



# Predicting skill needs: the OSKA system in Estonia

ETF Skills Lab Online Peer Learning Session

16 September 2024

## Today's workshop:

- Labour market needs **forecasting in Estonia**
- **OSKA methodology**: first and second round
- How OSKA is integrated in the **qualification system, education system and public employment service**
- How OSKA is **communicated** to stakeholders

Discussion, Q&A





# Labour market and skills needs forecasting in Estonia

Yngve Rosenblad, OSKA Chief Analyst  
Estonian Qualifications Authority

2005-2020

MKM Quantitative  
labour demand  
and supply  
forecast

2015-...

OSKA

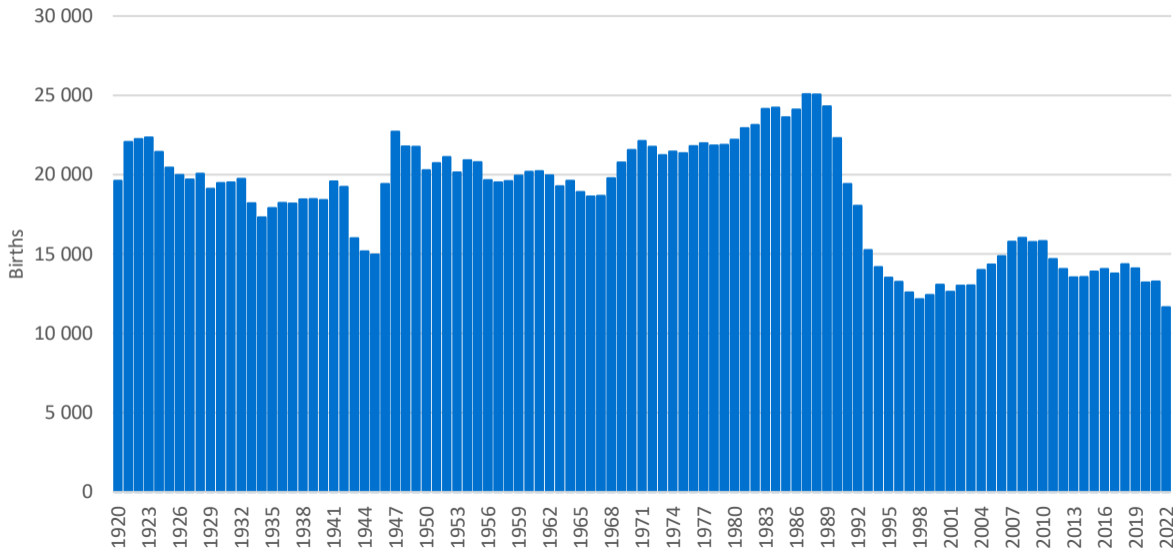
2016-...

Labour Demand  
Barometer by  
Töötukassa

## Background for the need to establish a skills anticipation system

- **Lack of qualified labour force** as one of the main problems for Estonian companies
- Rapidly **aging society** and **declining working age population** (2024-2040 forecasted decline of 15-74 population by 3.5% and 0-15 by -22% vs growth of 75+ population by 33%)
- Rapid **changes in economy and labour market** (automation, digitalization, green transition, geopolitical issues, energy crisis etc)
- **High skills mismatch** due to rapid changes in the society during the last 30 years (after gaining independence from Soviet Union)
- The **proportions of graduates** from different fields of education not in line with job opportunities
- **Curricula** not always up-to-date and streamlined with the needs of society and economy

# The new generation is 50% smaller



Source: Statistics Estonia

## What is OSKA ?

OSKA helps to learn and teach the right skills

OSKA analyses the needs for labour and skills necessary for Estonia's economic development over the next 10 years

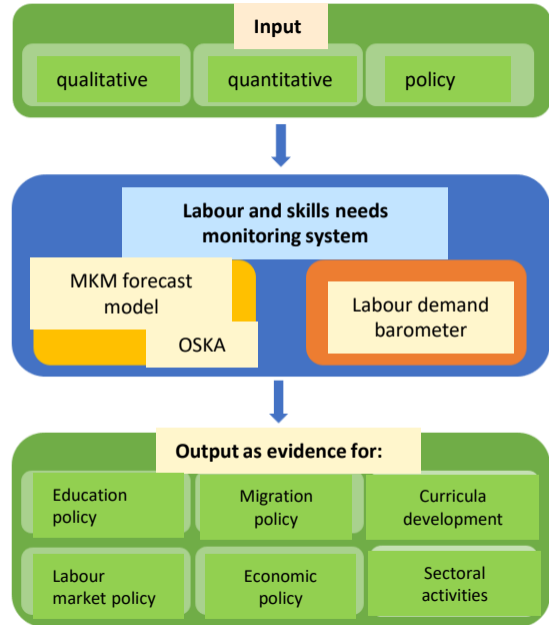


# Labour and skills needs monitoring in Estonia

OSKA and Labour demand barometer have different time horizons (6 months vs 5-10 years)

## OSKA aims to:

- help people make good career choices
- help to learn and teach useful skills in the best way
- enhance cooperation between employers and schools





## Estonian Qualifications Authority

Estonian Qualifications Authority forecasts the need for labour force and skills and develops qualifications standards. Learn more!

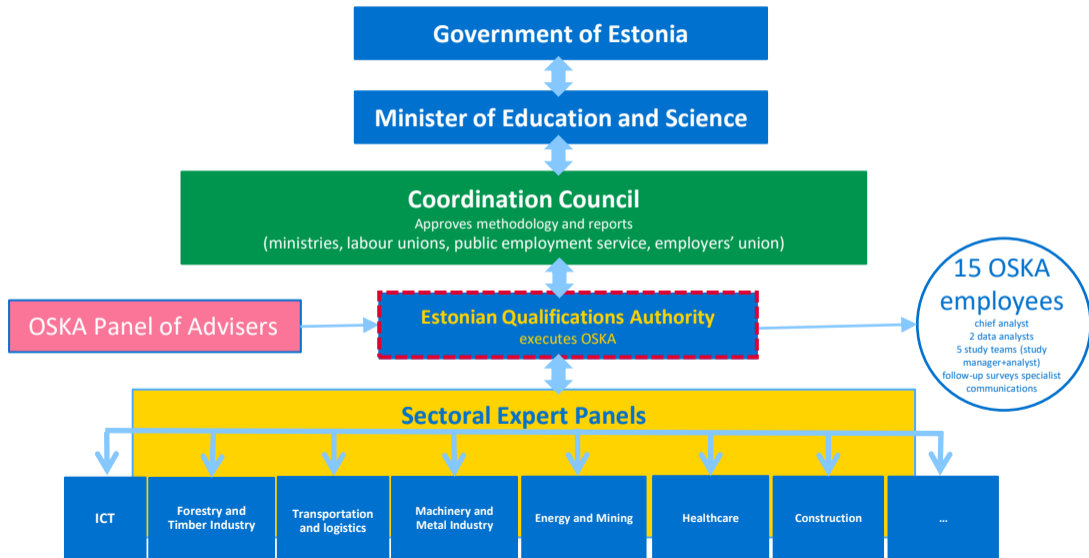
### A tripartite organisation

- Occupational qualification standards
- Occupational qualifications register
- OSKA labour and skills forecasting
- Skills system

<https://www.kutsekoda.ee/en/>



# OSKA governance model



## Bodies in OSKA governance

### Coordination Council

11 members (high-level representatives):

- Ministry of Education and Research
- Ministry of Economic Affairs and Communications
- Ministry of Social Affairs
- Ministry of Finance
- Ministry of the Interior
  
- Estonian Employers' Confederation
- Estonian Chamber of Commerce and Industry
- Estonian Service Unions' Confederation (TALO)
- Estonian Trade Union Confederation
  
- Bank of Estonia (*Eesti Pank*)
- Estonian Unemployment Insurance Fund

### Sectoral expert panels

24 panels, 20-30 sectoral experts each

½ employers, ¼ educational institutions, ¼ policy makers

Participate in sectoral study process and follow-up

### OSKA panel of advisers

„unofficial body“

Ca 40 members

- Partners from ministries and public sector
- Employers' organizations, sectoral associations
- Trade unions
- Think tanks and research organizations
- Universities

Methodological discussions, change of information, discussing preliminary/final study results

Questions?





# How OSKA is integrated in the qualification system, education system and public employment service?

Yngve Rosenblad, OSKA Chief Analyst  
Estonian Qualifications Authority

# OSKA communication strategy



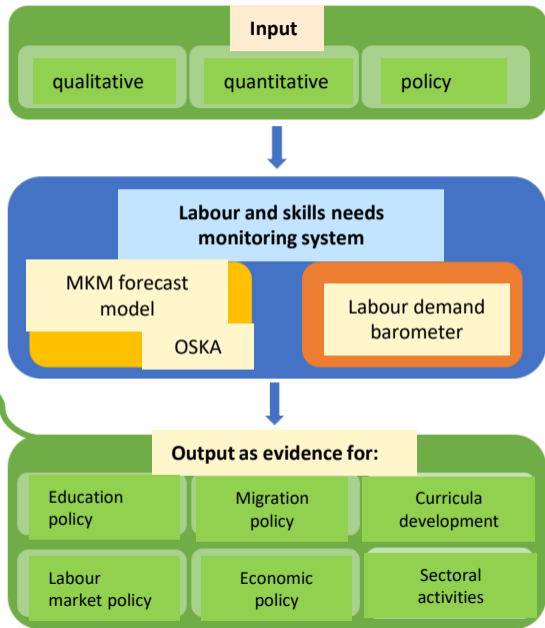
**...sets our main target groups:**

- policy makers, ministries
- educational institutions
- Estonian Unemployment Insurance Fund
- career service providers
- professional associations
- employers

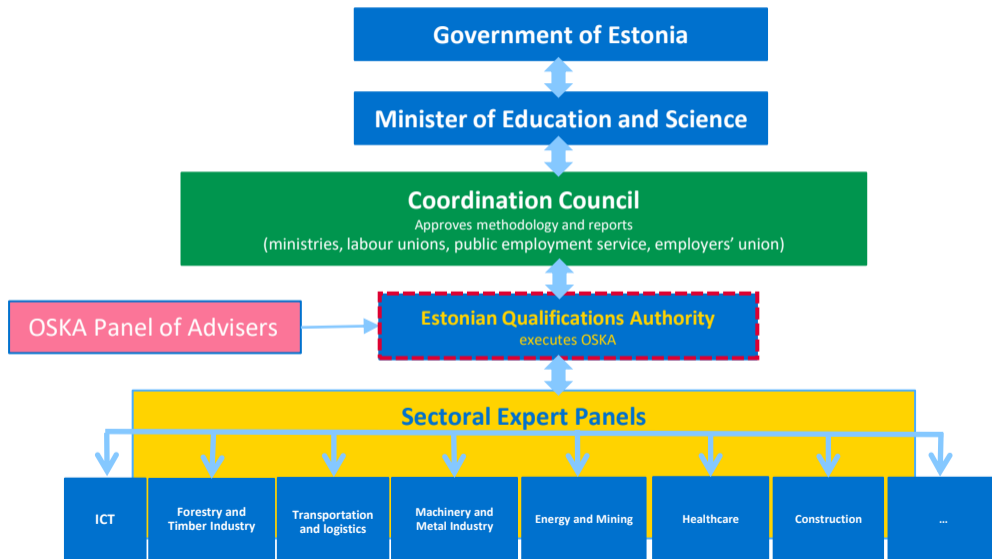
## OSKA is effecting...

- Vocational education (study places, content of curricula, skills)
- Higher education (study places, content of curricula\*)
- - up- and re-skilling measures
- Green skills, digital skills
- Fair Transition measures
- Active labour market policy
- Career orientation
- Cooperation between education and companies
- Effect on legislation
- Labour migration quotas

\* Via contracts between universities and Ministry of Education and Science



# Effective communication and cooperation via OSKA networks!



## OSKA intelligence is used in policy-making and more

- For planning **VET curricula** and commissioning study places since 2016
- As input for adjusting **university curricula** (obligatory since 2017)
- Feeds directly into several **active labour market policy measures**
- Main data source for **career counselling** service providers
- OSKA main findings presented to Government of Estonia every year
- Ad hoc OSKA studies for policy input (sectoral ICT skills; green skills; business and management education; Labour market effects of Covid)
- Fair transition measures, green skills
- For **up- and re-skilling** measures
- For **popularizing growth occupations**
- As input to **other forecasts**
- As background and source information for adjusting **sectoral strategies**

# Estonian Qualifications Authority



**Occupational  
qualifications  
system**



**OSKA labour and  
skills needs  
anticipation  
system**

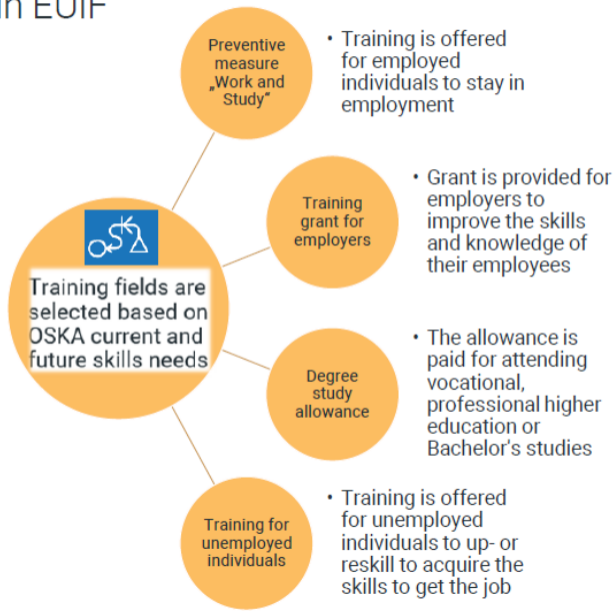


**Skills system  
OsKuS**



# OSKA applications in EUIF

## OSKA intelligence behind unemployment policy



# Outcomes of the OSKA report: data example

OSKA field	Year or the study	Sub-field	OSKA job	ISCO job code	Required education	Number of employed individuals	Employment forecast: future need	Difference of skills supply and demand: current need
ICT	2022	Planning and development	Cyber security specialist	2529		144	↑	25
ICT	2022	Planning and development	UI/UX designer	2166	BA, MA	381	↑	-30
ICT	2022	Planning and development	Data analyst	2120, 3314	BA, MA	804	↑	-90

## Selection of the training fields for unemployed individuals: motivation

- Fund only those trainings for unemployed individuals which develop needs that are really needed by employers
- Efficient use of public/tax payer money
- Better meet public expectations
- Adjust to budget constraints

### **INTERNATIONAL STANDARD CLASSIFICATION OF EDUCATION**

**Fields of education and training 2013 (ISCED-F 2013) –  
Detailed field descriptions**

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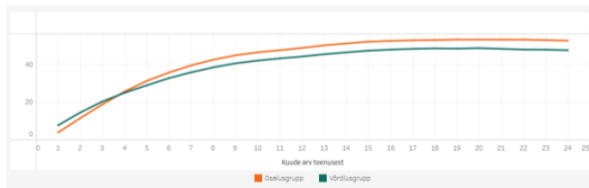
# Choosing training fields for unemployed individuals



- Past statistics of trained individuals
- Needed educational level for the job
- Vacancy and unemployed individual's ratio (based on the Beveridge curve logic)
- Impact of training on probability to enter the employment



The Beveridge Curve



## OSKA ad hoc studies serving policy needs

- ✓ Commissioned by ministries or other **stakeholders**
- ✓ Agreed and scheduled by OSKA **Coordination Council**

- **Vocational education fields with low professional placement** and the reasons
- Labour and skills demands of **research and development personnel in the business sector**
- **Generic work life skills**
- Skills necessary for **green and digital transition**
- Labour and skills demands of **renewable energy production** (Dec 2024)
- Demand for **foreign labour** (Jan 2025)

## Vocational education reform 2025+

- Aiming to bring **more young people** into vocational education
- Better **integration of academic and vocational** education
- **Duration** of vocational upper secondary studies **from 3 to 4 years**
- **Obligation** to study until the **age of 18**
- More focus on developing **digital skills** and vocational programs related to the **green transition**
- More **flexibility** for **adult learners**, but in certain cases have to **pay** for vocational education

## What is the purpose of the planned vocational education reform?

24 Oct. 2023 Tiina Vapper editor - 2 Comments



The needs of the labor market are changing rapidly, and vocational education must meet these expectations. Photo: Rakvere Vocational School

After finishing basic school, 25% of students choose a vocational school, more than half of the students there are adults. How to bring young people to vocational education? If the volume of general subjects was reduced by half with the previous reform, now there are plans to increase the proportion of general education, to increase the length of study in vocational secondary education to four years, to expand the selection of specialties and to make vocational education more flexible and personalized.

Questions?





## Effective dissemination and influencing: How OSKA is communicated to stakeholders

Yngve Rosenblad, OSKA Chief Analyst  
Estonian Qualifications Authority

## OSKA online outputs

- OSKA study reports <https://uuringud.oska.kutsekoda.ee/>
  - Sectoral studies
  - Thematic/ad hoc studies
  - General report <https://uuringud.oska.kutsekoda.ee/uuringud/oska-uldprognoos>
- OSKA dashboards <https://oska.kutsekoda.ee/naidikulehed/>
- Oskuste kompass (Skills Compass) <https://oskused.ee/>
- Labour market megatrends <https://oska.kutsekoda.ee/trendid/>
- Kutsekoda/OSKA YouTube channel <https://www.youtube.com/@sakutsekoda6095>

**OSKA web in English:** (NB! less information) <https://oska.kutsekoda.ee/en/>

# Social media and newsletter

- account in Facebook and LinkedIn
  - at least 2 posts per week
  - no more than one post per day
  - posts in the morning rather
  - illustrations are the most popular
- Newsletter once a month

Üldoskused, mida Eesti tööandjad enim hindavad

MÖTLEMISOSKUSED	ENESEJUHTIMIS-OSKUSED	LÄVIMISOSKUSED
ANALÜÜSIOSKUS	KOHANEMISOSKUS	MEESKONNA- JA KOOSTÖÖOSKUS
ÕPPIMISOSKUS	TEGEVUSTE ALGATAMINE (PROAKTIIVSUS)	SUHTLEMISOSKUS
PROBLEEMIDE LAHENDAMINE	EESMÄRGI SAAVUTAMINE	KEELEOSKUS
LOOVMÖTLEMINE		

OSKA uuringute andmeil



# Events

- information sessions (webinars)
- presentations to the Ministry of Education and Research and Estonian Unemployment Insurance Fund
- conference every 2 years



## OSKA 2015-2020 in numbers

- **34 OSKA studies**
  - Future megatrends publication „**Labour and Skills 2025**“
  - General forecast „**Estonian Labour Market Today and Tomorrow**“ – 4 forecast publications
  - **25 sectoral studies**
  - **3 meta-studies**
  - **Study of labour market effects of COVID-19**
- **2,300** sectoral experts included
  - in sectoral expert panels – **650**
  - interviewed – **1,500**
  - study report reviewers – **150**
- Participants in OSKA conferences, dissemination seminars **17,250**
- OSKA web pages viewed **700,000** times in 18 months 2019-2020

## Behind **the success** of OSKA:

- Strong **cooperation and involvement** of with policy makers and stakeholders
- Clear aim and agreement to **support policy making**
- **Qualitative** and **quantitative** methods
- **Flexibility**, agility and **neutrality**
- **Different tools**: general forecast model, sectoral surveys, ad hoc surveys
- Direct **communication** to target groups



## Challenges

- Huge and various **expectations** to OSKA  
→ *Streamlining with needs of various users*
- **Data** availability
- Rapid changes in small economy  
→ *flexibility of forecast*
- Reasonable **level of detail** (occupations, curricula)
- **Transparency** of results



## Use of OSKA results: lessons learned

- Continuous cooperation with users and partners is inevitable
- Understand the needs of your users
- Make a step towards your users
- Try to link to user's systems, frameworks and terminology
- Never-ending process
- Impossible to meet all needs and expectations



Questions?  
Reflections?



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