills** as a **crucial resource** for sustainable growth
- Focus on **innovation, inclusion, and regional competitiveness**
- **Collaborative efforts** needed for an inclusive green transition

Thank you!



Useful links:



Visit the **Just Transition Platform**: europa.eu/!PCGFJK

Sign up for the **JTP newsletter**: europa.eu/!TuwyNU

Track JTF **open data**: cohesiondata.ec.europa.eu/funds/jtf/21-27

Read the **JTF data story**: cohesiondata.ec.europa.eu/stories/s/28yb-762c

Apply to the **Public Sector Loan Facility**: europa.eu/!VxYc8M

Read the **Staff Working Document** on TJTPs: europa.eu/!nMwNU9

Speakers



Myriam Boveda

DG REGIO,
European
Commission



Tina Weber

Eurofound,
Research
officer

A green future: Labour market needs and skills development for the green transition

Occupations likely impacted by the green transition and their job quality

Tina Weber– Senior Research Manager

Climate risks

- Increased temperatures and increased heatwaves
- Other climate risks
 - Air pollution
 - Exposure to UV
 - Communicable vector-borne diseases and expanded vector habitats
 - Changes in the work environment
 - Extreme weather events
 - **Industrial transitions and emerging hazards**



Climate risks

- Increased exposure to psychosocial risks
 - job insecurity
 - management of change
 - ethical demands
 - financial insecurity
 - other forms of insecurity
 - increased workload
 - skills needed to do the job





**If we want a green transition based on high-quality jobs
and work environments, what should we do?**

Green transition and job quality – making use of the EWCTS

Greening of occupations

The “greening” of occupations refers to the extent to which green economy activities and technologies increase the demand for existing occupations, shape the work and worker requirements needed for occupational performance, or generate unique work and worker requirements.

(Dierdorff et al. 2009)

- Crosswalk between O*NET and ISCO-08 (mapping of occupational codes)
- Applicable to EWCTS 2021 (ISCO-08, 4 digit)
- Caveats: evolving discussion around green jobs, imprecision in identifying and measuring the degree of greenness of jobs.



Green Occupations according to O*NET

New and Emerging

Created to meet the new needs of the green economy

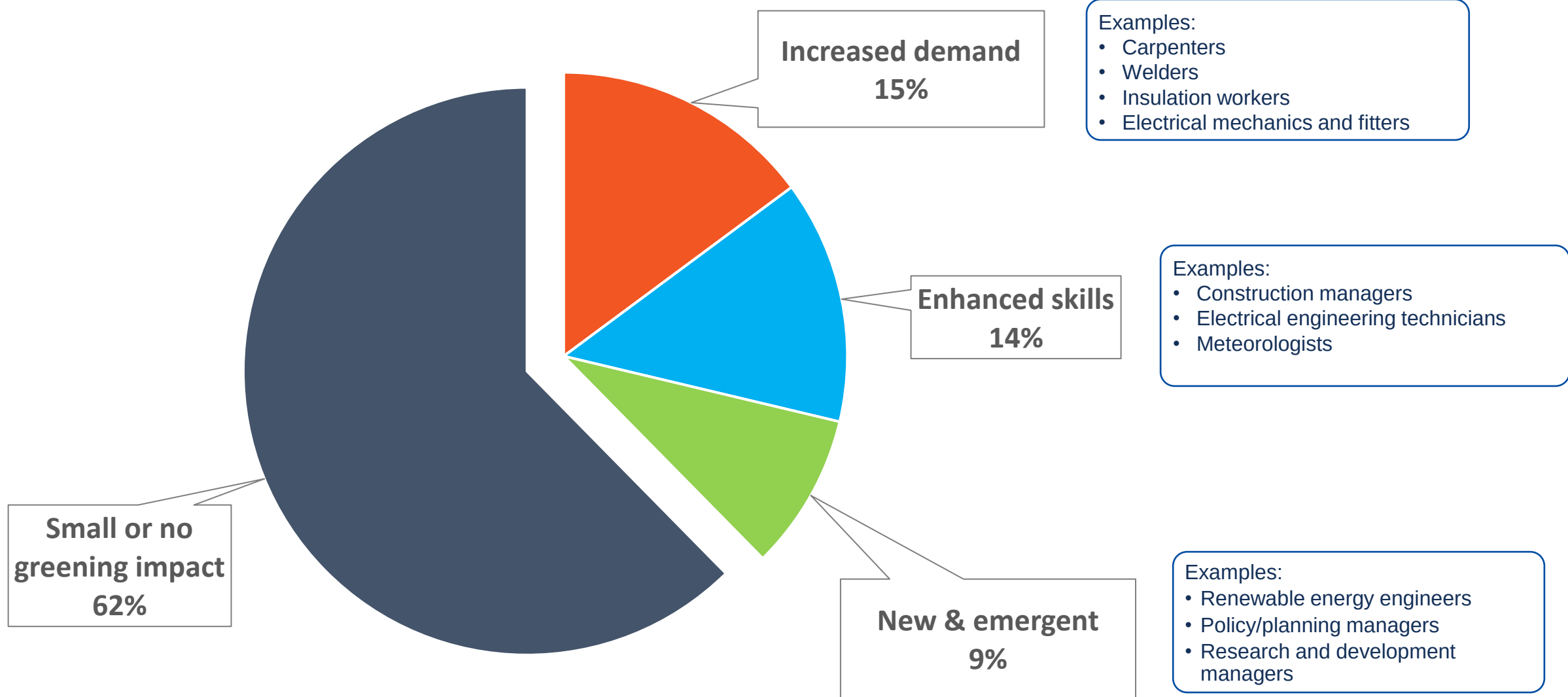
Enhanced Skills

Existing jobs that require changes in tasks, skills and knowledge as result of greening

Increased Demand

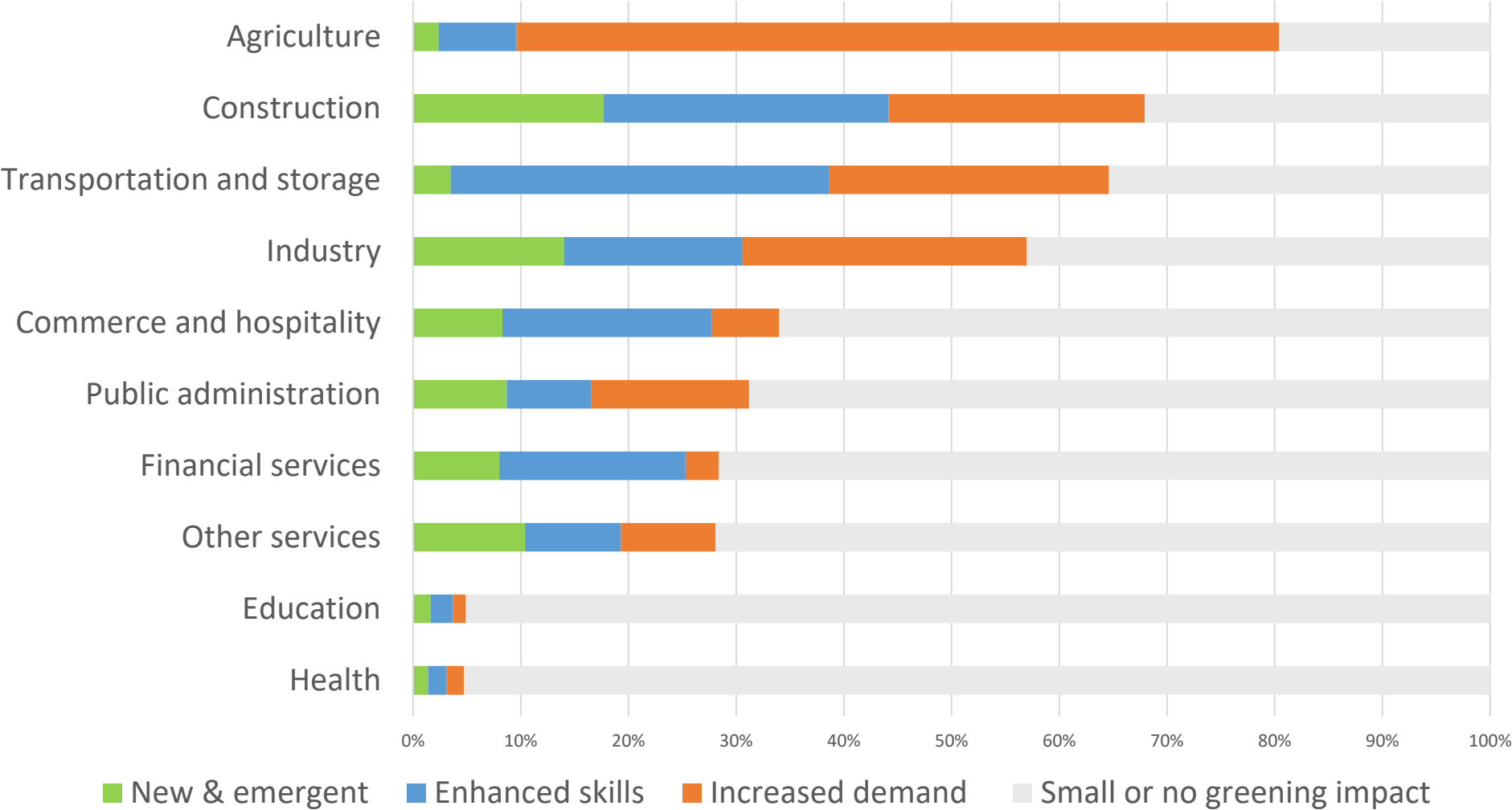
Existing jobs expected to be in high demand; do not require changes in tasks, skills or knowledge

Greening occupations - Jobs likely impacted by the transition



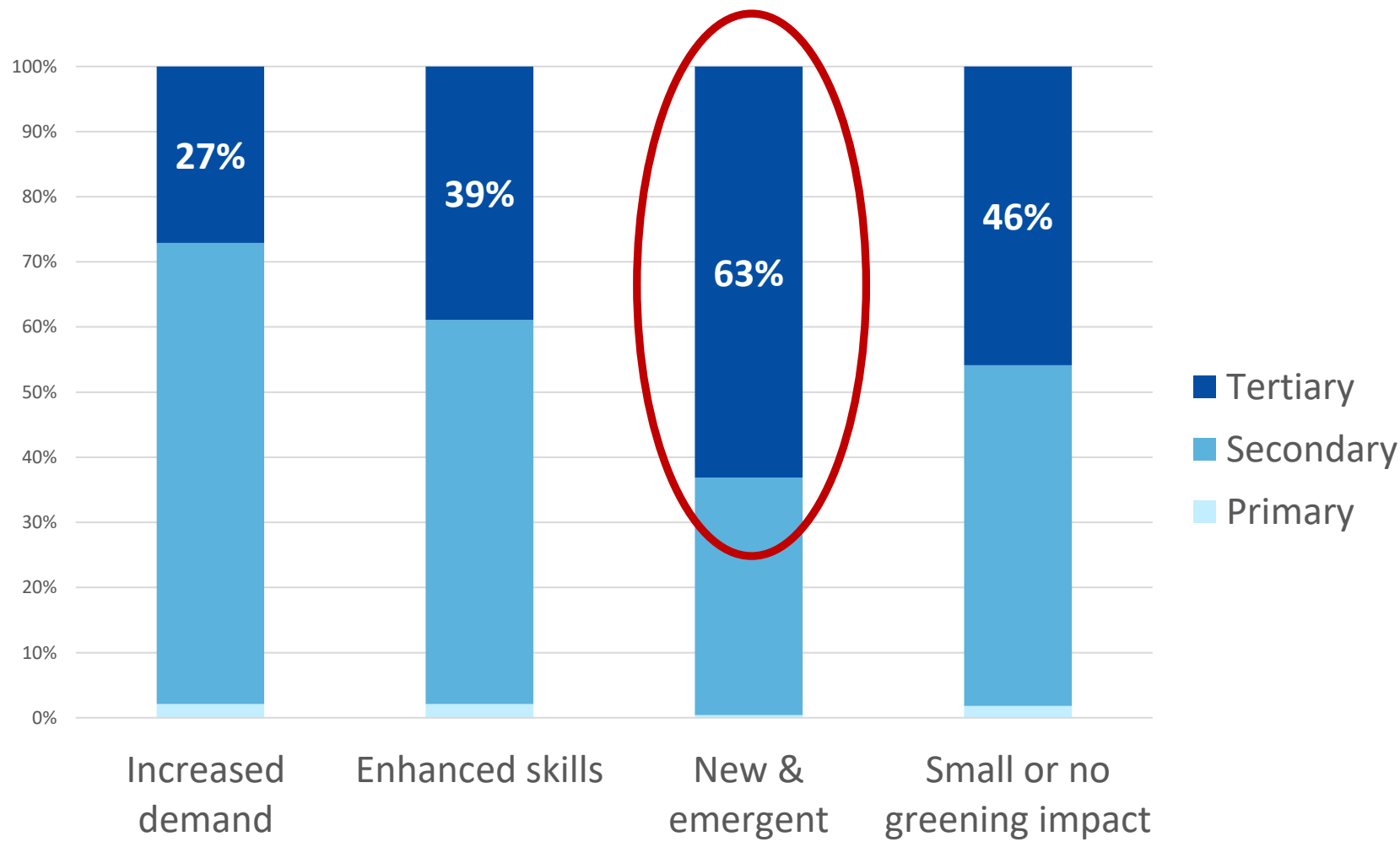
Source: EWCTS, 2021.

Greening occupations by sector



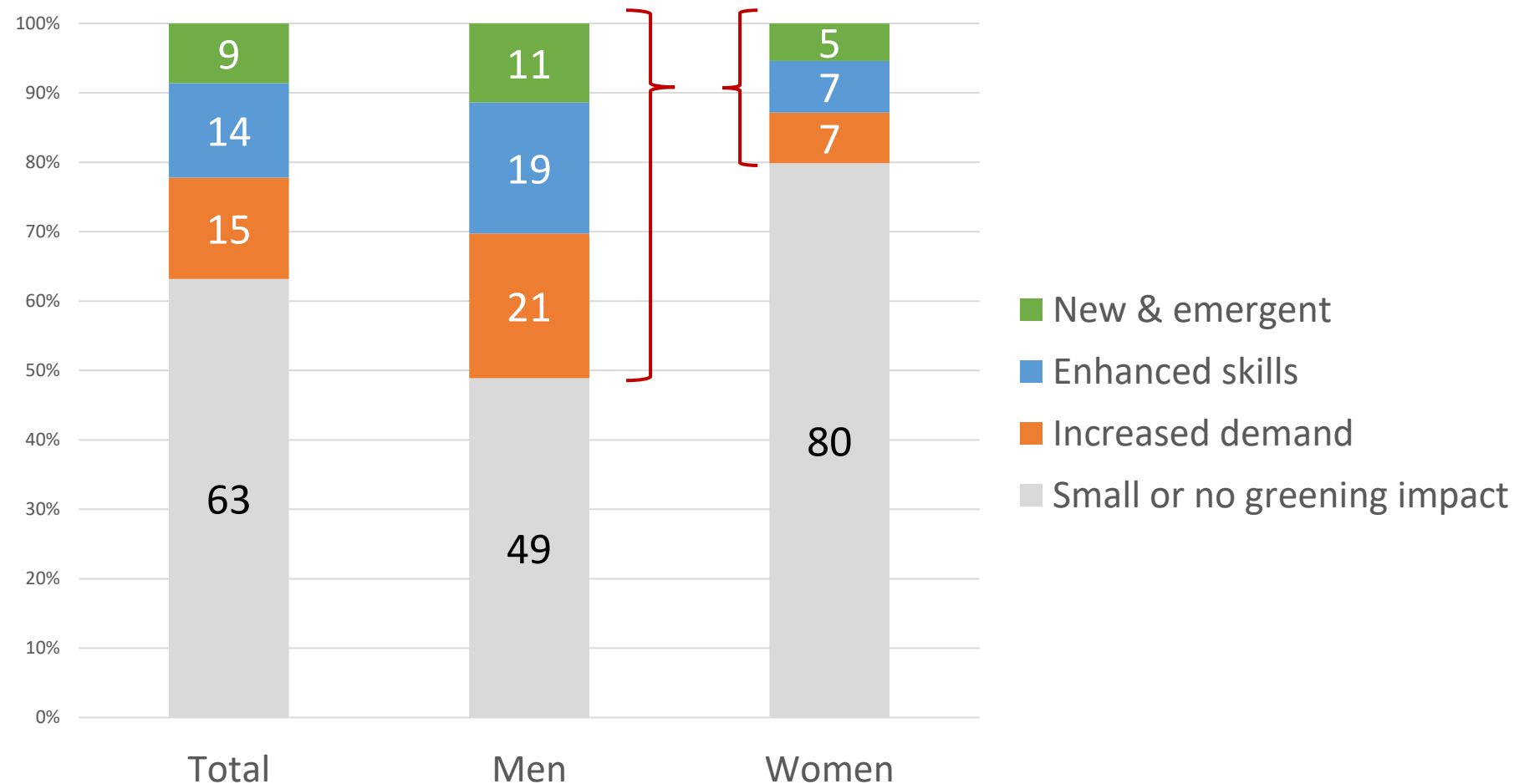
Source: EWCTS, 2021.

Jobs likely impacted by the green transition according to level of education



Source: EWCTS, 2021; figures refer to EU27.

A gendered transition?



Source: EWCTS, 2021; figures refer to EU27.

Seven dimensions of job quality



Physical environment



Social environment



Work intensity



Skills and discretion



Working time quality



Prospects



Earnings



Eurofound

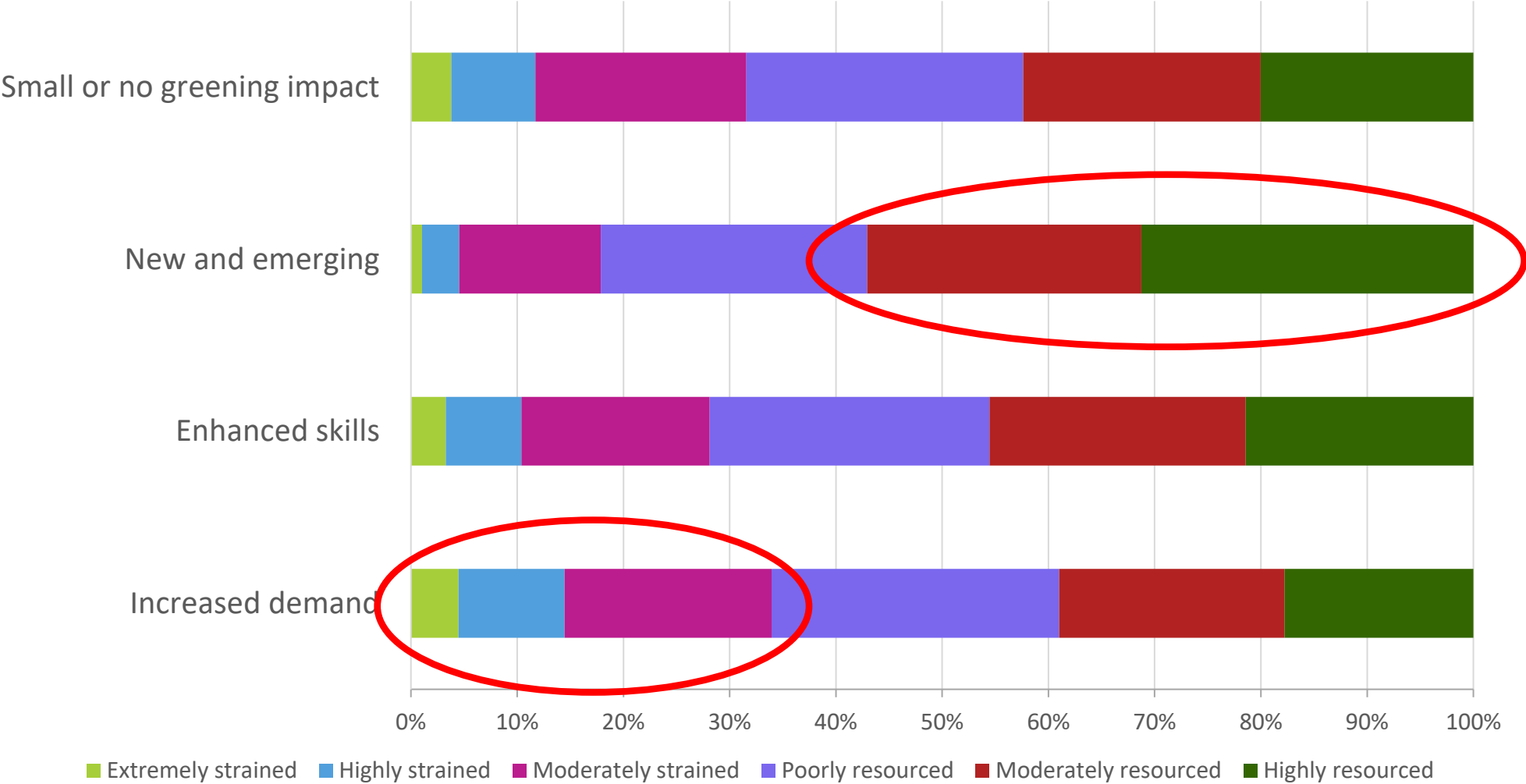
Source: Eurofound (EWCS 2015)

Job quality: Job strain approach focuses on the balance between job demands and job resources*

Dimension	Job demands	Job resources
Physical and social environment	Physical risks	
	Physical demands	
	Intimidation and discrimination	Social support
Job tasks	Work intensity	Task discretion and autonomy
Organisational characteristics	Dependence (self-employed only)	Organisational participation and workplace voice
Working time arrangements	Unsocial work schedules	Flexibility of working hours
Job prospects	Perceptions of job insecurity	Training and learning opportunities
		Opportunities for career development
Intrinsic job features		Intrinsic rewards
		Opportunities for self-realisation

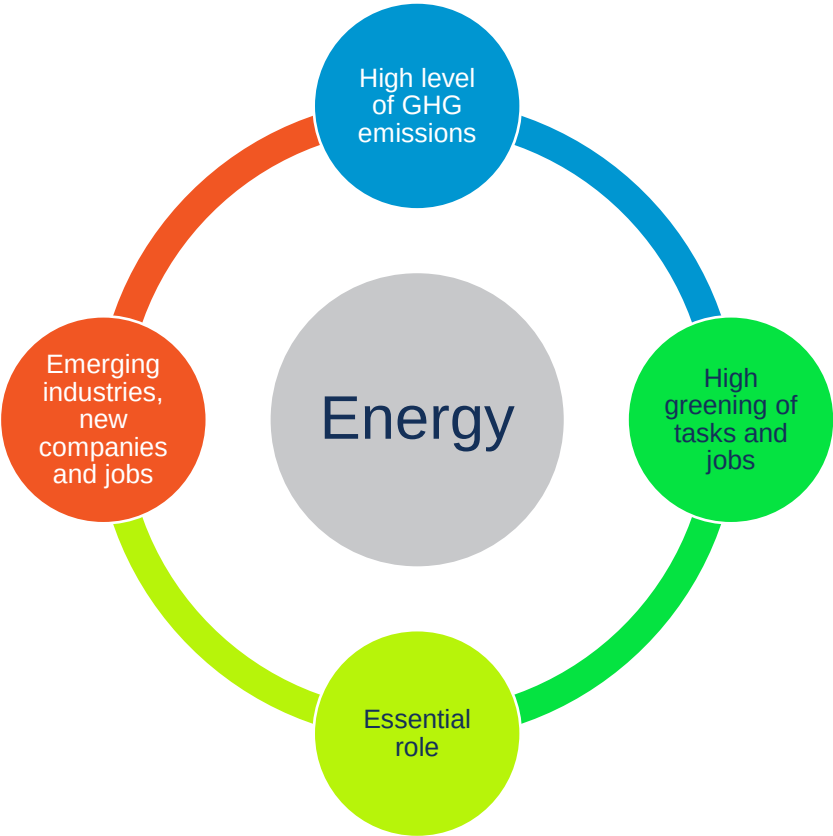
**Used for the analysis of data from European Working Conditions Telephone Survey (EWCTS) 2021*

Job quality index, by greening occupational groups (%)

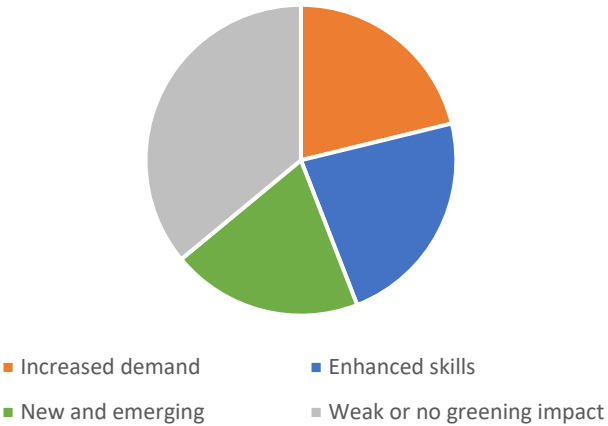


Source: EWCTS, 2021; figures refer to EU27.

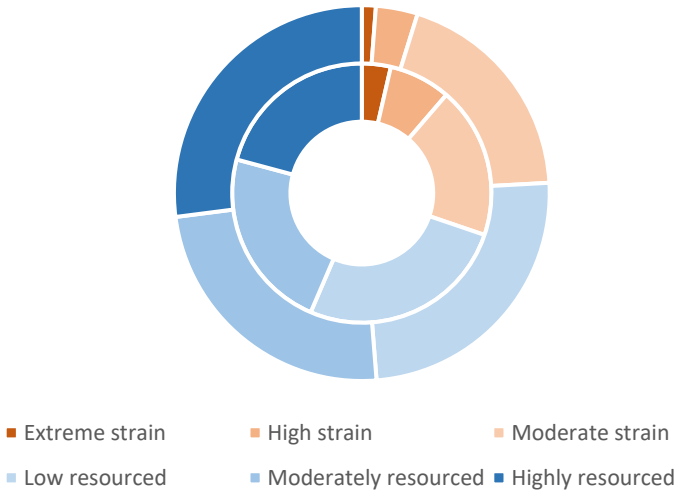
Energy



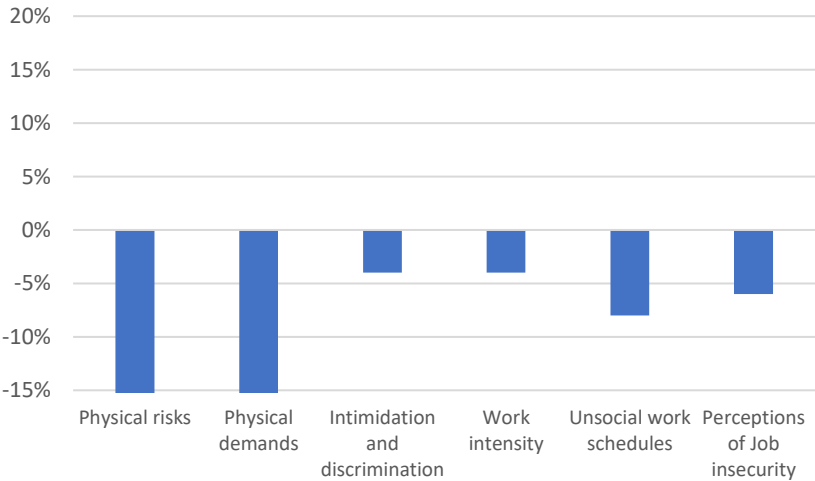
Share of electricity, gas, steam workers in occupations likely impacted by greening



Job quality index - Electricity, gas, steam Vs EU 27

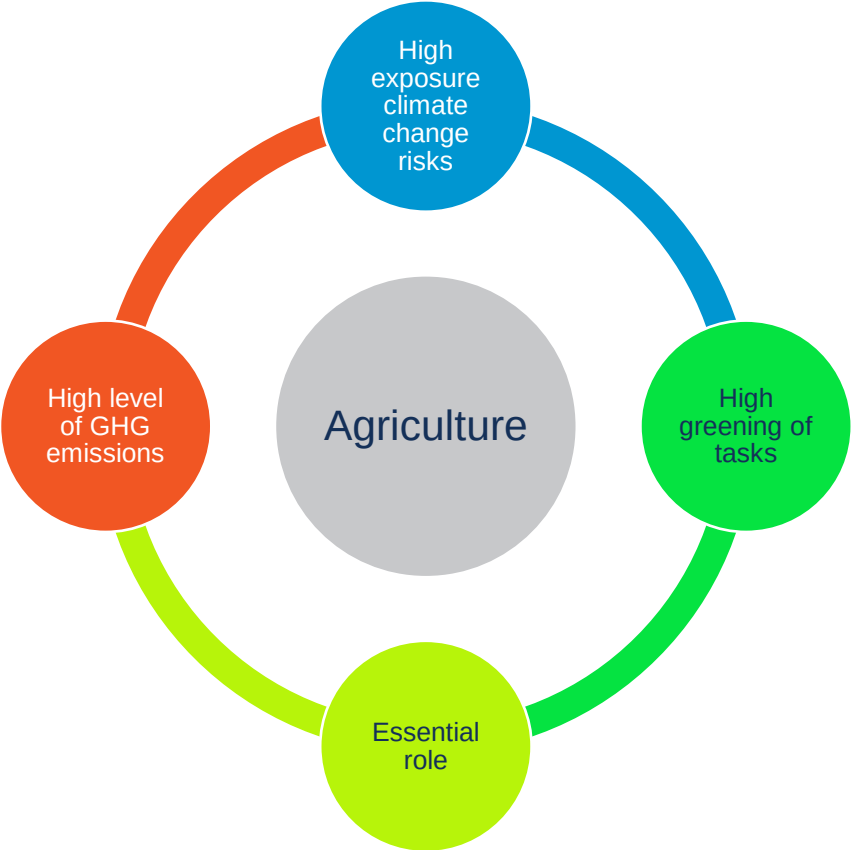


Job demands - Electricity, gas Vs EU27 (p.p)

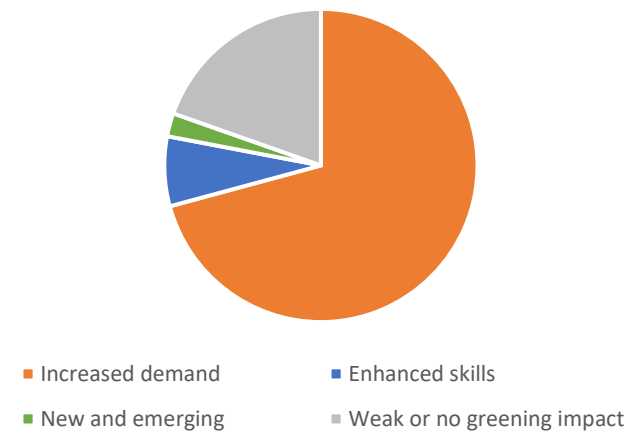


Source: EWCTS, 2021; figures refer to EU27.

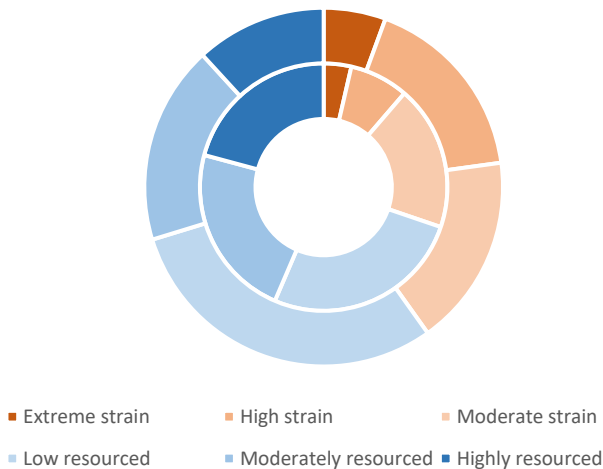
Agriculture



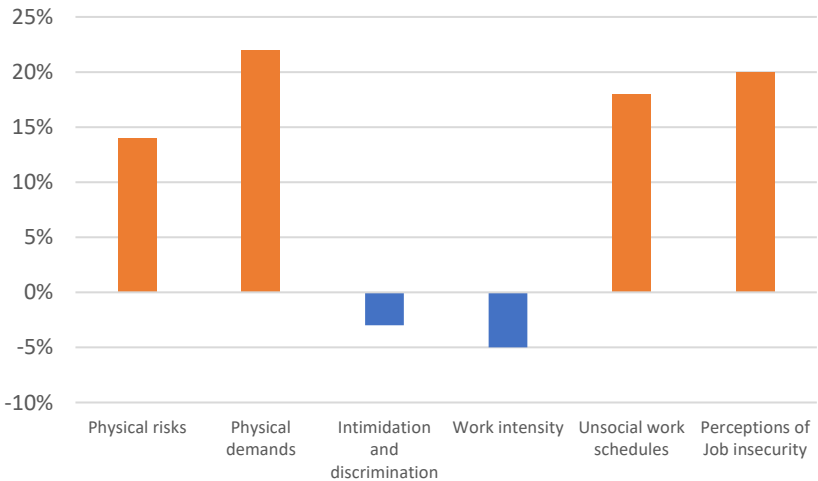
Share of Agriculture workers in occupations likely impacted by the green transition



Job quality index - Agriculture Vs EU27

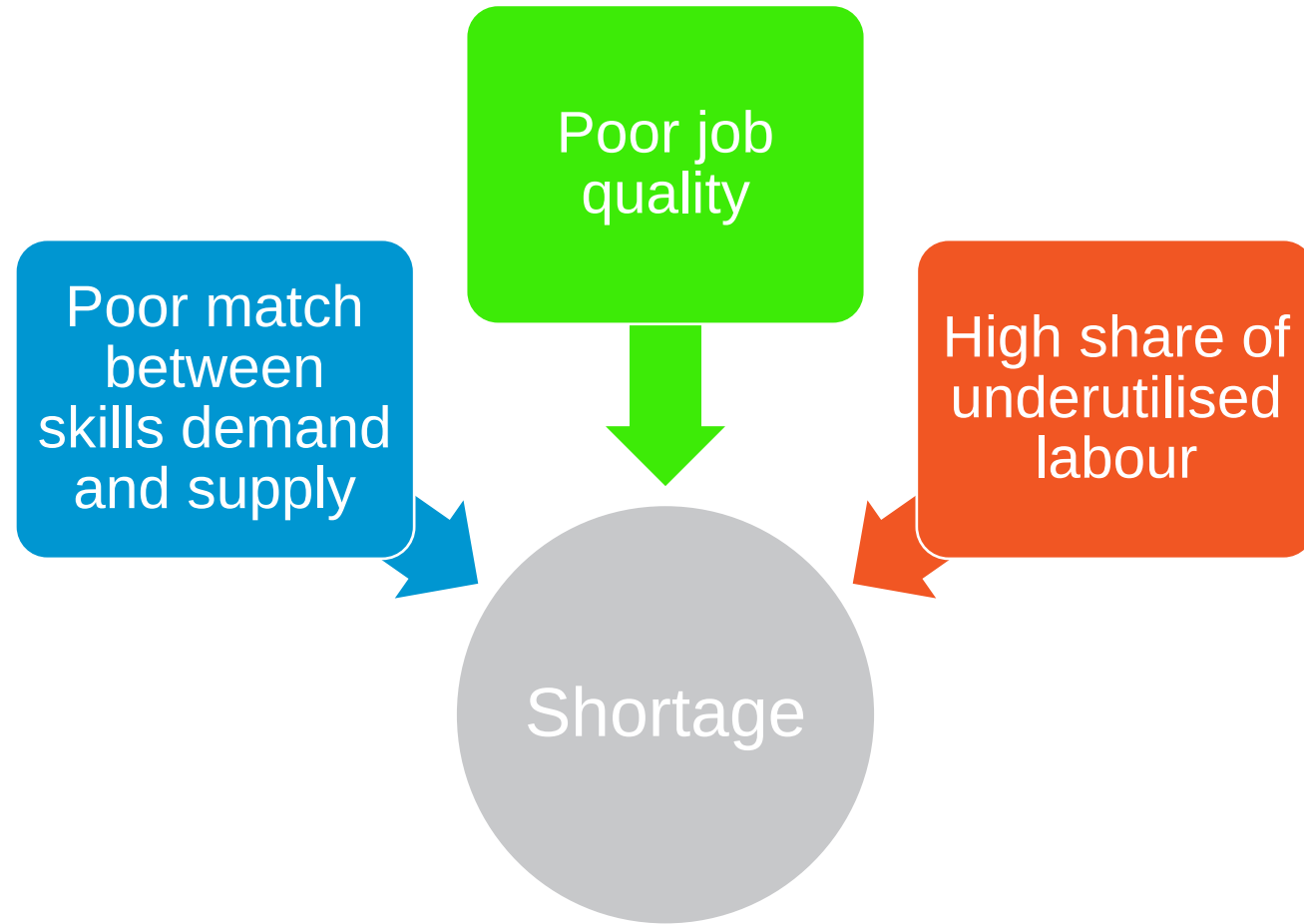


Job demands - Agriculture Vs EU27 (p.p)



Source: EWCTS, 2021; figures refer to EU27.

Drivers of labour shortage



Attract labour



- Enhance attractiveness of certain sectors
 - Improved pay and working conditions
 - Better information on career pathways and employment opportunities
 - Improve attractiveness of living and working conditions in a country/region
 - Active migration policies
 - Reduction of administrative barriers to migration
 - Better matching of foresight/shortage occupations to migration systems
 - Re-attracting nationals to return
 - Improved employer recruitment strategies (targeted recruitment, referral programmes, social media)
- ➔ Evidence shows that raising wages can enhance retention and recruitment, but is often insufficient without other elements improving working conditions (e.g. better infrastructure, greater control over working hours, more flexibility, help with housing or childcare etc.); Active migration policies should avoid brain drain and brain waste

Activate under-utilised resources

- Tackle work-life balance issues
 - More equal take up of leave systems
 - Improve (child)care facilities
 - Enhanced access to flexible working
- Active labour market policies to integrate disadvantaged groups
 - Multi-agency approach to address non-skill related barriers to labour market access
 - Re-integration after illness/absence

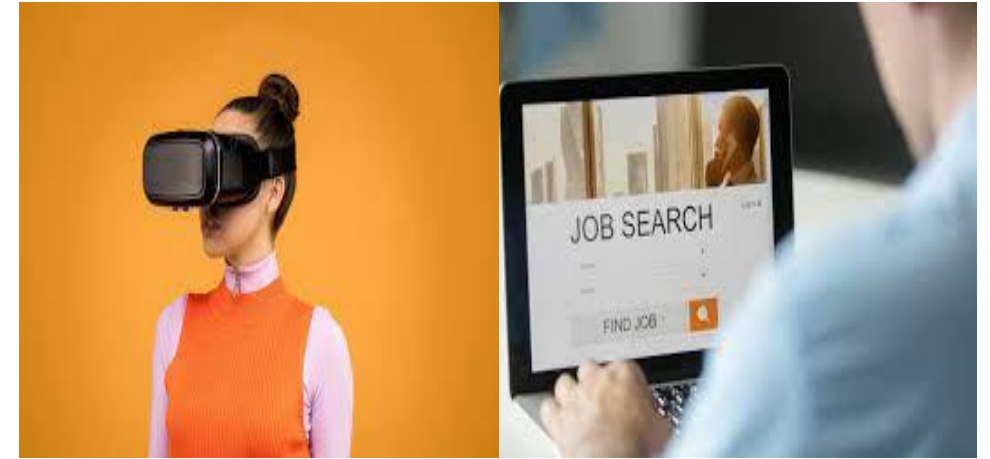
➡ Approaches in this area mainly focussed on integration of migrants; integration of vulnerable groups requires more holistic approach with more medium-term results, less engagement from employers



Enhance use of existing labour and retain labour

- Improve matching between supply and demand
 - Foresight
 - Integrating foresight into education and training planning
- Address skills mismatches
 - Enhance delivery of suitable education/training
- Improved matching systems
 - Individual action planning
 - Training for bottleneck occupations
 - Emphasis on workplace based experience
 - Closer interaction with employers
- Enhance the preparation of employees for labour market change
 - Support for workplace based training
 - Ongoing skill needs assessment
 - Mid-career reviews
- Employee sharing
- Support to retain workers
 - Lifecycle approaches

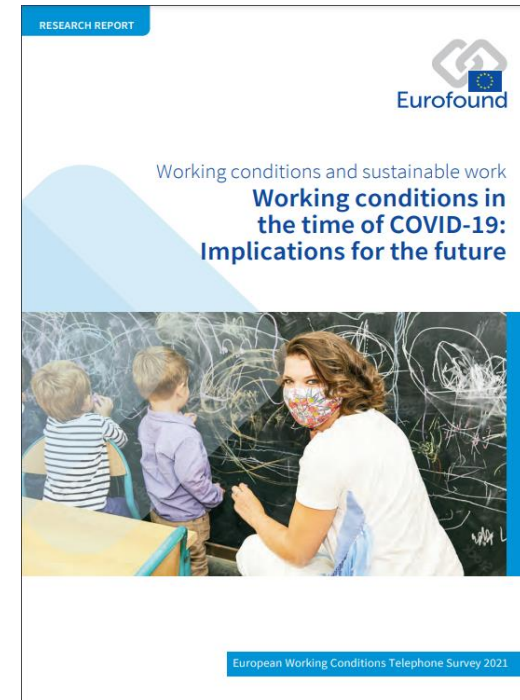
Still necessary to improve forecasting and matching with training strategies; importance of stakeholder involvement in curriculum development; offer training with elements of work experience, regular assessment of future skills requirements



To know more – look up these reports

Tackling labour shortages in EU Member States
Measures to tackle labour shortages: Lessons for future policy

Company practices to tackle labour shortages



**Skills development:
Experiences, lessons learnt
and strategies –
Project pitches and Open Forum**

12:00 – 13:15

Speakers



Kätlin Poopuu
Saaremaa, Estonia



Poul Sørensen
Northern Jutland,
Denmark



Laila Gercane
Vidzeme, Latvia



**Hanna Sällström
Jonasson**
Gotland, Sweden



SAAREMAA VALD



Welcome to **SAAREMAA**

Municipality, Island, People





SAAREMAA VALD

Saaremaa

Largest island and municipality in Estonia

Area: 2718 km²

Population: 32 000

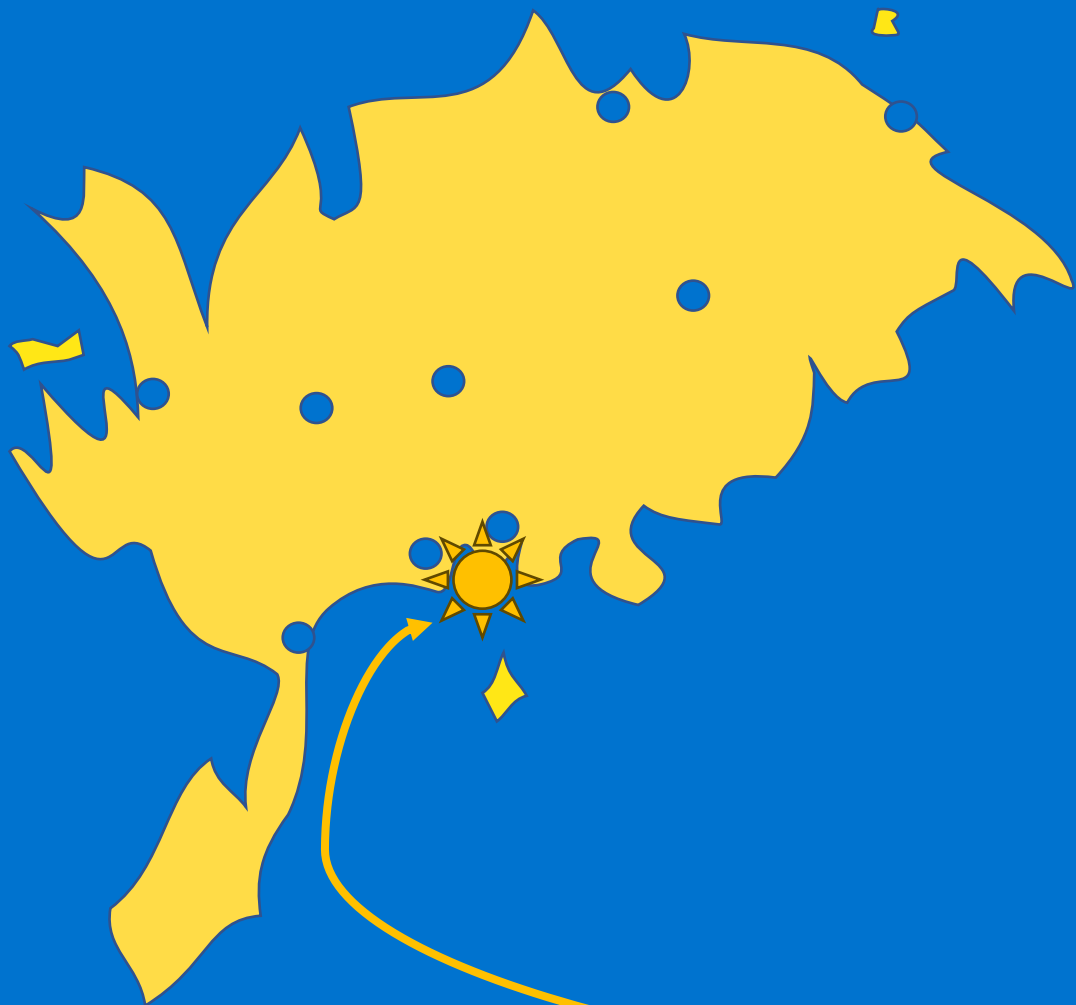
427 villages

3 permanently settled & connected small isles

35 educational institutions

Capital:
Kuressaare

Inhabitants: 13 000
Historically Arensburg
Estonia's sunniest town







SAAREMAA VALD





SAAREMAA VALD



- Blade repair technician
EQF level 4 by 2025
- Wind turbine technician
EQF level 5 by 2027
- GWO & IRATA safety training
licence



SAAREMAA VALD

- **Sustainable Technologies in Blue Economy**

Environmental Protection and Sustainable Development

Introduction to the Circular Economy

Green transition in maritime transport

Green Energy in Blue Economy

Sustainable Coastal Tourism in Blue Economy

Energy Technologies

- **Marine Engineering - Applied higher education studies**

Environmental Protection

- **Marine Engineering - Master studies**

Green transition in maritime transport

Sensors and Power Supplies

Speakers



Kätlin Poopuu
Saaremaa, Estonia



Poul Sørensen
Northern Jutland,
Denmark



Laila Gercane
Vidzeme, Latvia



**Hanna Sällström
Jonasson**
Gotland, Sweden



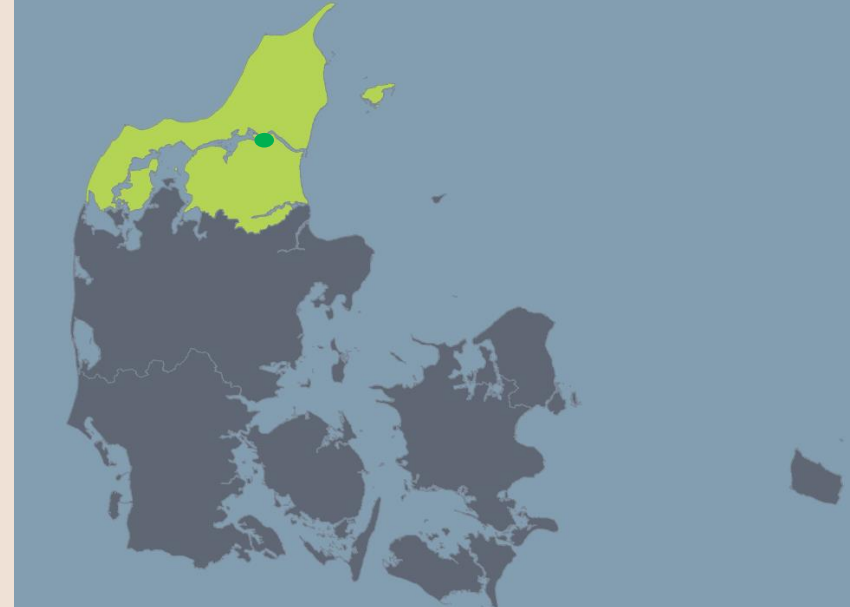
Skills and the green transition in Northern Jutland

Poul Sørensen, 12th March 2025

Green transition in Northern Jutland

Early mover in sustainable energy:

- **Wind turbine** manufacturing in Aalborg since 1999. Approximately 2,000 employees at SiemensGamesa Renewable Energy, plus subcontractors
- Widespread use of **district heating** throughout the region. First based on natural gas, then on biomass (wood chips, straw, etc.). In the future based on heat pumps, based on renewable energy
- Aalborg Portland (cement-producer) is planning to **implement CCS** from 2029, avoiding 1,5 million tons CO₂ emissions
- Several **CCS/U projects** from a wide range of CO₂ sources are planned. Expansion of high-voltage grid and renewable electricity production





Skills and labour force

- Northern Jutland: **593,135 inhabitants** (2024)
- **293,717 employed** in 2024. 9.5% increase in 10 years
- Unemployment: 3,1 pct (2024)
- **University in Aalborg** with big science department. Vocational training institutions etc. Well developed training infrastructure
- Many years of efforts to attract more students to vocational schools, but with limited success
- **Challenges:**
 - Expecting a **decline in workforce**: 5.8% until 2040
 - Major challenges in relation to **skilled technicians** (building, industry, trade, transport)
 - Significant **urbanization**: Young people moving to Aalborg, but many green jobs are in rural areas

Speakers



Kätlin Poopuu
Saaremaa, Estonia



Poul Sørensen
Northern Jutland,
Denmark



Laila Gercane
Vidzeme, Latvia



**Hanna Sällström
Jonasson**
Gotland, Sweden

Videzme Planning Region Development Program 2027

- Analysis of global megatrends and drivers
- Local policy analysis
- Data analysis
- System dynamic modelling
- Foresight approach
- Consultations with youths
- Stakeholder engagement
- Consultative panel
- Public involvement
- Big data analysis



POWERFUL ORGANISATIONS

- Municipalities, businesses, civil society organisations
- Institutional capacity - change management, green transition, climate, innovation

• Cultural changes

HR management practice

learning culture

innovation culture

collaboration

knowledge sharing

collective action

VIDZEME STRATEGIC OUTLINE 2022-2027

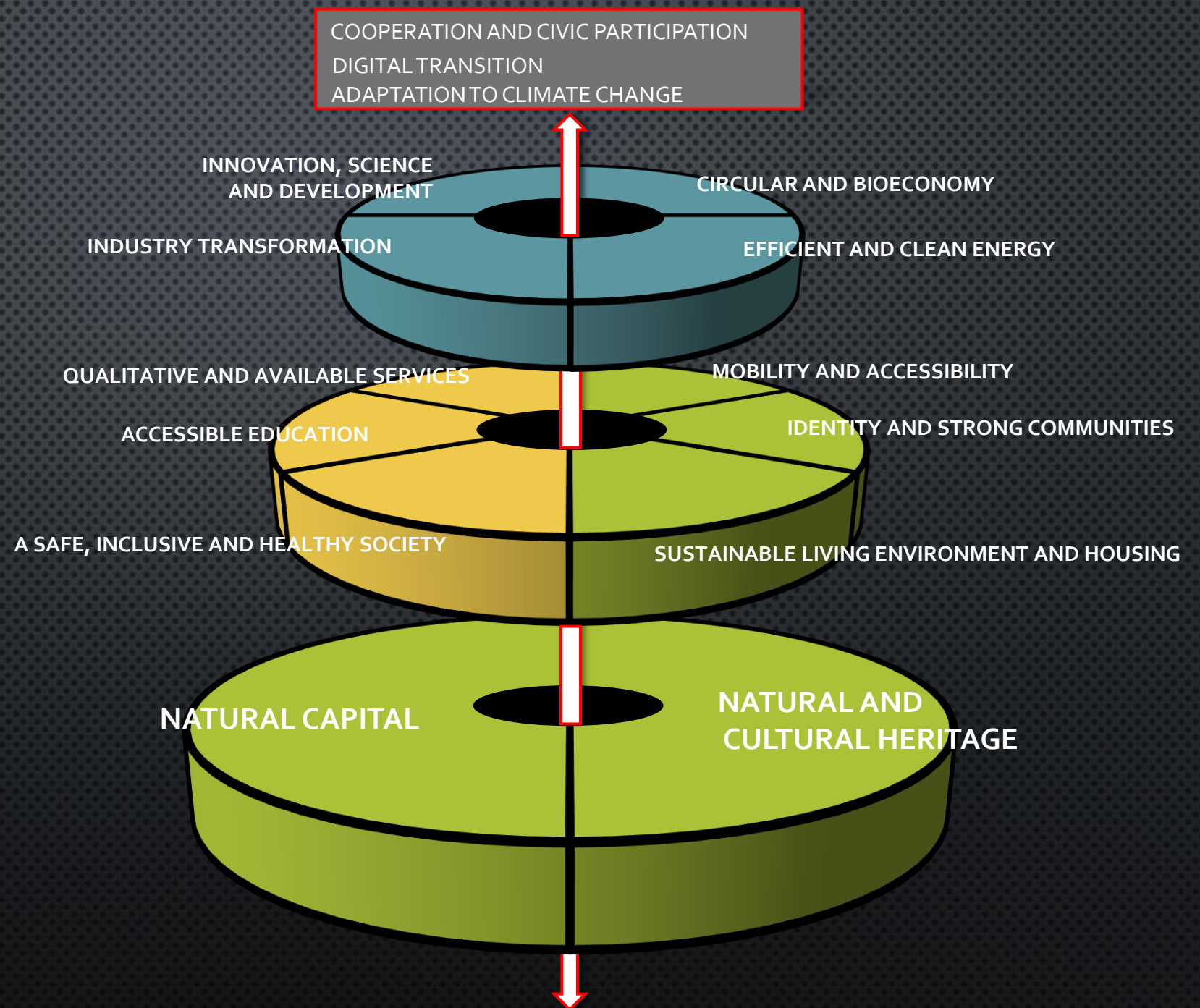
MEDIUM-TERM OBJECTIVES:

ENCOURAGE COLLABORATION AND
POWERFUL ORGANIZATIONS

PROMOTE ECONOMIC DEVELOPMENT
AND GROWTH BY TRANSFORMING
BUSINESS MODELS

IMPROVE THE QUALITY OF LIFE OF
PEOPLE IN THE REGION

PRESERVE AND WISELY MANAGE
NATURAL ECOSYSTEMS AND RESOURCES



Speakers



Kätlin Poopuu
Saaremaa, Estonia



Poul Sørensen
Northern Jutland,
Denmark



Laila Gercane
Vidzeme, Latvia



**Hanna Sällström
Jonasson**
Gotland, Sweden

Adult education at all levels as an enabler in the skills supply challenge

- ✓ Adult education has in Sweden a government mission to form the basis for the provisions of skills from a national and regional perspective.
- ✓ On the mainland, you have to cooperate within the regions, but Gotland have to fend for ourselves, for better or for worse.
- ✓ Since Gotland is an island, Vuxenutbildningen Gotland, have worked to ensure that we are as self-sufficient as possible in areas such as vocational training (for example **electricians, truck drivers, construction workers, process operators** etc).
- ✓ Vuxenutbildningen Gotland has over the past 8 years built up a number of vocational training courses in different sectors and has worked closely with the different industries to meet the needs.

Education – without leaving the island

- ✓ As the Gotland population has a relatively low level of education, Vuxenutbildningen Gotland has also **increased our cooperation with higher vocational training and universities on the mainland**. For example, teacher education and social work education.
- ✓ **Funding** is a challenge where the region must take a stand to be able to provide premises, technology, personnel etc.
- ✓ By offering a **wide range of educational opportunities**, Gotland can on the one hand attract new residents, but also retain and enable both career change and skills-enhancing initiatives as part of the skills supply challenge.

Conclusion:

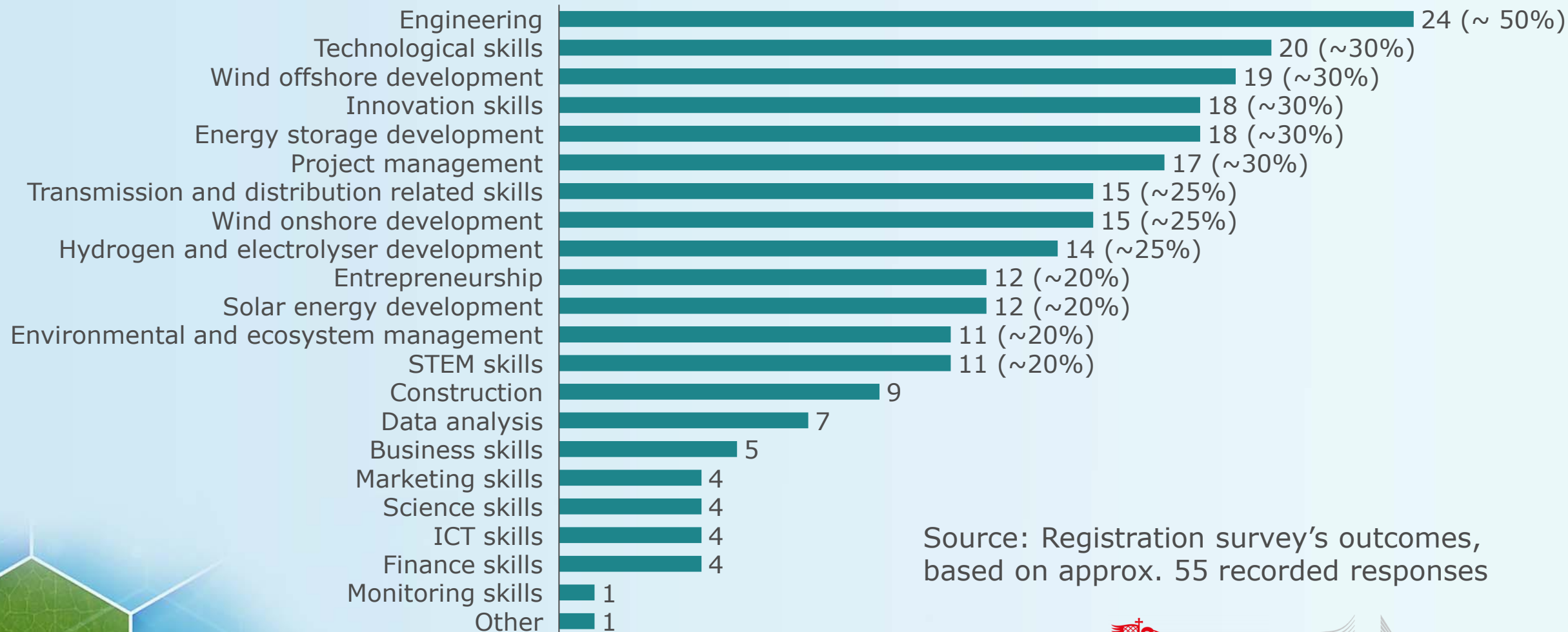
Gotland has **a wide range of educational alternatives** for the upcoming challenge of providing expertise to facilitate the green transition but to scale up it will require substantial **political will** and **funding**. Another important aspect is **cooperation with employers**.



Building a regional capacity to plan development and attraction of labour for the green transition

14:15 – 16.00

Which skills are most sought after by regions?



Source: Registration survey's outcomes, based on approx. 55 recorded responses

Speakers



Milan Petit

Project SEER



**Jenny Wallin
Sander**

Heidelberg
Materials



Mimmi Gibson

Region Gotland



**Hanna Sällström
Jonasson**

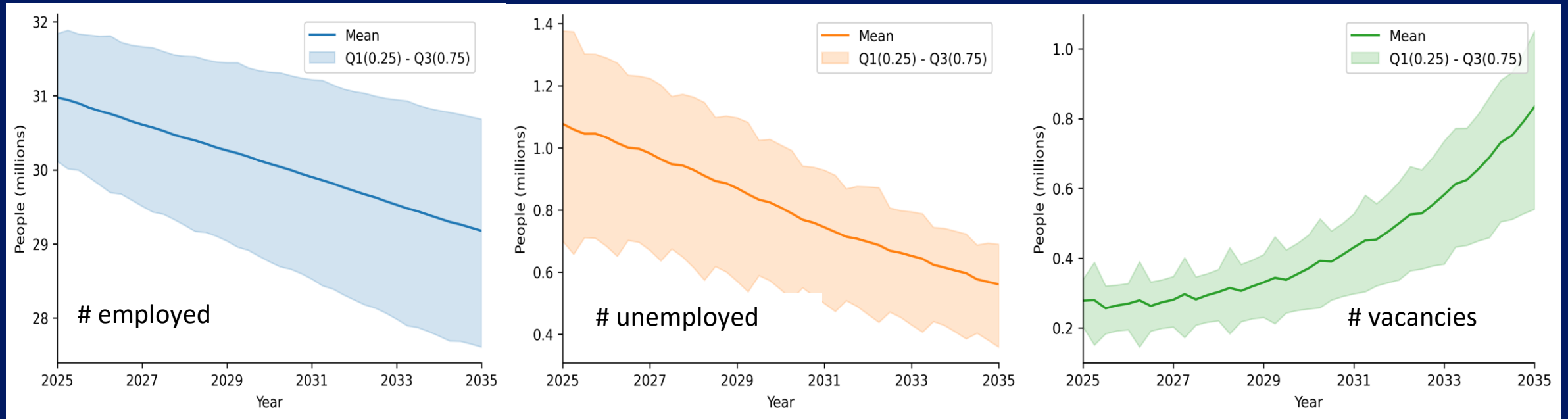
Region Gotland

JTP Groundwork – TRF Gotland

Skills anticipation – Mission impossible?

Milan Petit
SEER Project Lead
Milan@petit.earth

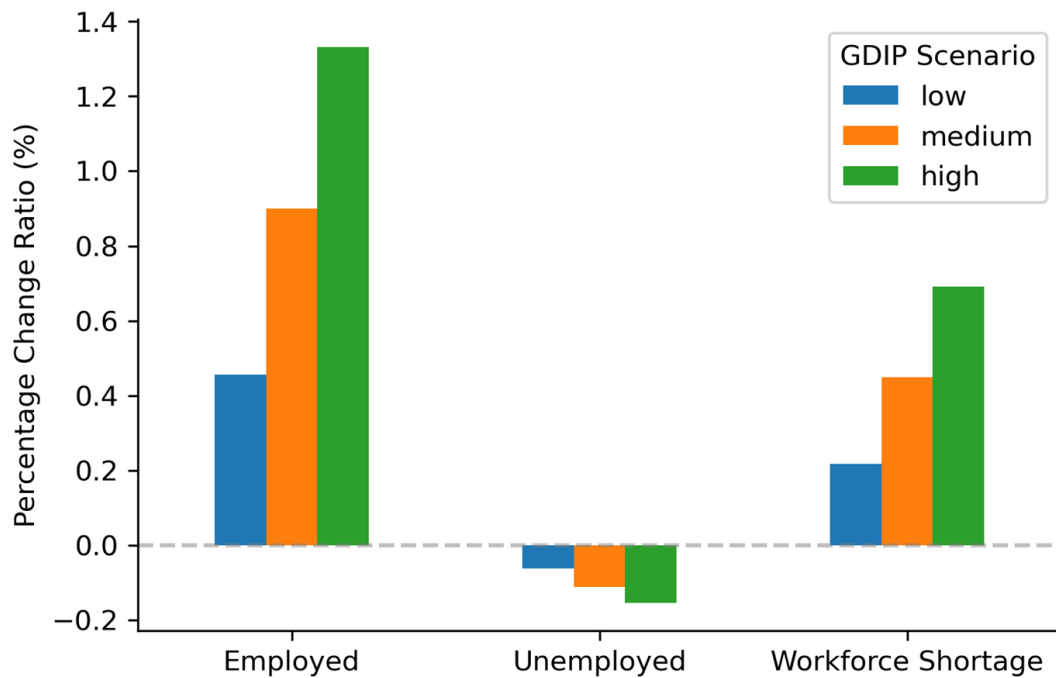
European labour market trends



- Ageing will be a clear challenge
- Inconclusive evidence for deindustrialisation and other trends

Green Industrial policy effects at EU level

GDIP effects on European employment indicators for
manufacturing excluding construction in 2035

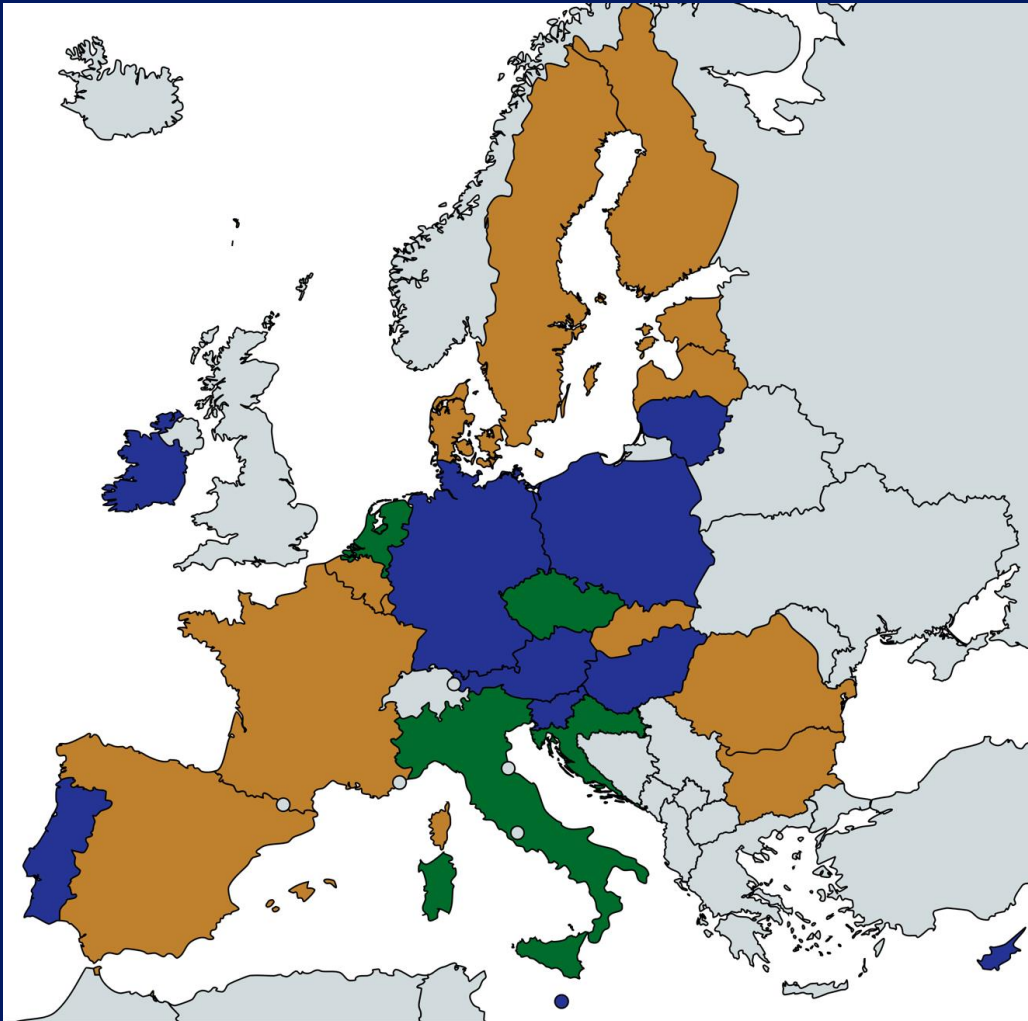


Expected green industrial policy
effects:

- Increasing manufacturing employment
- Slightly decreasing unemployment
- **1/3 of jobs created likely to be unfilled**

BUT effects are small & uncertain

3 types of labour markets



Growth-stretched economies:

- Stable or growing manufacturing workforce with low unemployment but rising vacancies
- Limited growth potential for green industries



Stable-flow economies:

- Average employment, unemployment, and vacancy indicators
- Some growth potential for green industries



Transition-phase economies:

- Declining manufacturing employment with decreasing unemployment rates
- Highest growth potential for green industries

High regional (and local) variety within countries

Three key challenges for skills anticipation

1 Business environment uncertainty

- Macro shocks (e.g. Ukraine invasion)
- Business success (e.g. Northvolt)
- Permitting (e.g. Gotland wind power)

2 Technological change

- Effect on skills (e.g. coding US coal miners)
- Effect on jobs (e.g. fracking engineers)
- Effect on companies (e.g. Tesla)

3 Attractiveness of career paths

- Relevance of education programmes (e.g. Silesia)
- Retaining employees in industry (e.g. France)
- Attracting skilled labour (e.g. Gotland)

Skill shortage solutions

5 interconnected approaches to improve skills anticipation and address skills shortages

1

Collaborative planning

Do as Gotland does!

- Make forecasts together with local business and experts
- Present in transparent and structured manner to guide individual career decisions
- Collaborative learning with and from other regions



2 Skills 1/2: focus on the basics

Without **foundational competencies** nothing and no one works:

- Hard skills: STEM, language proficiency, financial literacy
- Soft skills: curiosity, entrepreneurship, teamwork

Goal: empower adaptable workers eager for and capable of lifelong learning



Image by 8photo on Freepik

3 Skills 2/2: Specialised skills are teamwork

To anticipate for specialised skills, bring together social partners and educational providers to:

- Assess required skills and training
- Determine optimal training methods
- Select course providers
- Agree on funding mechanisms

Tip: use existing national and EU level programmes, e.g. EU union of skills, individual learning accounts, JT Mechanism



Image by pch.vector on Freepik

4

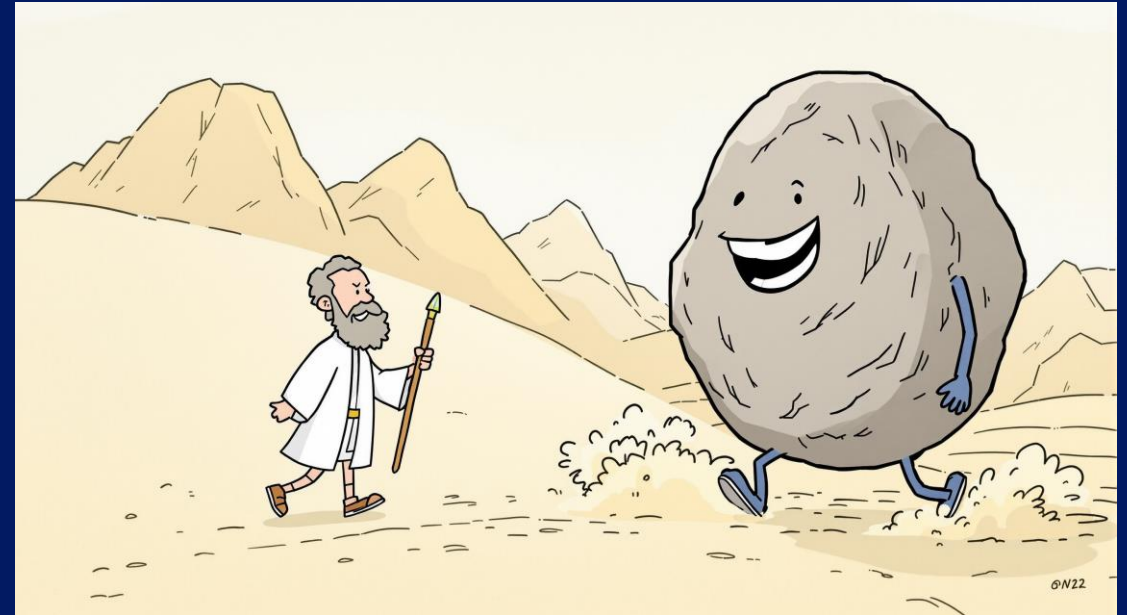
Redesign jobs

Employers and regulators to adapt workplace to workers:

- Rethink which tasks should be done by which workers
- Adapt work schedules
- Change management practices

Example: Siemens Norway senior policy management

Source: Senter for Seniorpolitikk (2018)



Generated with FLUXpro

5 Enhance job quality

Job strain → Skill shortages
But also: jobs with highest societal value

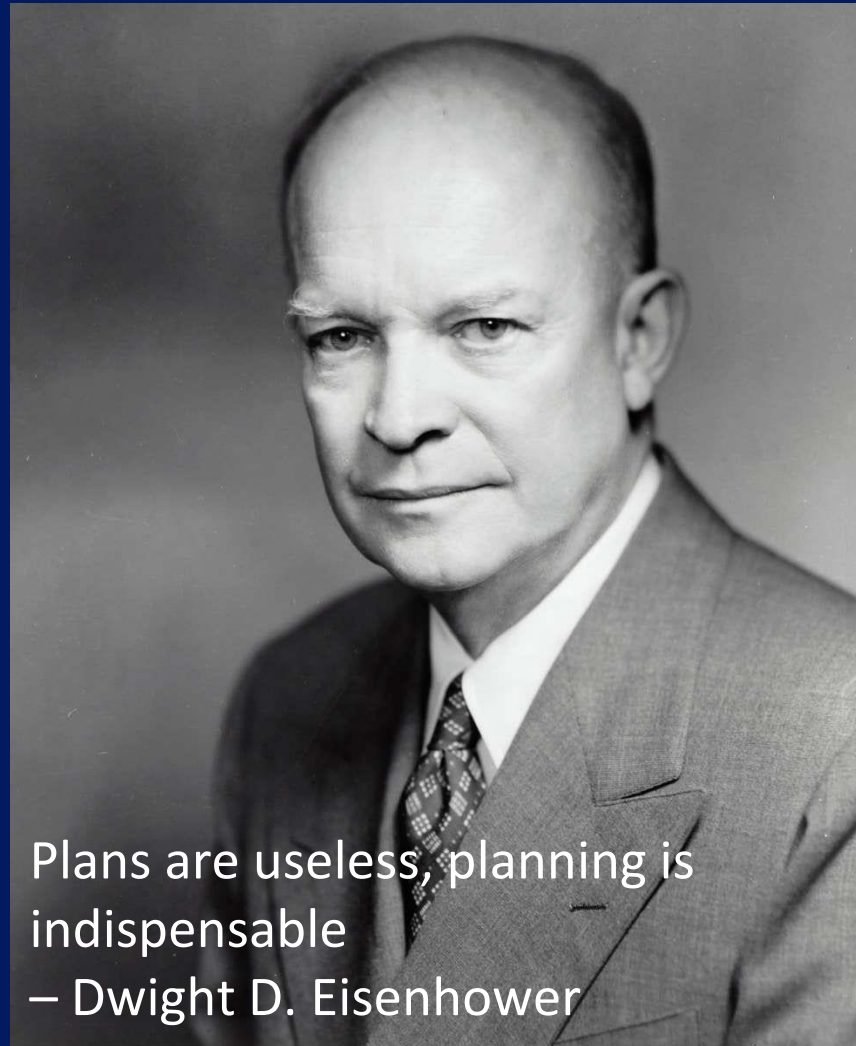
Decreasing job strain is context-specific and includes:

- Salary
- Flexibility
- Health and safety
- Life balance



Generated with FLUXpro

To conclude



Plans are useless, planning is
indispensable
– Dwight D. Eisenhower

Source: Rainmakervt.com

Thank you

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SEER Project Lead
Milan@petit.earth

Speakers



Milan Petit

Project SEER



**Jenny Wallin
Sander**

Heidelberg
Materials



Mimmi Gibson

Region Gotland



**Hanna Sällström
Jonasson**

Region Gotland

Beyond Net Zero 2030

the People Perspective

Jenny Wallin Sander
HR Manager Northern Europe BL Cement
19/03/2025



Material to Build our Future



51,000

Employees,
5 continents

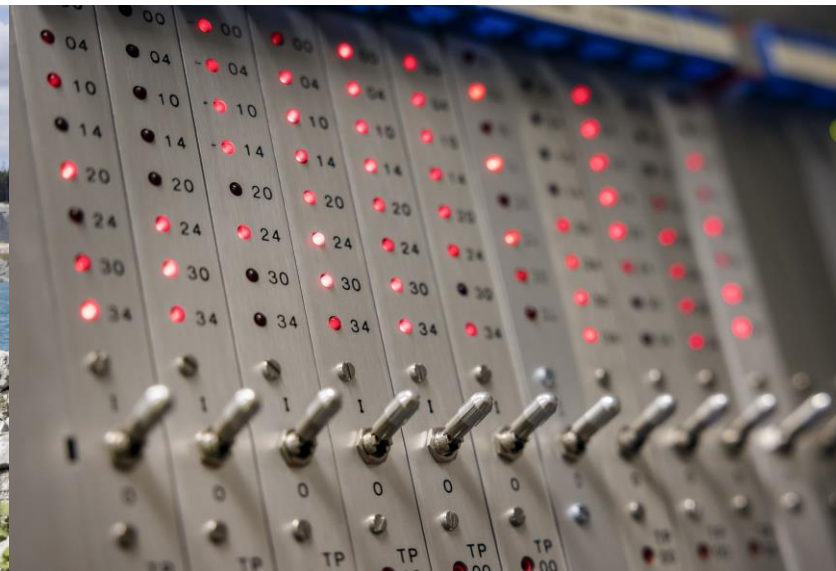
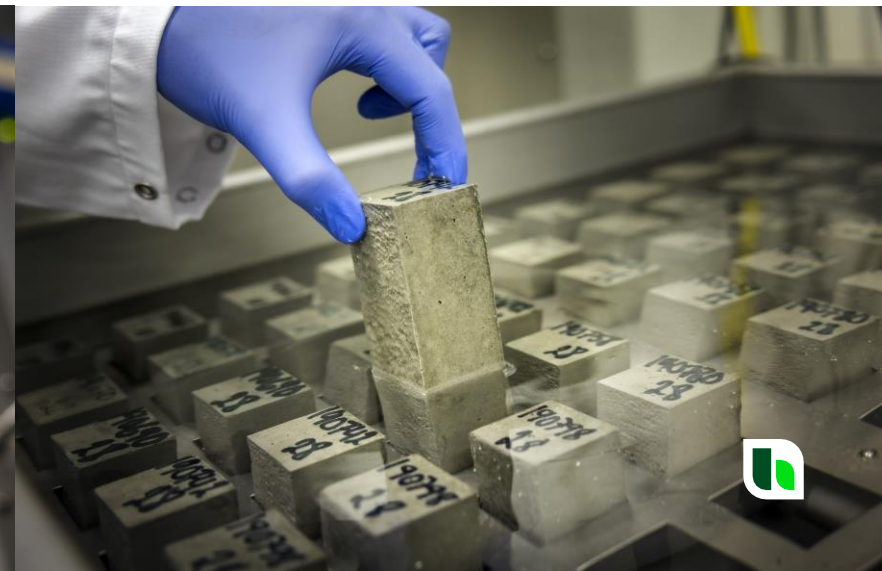


3,000

Production sites



Leading market positions within
cement, aggregates and
concrete

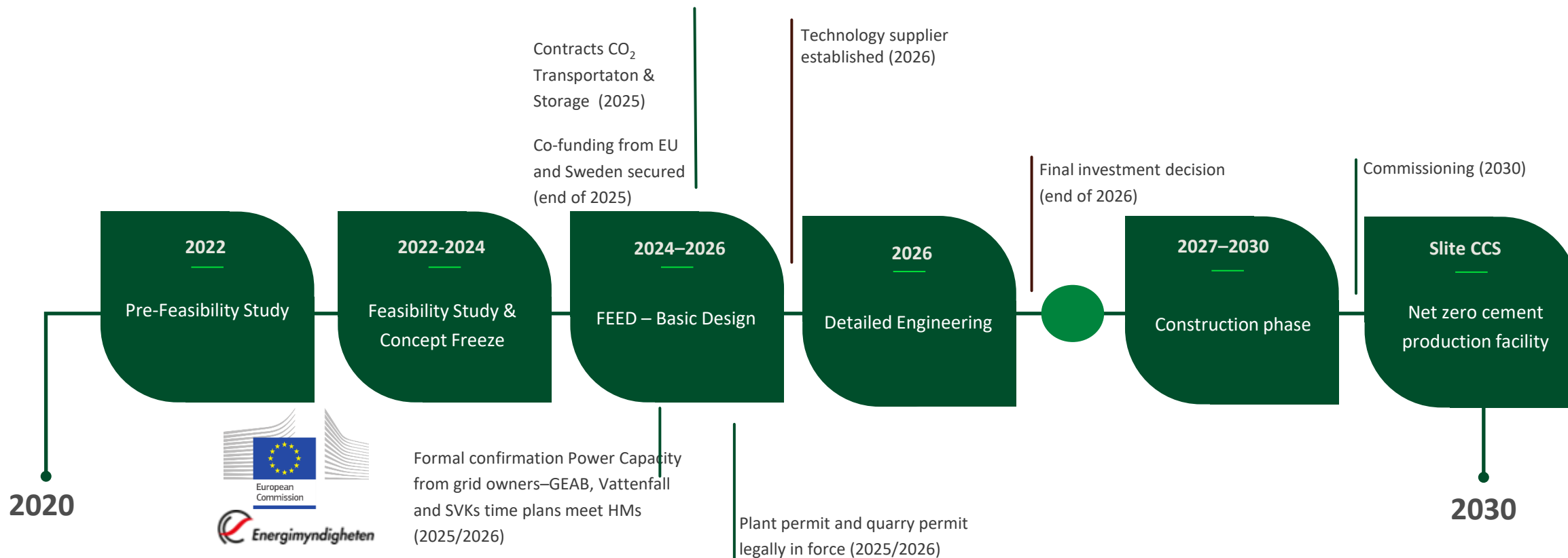


Future CCS Facility Slite



- Construction 2027-2030 with 500 to 1500 people on site
- 24/7 production ongoing

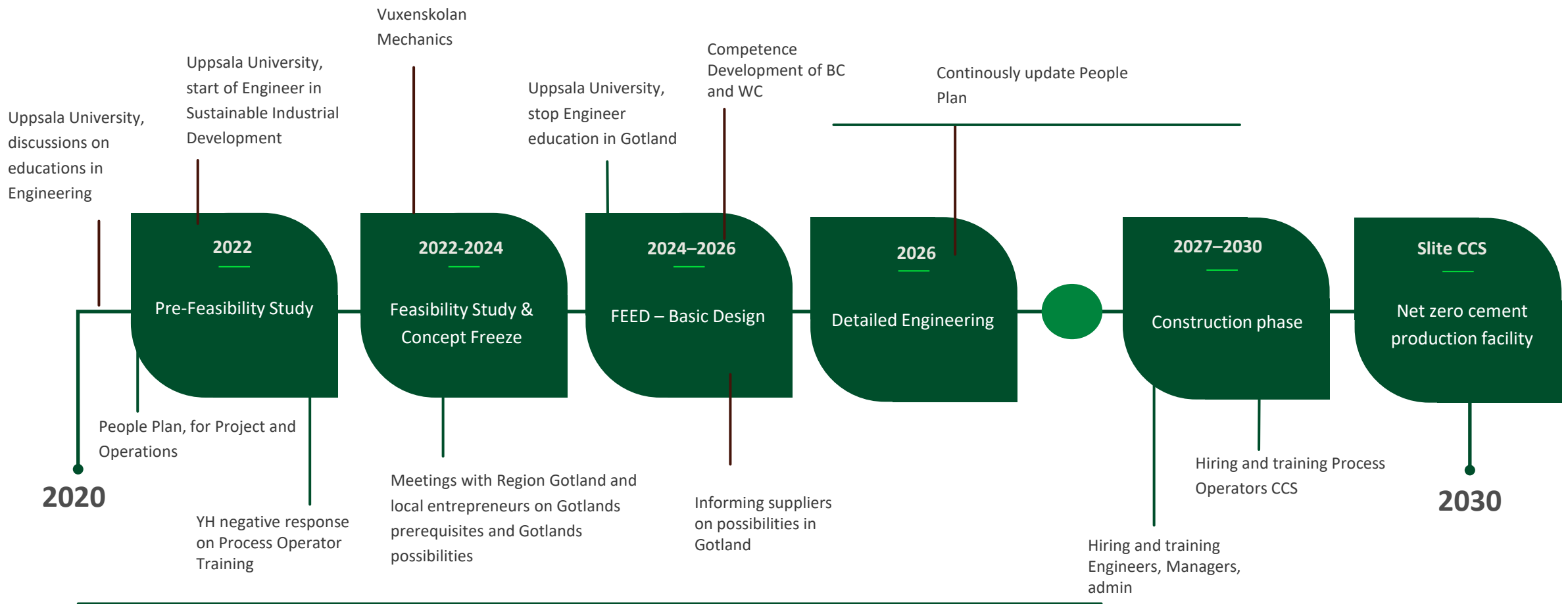




Attract, retain and train workforce

- Continuous Meetings internally and externally to adapt People Plan
- Long term co-operation with Vuxenskolan (YH, vocational educations), Teknikcollege (start 2017) and Universities
- Long term co-operation with other universities on PhD-studies, research, ex-jobs, apprenticeships
- Long term partnerships with local associations on sport, culture and entrepreneurships
- Cultural and organizational development





Regional action is important

Travel to/from Gotland

Travel on Gotland

Housing

Eat, enjoy

Stay for longer





Heidelberg
Materials

Speakers



Milan Petit

Project SEER



**Jenny Wallin
Sander**

Heidelberg
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Mimmi Gibson

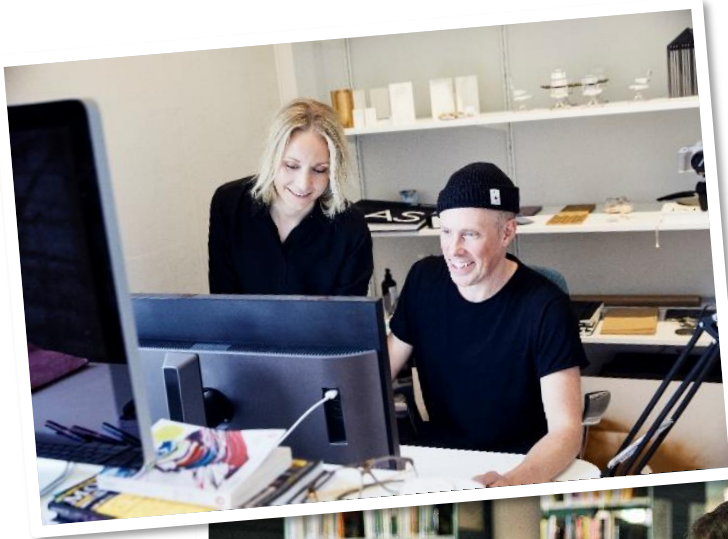
Region Gotland



**Hanna Sällström
Jonasson**

Region Gotland

Gotland's Attractiveness – A Key to Sustainable Growth



Key opportunities

-  **Strong Job Market in the Green Transition & Emerging Industries**
-  **Unique Lifestyle and Work-Life Balance Advantages**
-  **A Strategic Push for Talent Attraction and Retention (2023-2026)**
-  **Gotland's Growing Appeal Among Students & Young Professionals**

Challenges

-  **Housing Shortages and High Costs**
-  **Skill Shortages and Limited Education & Career Development Options**
-  **Accessibility and Transportation Costs**
-  **Demographic Challenges & Retention Issues**

- **Expand education and training programs**
- **Increase investments in long-term housing solutions**
- **Enhance incentives for relocation**
- **Develop stronger infrastructure links**
- **Live our identity**





Speakers



Milan Petit

Project SEER



**Jenny Wallin
Sander**

Heidelberg
Materials



Mimmi Gibson

Region Gotland



**Hanna Sällström
Jonasson**

Region Gotland

How will the education system in Gotland manage to meet the upcoming skills needs linked to the green transition?

- ✓ Monitoring the environment
- ✓ Flexibility and collaboration with employers
- ✓ Recruit students – joint marketing
- ✓ Increasing access to higher education



Monitoring the environment

- ✓ A recent example from northern Sweden of how the education system quickly needed to expand is **Skellefteå** and the Northvolt battery factory.
- ✓ From the initial belief that engineers were the greatest need, it was realized that vocational training in fact was the greatest need.
- ✓ Adult education in Skellefteå scaled up its vocational training in close collaboration with the companies involved.
- ✓ This shows **the importance of dialogue and analysis** of what skills are actually needed.

Flexibility and collaboration with employers

- ✓ As there is uncertainty regarding timetables and volumes, it is important that there is an **opportunity for flexibility** in order to quickly increase the number of students in vocational training.
- ✓ Close **cooperation between the education system and employers** will be required. Both in terms of basic vocational training and skills development.
- ✓ There is a shortage of vocational teachers, but in cooperation with employers, this can be solved if companies can provide instructors who can cooperate with the teacher. We have worked in a similar way when we have trained, for example, painters and bus drivers.

Recruit students – joint marketing

- ✓ Gotland has a relatively **low unemployment rate**, which means that there needs to be a shift in the labor market for more people to be willing to retrain.
- ✓ Adult education can create education, but there must be **students who want to work** in the relevant areas.
- ✓ Previous examples in healthcare show that it is important for employers to be **involved in the marketing** of training.

Increasing access to higher education

- ✓ Vuxenutbildningen Gotlands **learning center** is a way to increase access to more education at a higher education level. Here too, it is important that employers specify their needs so that Vuxenutbildningen can create collaborations with universities on the mainland.
- ✓ Advantages of education via learning centers are that Gotland can **request specific student numbers** and that cooperation can be terminated when the need for expertise is satisfied.
- ✓ The students get a study group to study with and do not have to move to the mainland. This can also lead to **Gotland becoming a more attractive place to live.**

The background is a light blue gradient. It features several white-outlined hexagons of varying sizes. Some hexagons are filled with a green leaf pattern, while others are empty. A network diagram with white dots and lines is visible in the bottom left corner.

Thank you!

jtpgroundwork@justtransitionplatform.eu

