



Sihtasutus  
Kutsekoda

# OSKA: Estonian labour and skills forecasting system

Methodology in the 'first round' 2015-2020

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Estonian Qualifications Authority

A close-up photograph of a watchmaker's hands. The watchmaker is wearing a red and black plaid shirt. They are holding a small, intricate pocket watch movement in their left hand. With their right hand, they are using a thin, blue-handled tool to adjust a component of the movement. A large, silver magnifying glass is mounted on a stand, positioned above the watch to provide a clear view of the work. The background is dark and out of focus.

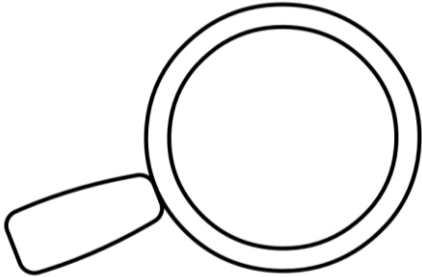
**Before OSKA**

- Based on labour force survey (LFS) and macroeconomic indicators
- Macro model + expert opinions and sectoral analysis
- forecast period 7-10 years
- Simple labour demand and supply model.



OSKA

## Different OSKA studies



### 3 types of studies:

- Sectoral studies (+ follow-up)
- OSKA general report (in cooperation with Ministry of Economic Affairs and Communication)
- *Ad hoc* studies (rarely)
- Labour market megatrends monitoring

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**OSKA sectoral studies**

## OSKA = anticipation and monitoring system for labour and skills demand

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

- How many people and which skills are needed in our labour market today and tomorrow?
- Where and how to acquire those skills?
- What should be changed in today's educational system and in lifelong learning system to meet the future needs?

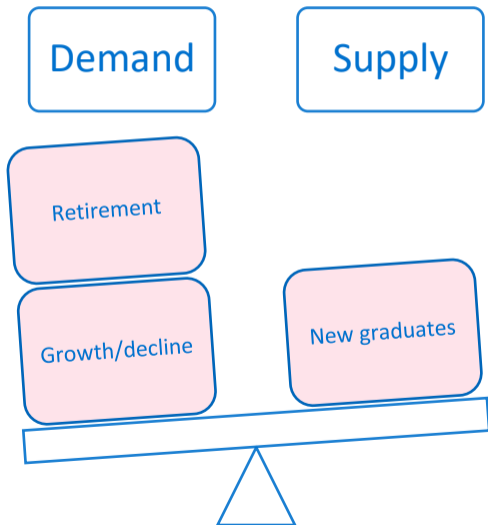


# OSKA sectoral studies of labour and skills needs – since 2015

- Reports on 5 economic sectors or topics every year
- Aim to cover all sectors in 5-7 years (and continue the 5-7 years cycle)
- Similar methodology applied to all sectors – comparable results
- Forecast horizon 5-10 years
- Combining qualitative and quantitative methods
- Sectoral expert panels (½ employers, ¼ educational institutions, ¼ policy makers)
- Follow-up of results and recommendations



## Demand and supply of skills/people



# Sectoral study process

## Tasks of OSKA team

Literature, statistics, policy documents analysis

Interviews (sector, policy makers)

Establishing experts panel

Interviews (sector)

Preliminary labour forecast

Analysis of skills needs

Interviews (education)

Calculation of supply

Preliminary table of demand and supply

Drawing conclusions, forming preliminary proposals and suggestions to meet mismatches

Compiling survey report

## Experts panel workshops

1. Sector and occupations, statistics, trends

2. Labour forecast, growing skills needs

3. Education & training, balance of demand and supply


4. Conclusions, mismatches, proposals and suggestions

5. Key messages; approval of survey results

Approval of survey results by Coordination Council

Dissemination, follow-up



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# OSKA general report

## OSKA general report

- In cooperation with OSKA, Ministry of Economy and Communications, etc.
- About 100 pages
- 7 years forecast
- Main contents:
  - Overview of economy, labour market, work force
  - Labour force needs forecast summary
  - Forecast by sectors (trends, main enterprises, forecast by occupation, balance of supply and demand)
  - Forecast by level and field of education
  - Ad hoc topics



Tööjõuvajaduse seire- ja prognoosisüsteem OSKA

# EESTI TÖÖTURG TÄNA JA HOMME





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# OSKA: Estonian labour and skills forecasting system

Methodology in the 'second round' 2021-2029

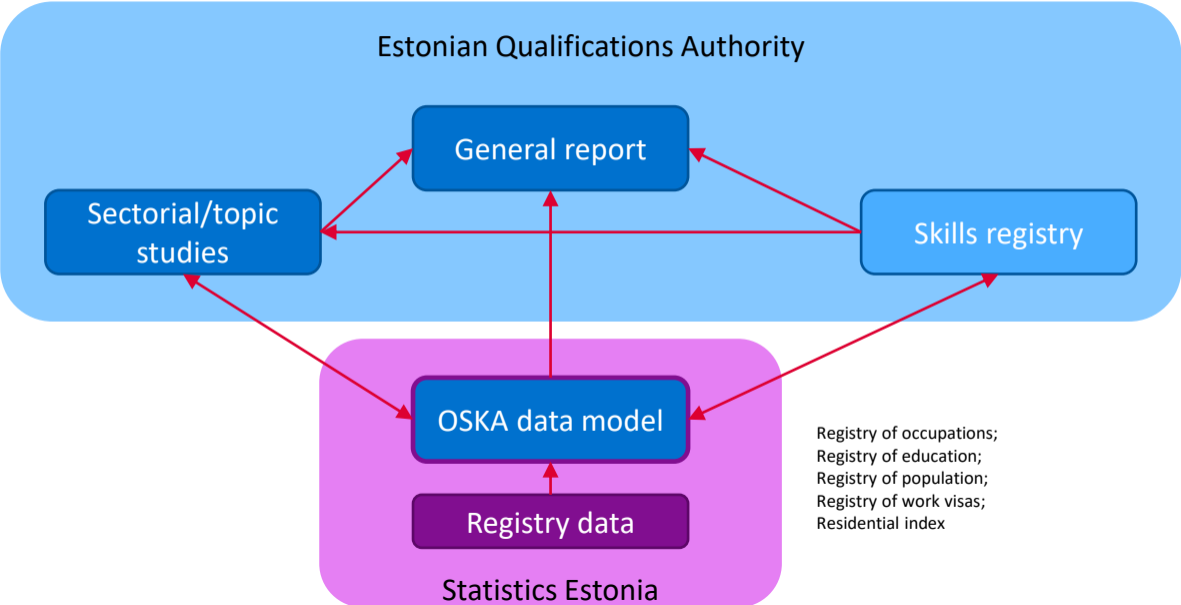
## Main differences between OSKA rounds

- First round 2015-2020
  - Mainly sectorial studies (focus point)
  - General report with the Ministry of Economic Affairs and Communication
  - Dataset from the Ministry of Economic Affairs and Communication
  - Population census + Labor force survey
- Second round 2021-2029
  - Sectorial studies with a focus topic
  - Topic (ad hoc) studies
  - General report only by OSKA team
  - Dataset built inhouse
  - Registry data
  - Skills registry

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**OSKA's new data model**

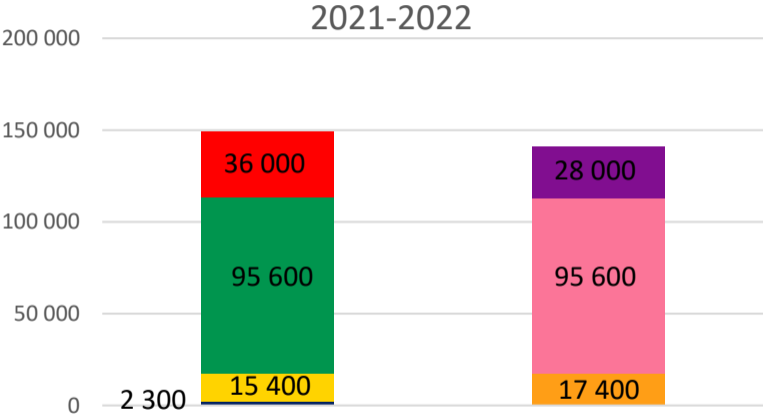
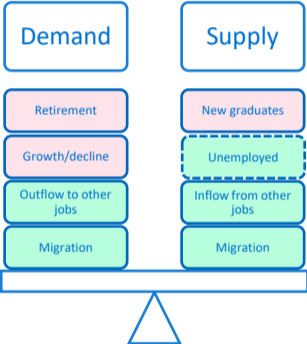
# OSKA quantitative data model



## OSKA data model components

- Base models
  - Education key to link jobs and education
  - Calculating main jobs and secondary jobs
  - Model to distinguish foreign workers (Under development)
- Forecasting model
  - Calculating changes in number of jobs based on OSAKA's sectoral studies
  - Calculating retirement of people based on their sectors and jobs
  - Calculating future graduates based on the changes in population

# Demand and supply overview from data model 2021-2022



- New Graduates
- Inflow
- Retierment
- Outflow
- Inflow from other jobs
- New jobs
- Outflor to other occupations

## Updated sectorial studies

- Changes
  - Focus topic to find new insights
  - New ways to calculate supply and demand of occupations
  - Less focus on trend descriptions
  - Less focus on quality of education
  - More focus on graduate experiences
- The same or with small changes
  - Economic sectors
  - Recommendations and follow-ups
  - Interviews
  - Selection of experts

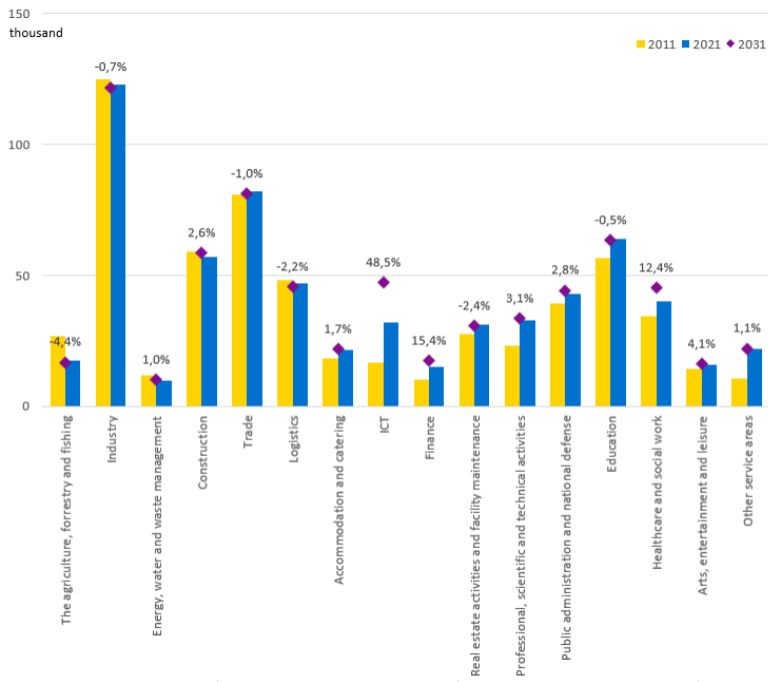
## Topical studies

- Grew out of a practical need to do other than just sectorial forecasts
  - Covid-19 Studie, Industry metanalysis, green skills study etc.
- It was better to make it a part of the OSKA ecosystem than just leave it as an unmentioned option
- Different methodology in every study
- Might not use the OSKA data model
- We do not plan any follow-ups (yet)

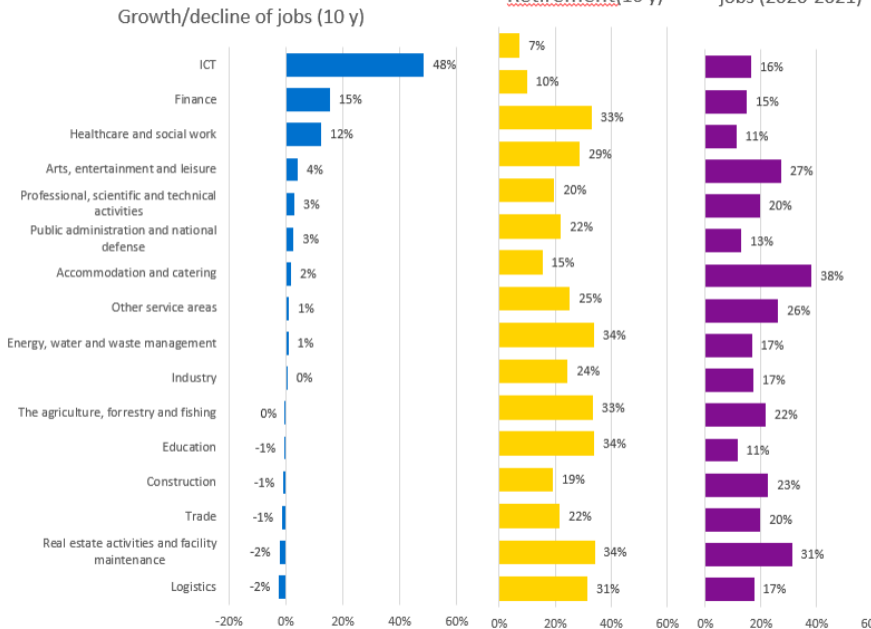
## General Report

- Changes
  - Once every 3 years
  - New registry-based data model
  - More in depth overview
    - By sectors (was before)
    - By occupational groups (new)
    - By education (new)
    - General comparison of supply and demand of workforce (new)
    - Main problem areas of supply and demand of labor and how to levitate them (new)
  - One focus topic every time
  - Yearly updated factsheets

# Number of people employed by sectors



## Forecasted need by sectors



Further information:  
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