The challenges of the PES in times of accelerated digital transformation

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The challenges of the PES in times of accelerated digital transformation

Introduction

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Moderator

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International Labour Organization

Use of technology by PES
ILO global survey

Microsoft news centre 2016

ANETI-WAPES webinar
The challenges of the PES in times of accelerated digital transformation
25 March 2021

![International Labour Organization logo]

Technology is changing service delivery

▶ Job-searching and recruitment methods are evolving

▶ Supporting service continuity and adaptation

▶ Use of big data and algorithms

▶ Increasing relevance with the COVID-19 pandemic

▶ Increasing need for target investments in service capabilities

What type of technology?

▶ **Telephone**
- Fixed line
- Mobile
- SMS
- Toll-free numbers
- Help desk and call centers

▶ **On-line/mobile Apps**
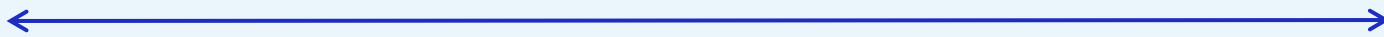- E-mail
- Web Apps
- IP/GPS
- VoIP

▶ **Social media**
- Facebook
- Tweeter
- Instagram

▶ **Artificial Intelligence**
- Big Data
- Conversational AI
- Data mining
- Self-learning algorithms
- Chat robots and smart software
▶ Face, voice recognition

Simple ◄──────────────────────► **Complex**

PES delivery models

75 surveyed PES in 69 countries
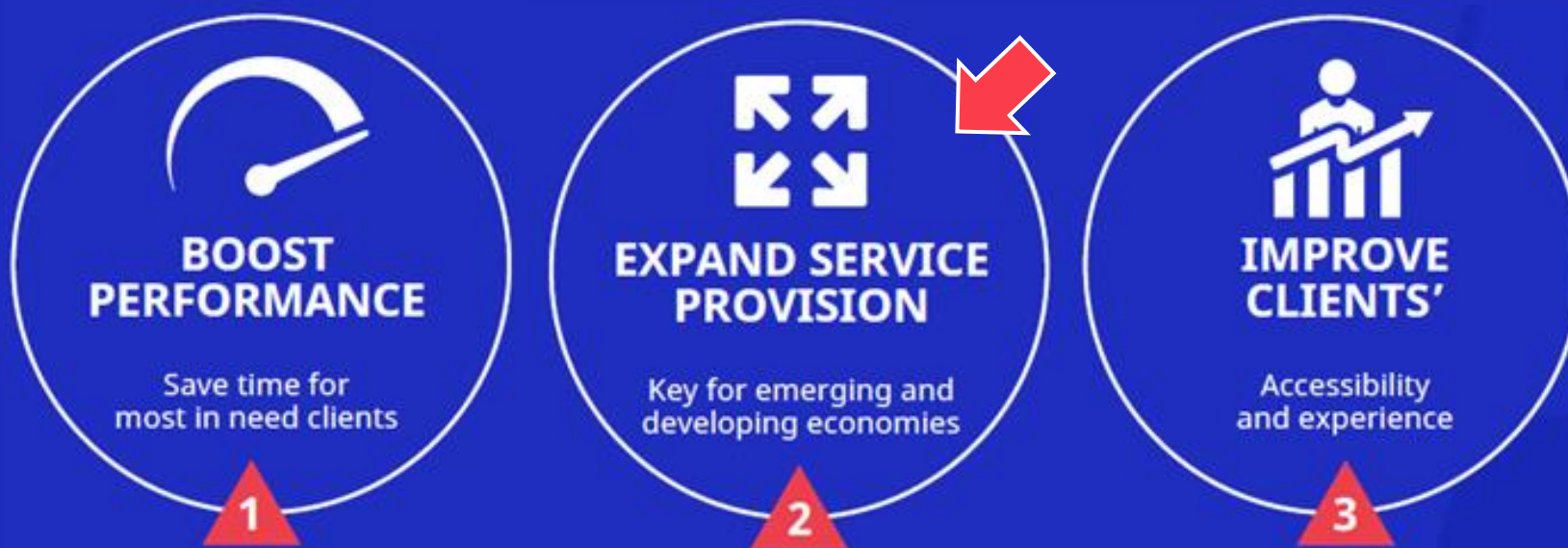
► All provide online basic services

► One third offer AI-driven solutions, still...

► Mixed solutions predominate

▷ Face-to-face dominating in **21%**

▷ Selected services in **52%**

▷ Technology based services in **27%**

DELIVERY MODELS

Advancing social justice, promoting decent work
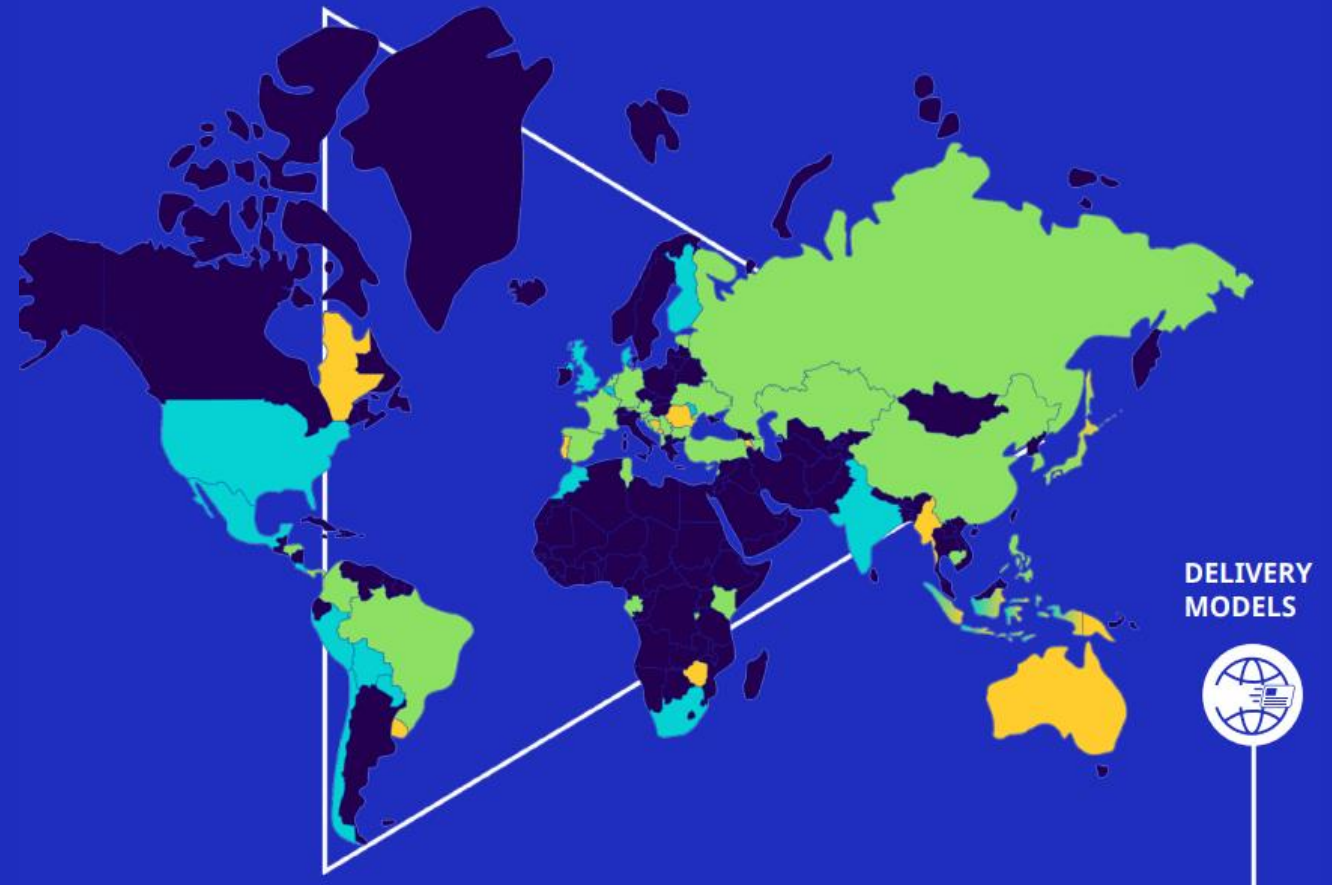
Drivers of PES technological transformation

Services delivered using technology

▶ Complex services require advanced technology

▶ Broadband Internet connection and data remain an important bottleneck, particularly in low- and middle-income economies

	SIMPLE ━━━━━━━━ COMPLEX TECHNOLOGY			
	📞	📱	⇜	🧠
General Information	100	100	100	100
Registration	97	97	98	96
Labor Market Information	95	96	98	95
Job Matching	89	88	89	90
Counselling	84	79	80	81
Skills Training	69	66	65	81
Self-Assessment	57	55	61	67
COMPLEX SERVICES	Phone	Online App	Social Media	AI

Clients experience

▶ HIC clients more likely to access proactive and tailored-made technology solutions

▶ LMIC clients can mostly obtain information remotely and access services supported over the phone, e-mail or SMS
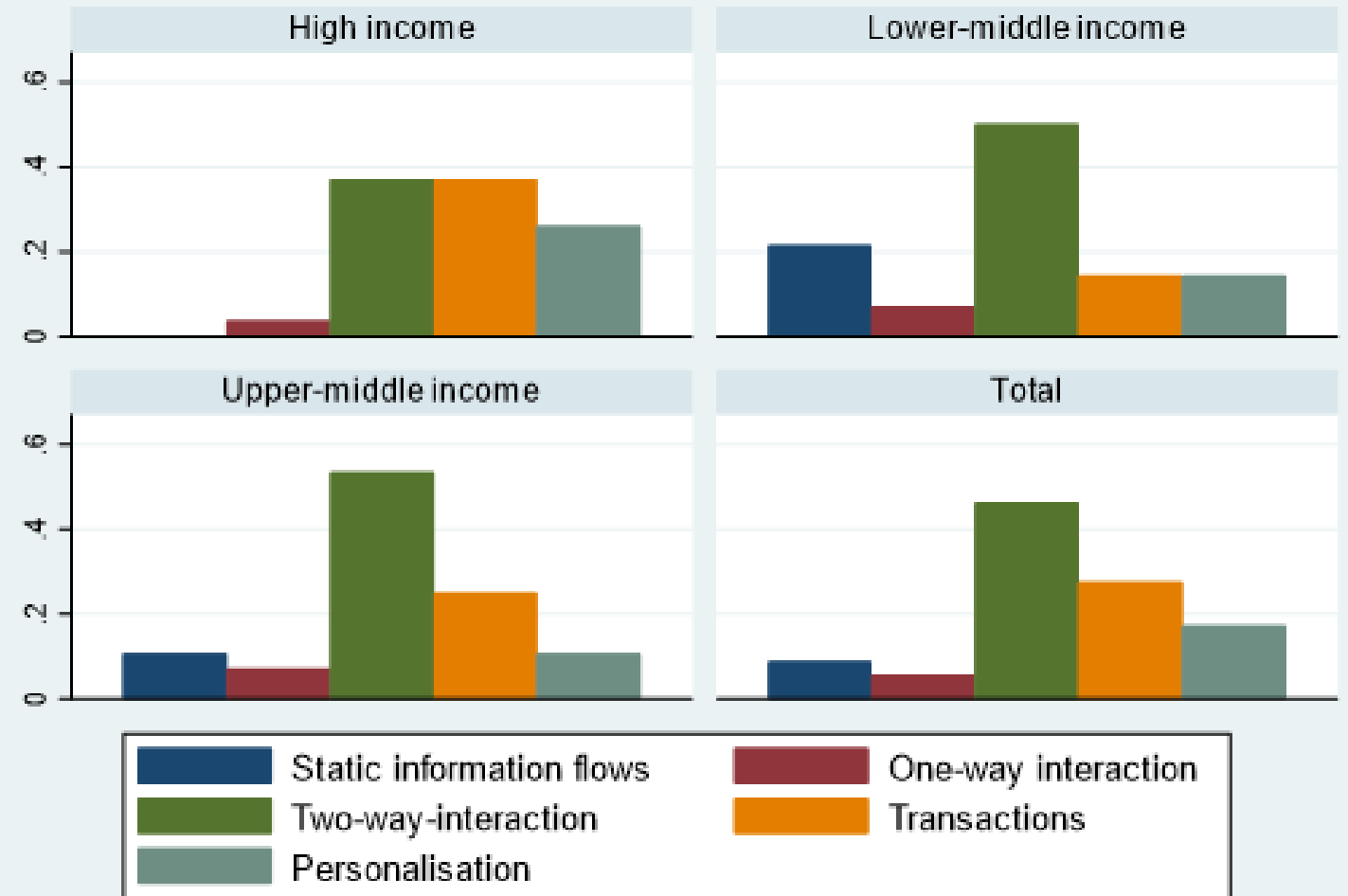
Graphs by Income groups (HI, UMI, LMI+LI)

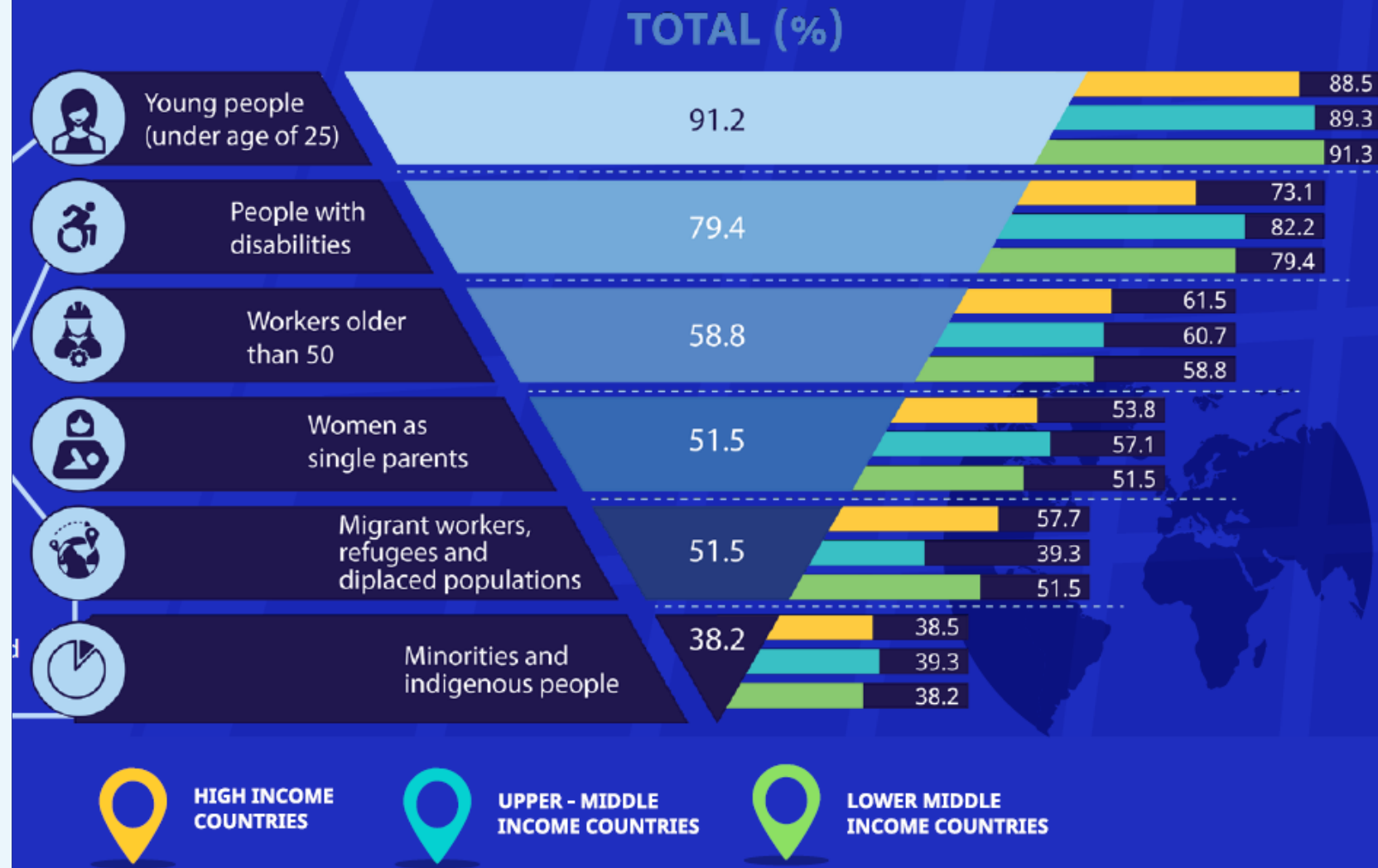# Technology as a tool for inclusion

► ...when solutions are accessible and adapted to all

► ... Still the **digital divide** makes disparities persist for some groups

TOTAL (%)

Group	Total	High income	Upper-middle income	Lower middle income
Young people (under age of 25)	91.2	88.5	89.3	91.3
People with disabilities	79.4	73.1	82.2	79.4
Workers older than 50	58.8	61.5	60.7	58.8
Women as single parents	51.5	53.8	57.1	51.5
Migrant workers, refugees and diplaced populations	51.5	57.7	39.3	51.5
Minorities and indigenous people	38.2	38.5	39.3	38.2

HIGH INCOME COUNTRIES

UPPER - MIDDLE INCOME COUNTRIES

LOWER MIDDLE INCOME COUNTRIES

Overall, technology is a time multiplier, especially for PES being able to address most in need clients.

Artificial Intelligence, powered services

Algorithms capable to: **identify, classify** and **predict** patterns within massive amounts of data, including for **job-searching/matching**

Use is still very narrow: **one third** of survey PES

AI is being introduced more rapidly in HIC; middle-income countries are catching up, still quality data is an important bottleneck

Copy rights: Tara Moore/Getty Images

Gaps in core capabilities

▶ Need to more frequently up-skill staff is the biggest challenge PES are experiencing

▶ Client's lack of digital skills and accessibility, i.e via 4G mobile devises

▶ Challenges also remain in cybersecurity, data protection and contingency plans

Preparing PES for the next era?

▶ Skilled-digital staff and more collaboration across providers

▶ AI is data hungry: non-traditional datasets for public policy-making in developing countries?

▶ Governance of data management: data the new "black gold"

▶ Building trust with clients – transparency with data practices, privacy and ownership

▶ Placing clients at the centre of technology transformations

▶ Technology adoption needs alignment with overall strategy
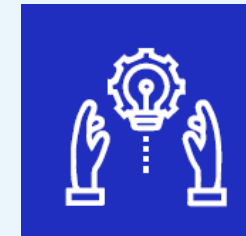
Thank you!

Download infographics from:

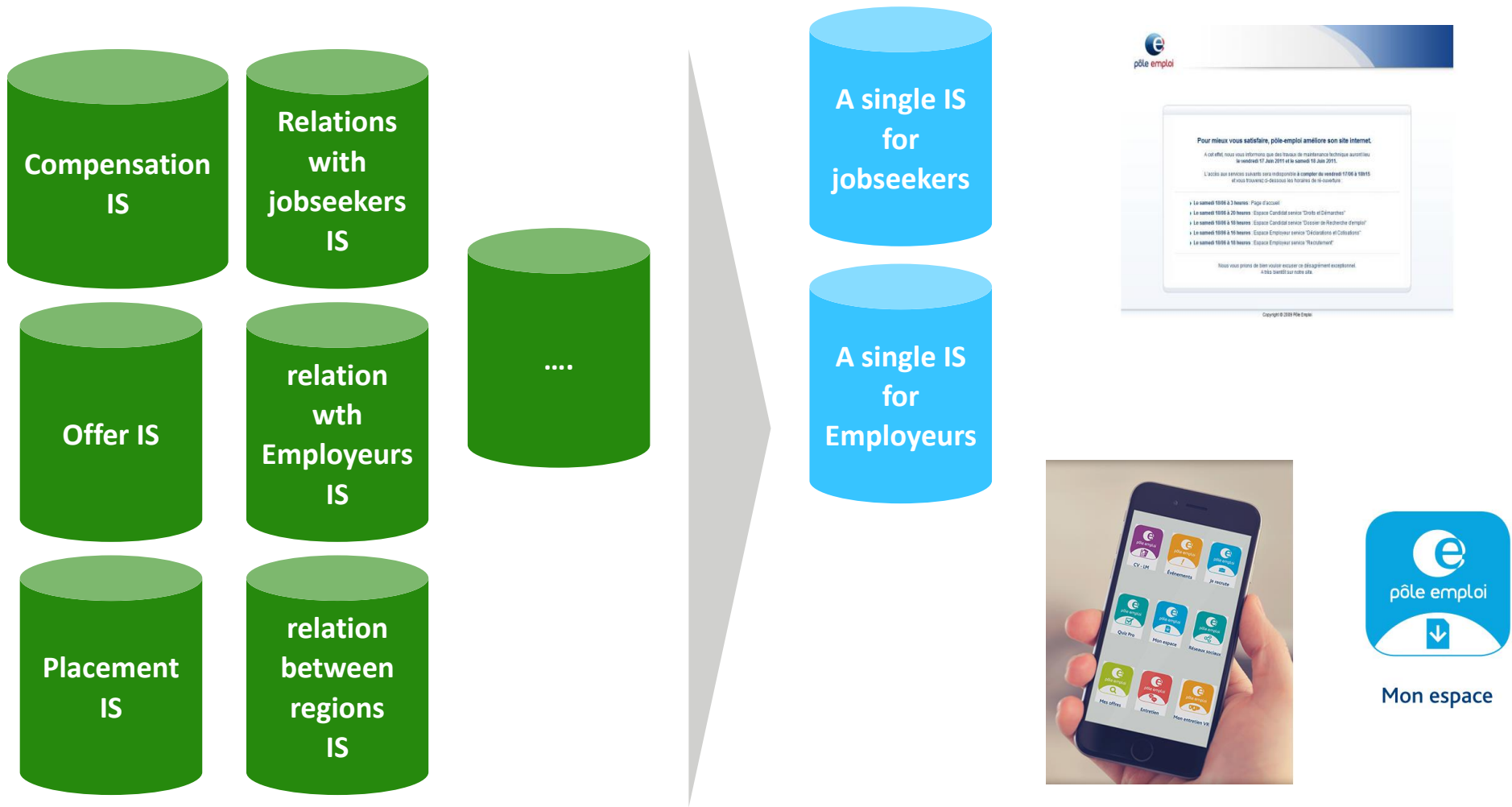https://www.ilo.org/emppolicy/pubs/

Contact me at: avila@ilo.org

Deloitte.

Sharing the ODS Digital employment experience in France

The creation of the single operator has boosted the digitalisation of services

anpe + **Assédic** = **pôle emploi**

- Online registration
- Job search
- Job Submission
- Training search
- Status report
- …. : all that supports job seekers and companies in their relationship with the operator

Difficult cohabitation between historical IS, new services, and new distribution channels

- Compensation IS
- Relations with jobseekers IS
- Offer IS
- relation wth Employeurs IS
- ....
- Placement IS
- relation between regions IS

- A single IS for jobseekers
- A single IS for Employeurs

Mon espace

Digital services, but for what purpose and under what conditions?

- Improvement of the quality of service

- Modernisation of the relationship with employers and jobseekers

- Historization of relationships

- Effectiveness of the services provided

- Rapid service and interactions.

- Increased added value of contacts

- Increased value in the services provided thanks to digital technology (data, AI, historisation, etc.)

- **WITHOUT …**

- Dehumanising the relationship

- Reducing the scope of services provided

- Limiting support to those who need it most

Create new services through digital means more than just shifting existing services to digital ones.

ANETI's current information system

Business application in BETI / EE

Regional Services Activity Indicator System

National website
www.emploi.nat.tn

ANETI's INTRANET

International website
www.aneti-international.tn

ANETI's current information system

SMSing platform

e-learning platform
Tkawen.emploi.nat.tn

Référentiel Tunisien des
Métiers et des Compétences
(Tunisian Repository of Trades
and Skills)
rtmc.emploi.nat.tn

Job search techniques website
Tre.emploi.nat.tn

Web services

Jobseekers

Satisfaction

44%
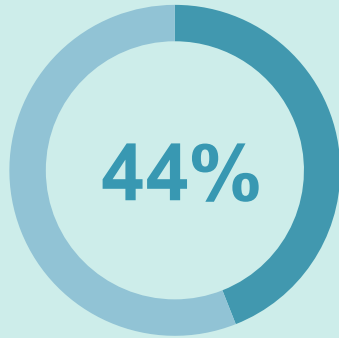
are not satisfied with ANETI' services

Use

Reported a bad user experience

50%

4th most visited job website

Expectations

ANETI' services are considered inefficient

41%

54%

Long delays in job search

Companies

Satisfaction

Are not satisfied with ANETI' services

51%

3rd Public Administration
7th in terms of digitisation (*)
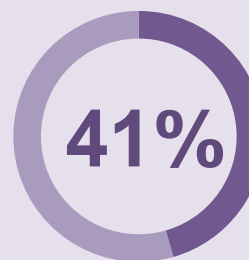
Use

Often resort to ANETI's services

31%

5th job posting site

Expectations

Contacted by employment offices (*)

54%

41% are not registered on the ANETI website

ANETI's challenges

Market dynamics

- A changing market
- New emerging skills.

HR policy

- Internal skills development
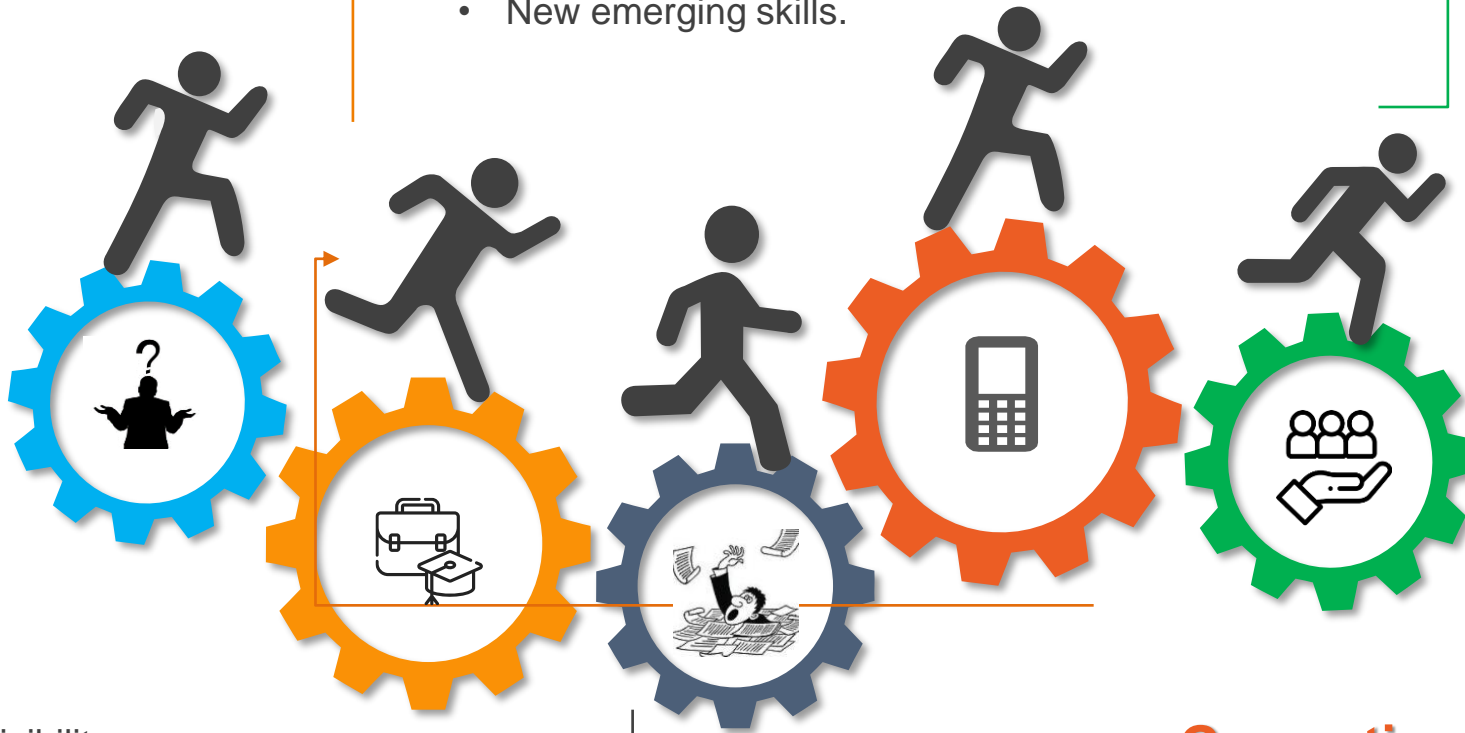- Adapting to innovation.

Governance

- Lack of stability and visibility
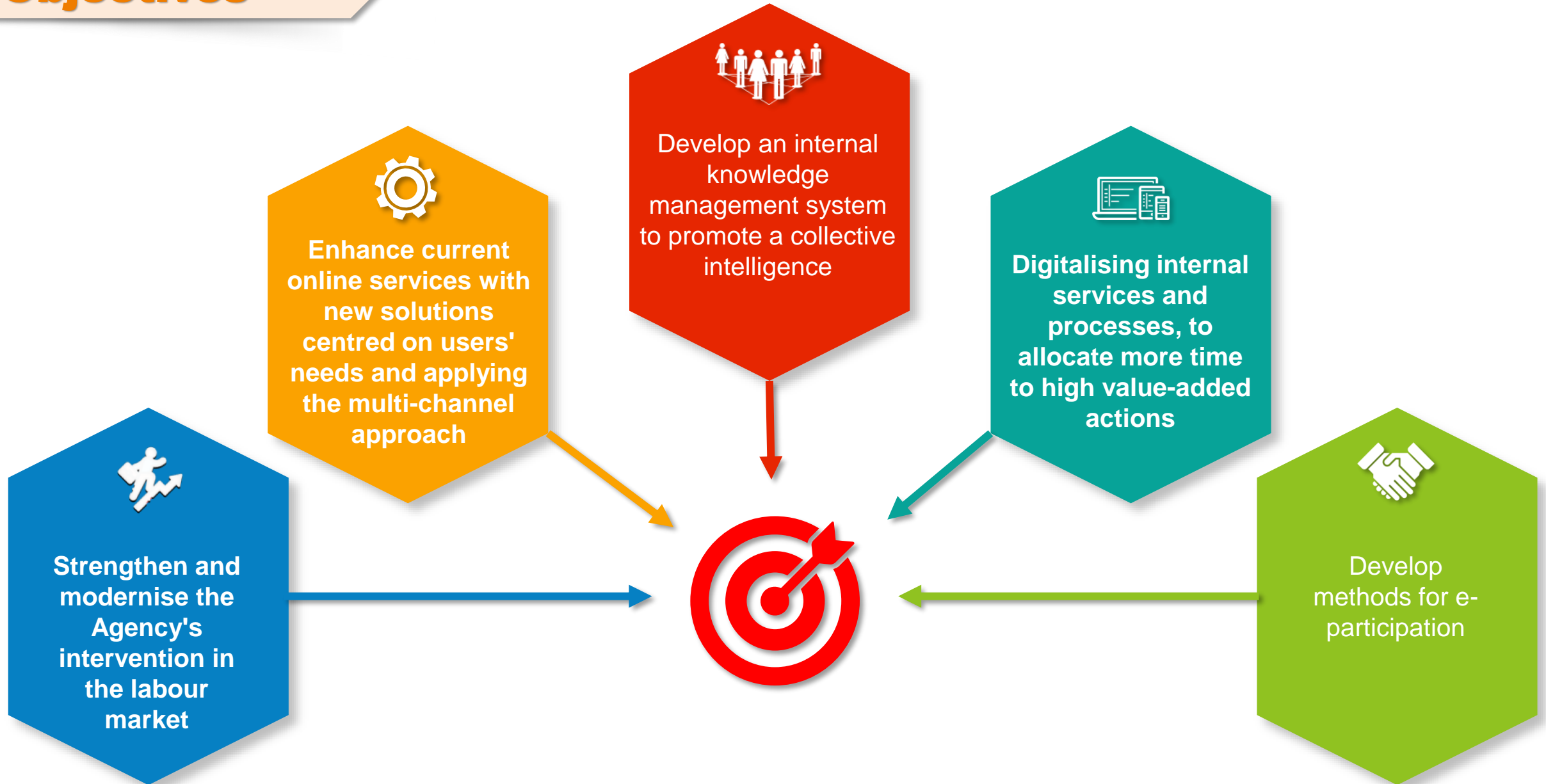- Difficult economic and social context

Bureaucracy

- Discouraging
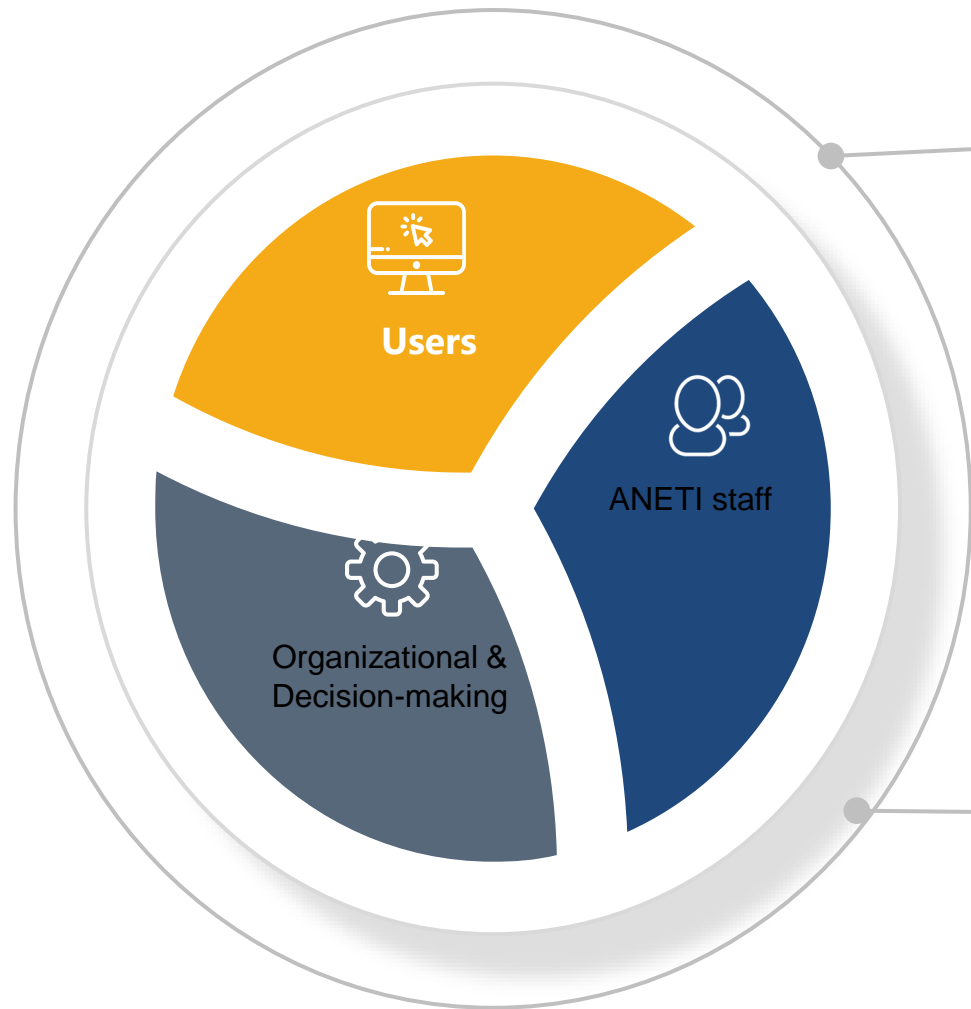- Loss of efficiency, productivity and time
- Complexity

Generation Z

- Connected
- Born digital
- Practical

Enhance current online services with new solutions centred on users' needs and applying the multi-channel approach

Develop an internal knowledge management system to promote a collective intelligence

Digitalising internal services and processes, to allocate more time to high value-added actions

Strengthen and modernise the Agency's intervention in the labour market

Develop methods for e-participation

Digitalization axes

Users

ANETI staff

Organizational & Decision-making

- **Jobseekers**
- **Companies**
- **Project leaders**
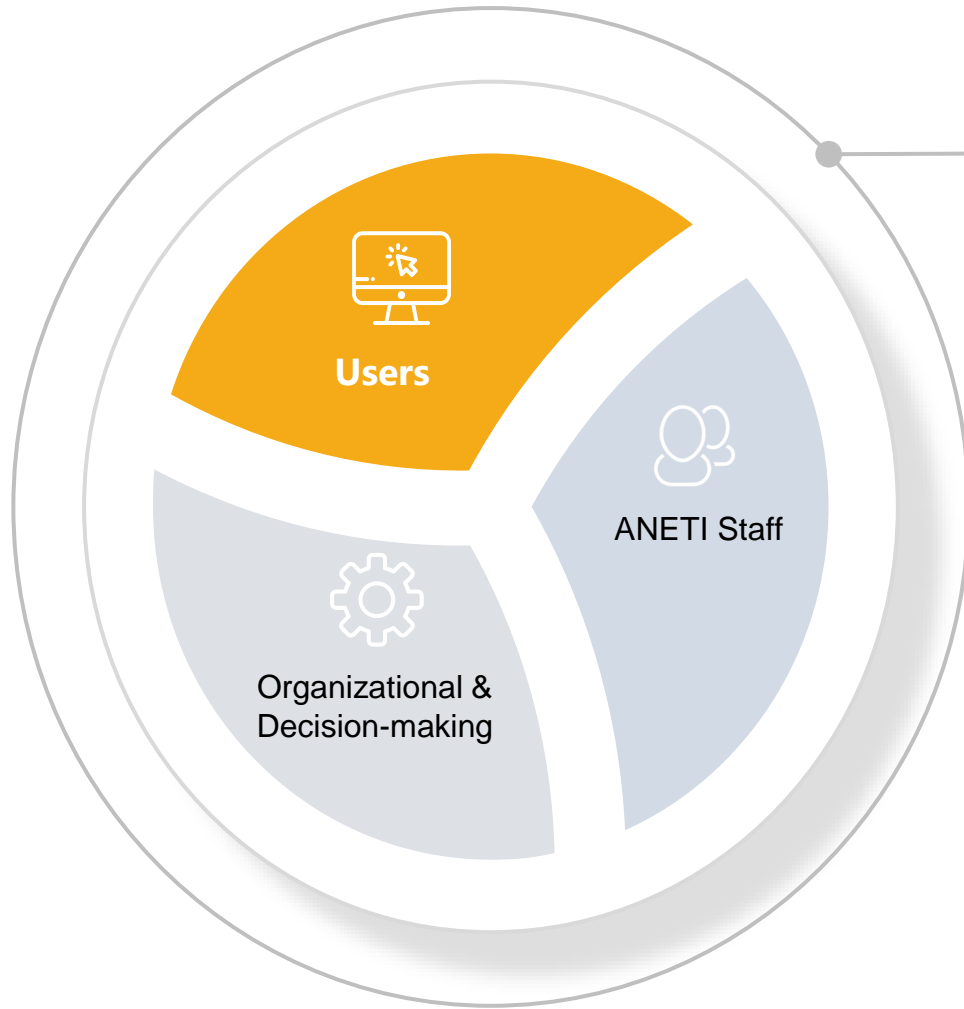- **Associations**
- **Partners**

- **Skills and careers**
- **focus on core business**
- **Innovation valorisation**

- **Process mapping**
- **Cost reduction**
- **Decision support**

Digitalization axes

Users

ANETI Staff

Organizational & Decision-making

- **Monitoring and statistical profiling**
- **RTMC**
- **Website portal**
  - Topical sites
  - AI-based matching system
  - Skills validation system
  - E-learning
  - "E-participation & E-petition".
  - Open-DATA
  - ANETI - Expo
  - Electronic files management
  - Notification system (SMS, mailing,...)
  - Chat box
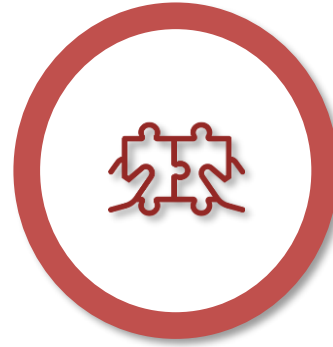- **Mobile applications**
- **Job fairs**

Matching system

Needs identification

- **Identification of the job seeker's profile (education and training, assessment, CV, professional and extra-professional experience,...)**
- Identification of recruitment requirements

Search

- Semantic search
- Multi-criteria search
- Search by keywords or tags

Matching

- Crossing of variables into input data's
- Specification of the selection criteria (removal, bonus,...)
- Variables measurement
- Shortlisting / Scoring

Gap analysis

- Gap analysis report
- Suggestions for training and action plans to improve the employability of the jobseeker
- Dashboards (skills gap, related professions, most requested qualifications)

Digitalization axes

Users

Organisational
&
Decision-making

ANETI Staff

- Internal skills and career management system
- **Digital Workplace**:
  - WikiEmployment : Knowledge base
  - Best practice capitalisation platform
  - Internal skills bank
  - Participatory innovation platform
  - Corporate social network
  - Digital library
- **E-learning platform**
- **Innovation Lab**
- **System for managing and monitoring requests and complaints**

Digitalization axes

Users

ANETI Staff

Organisational
&
Decision-making
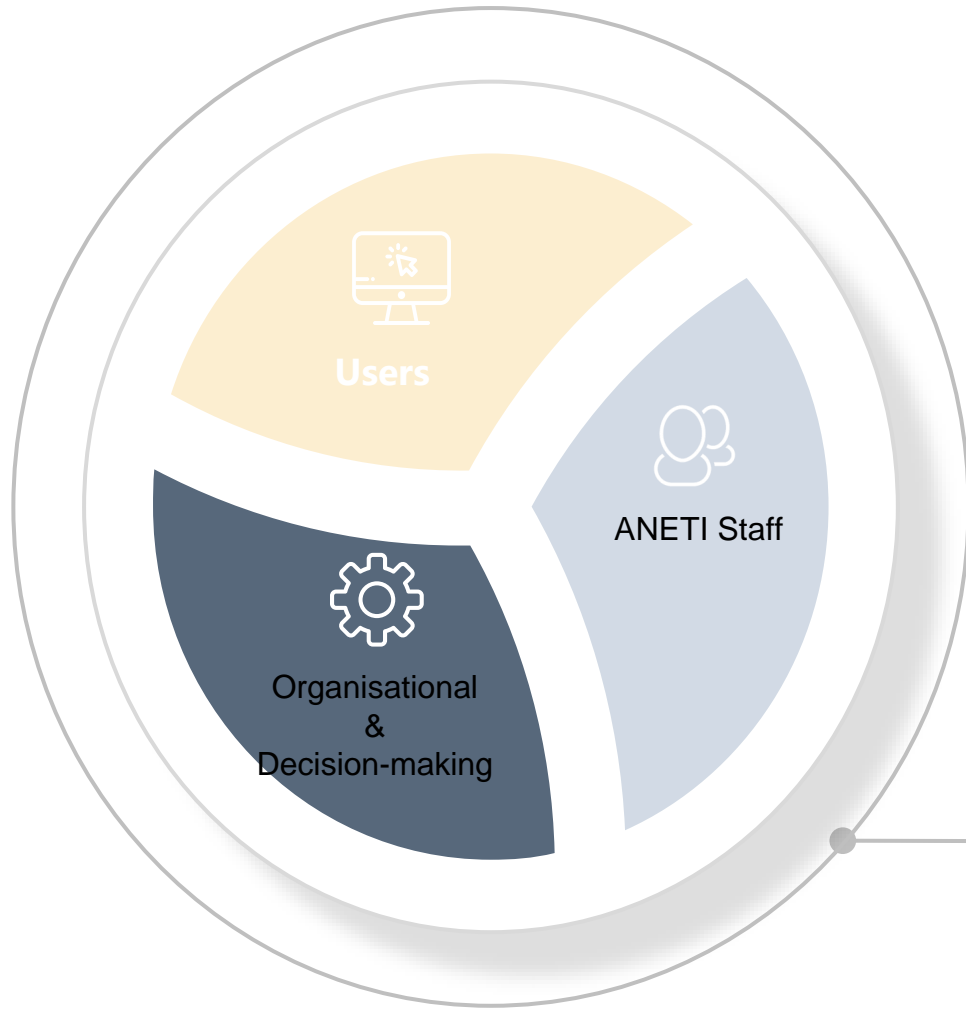
- **Functional mapping of processes**
- **Dematerialisation**
- **Decision making support system**
- **Virtual job agency**
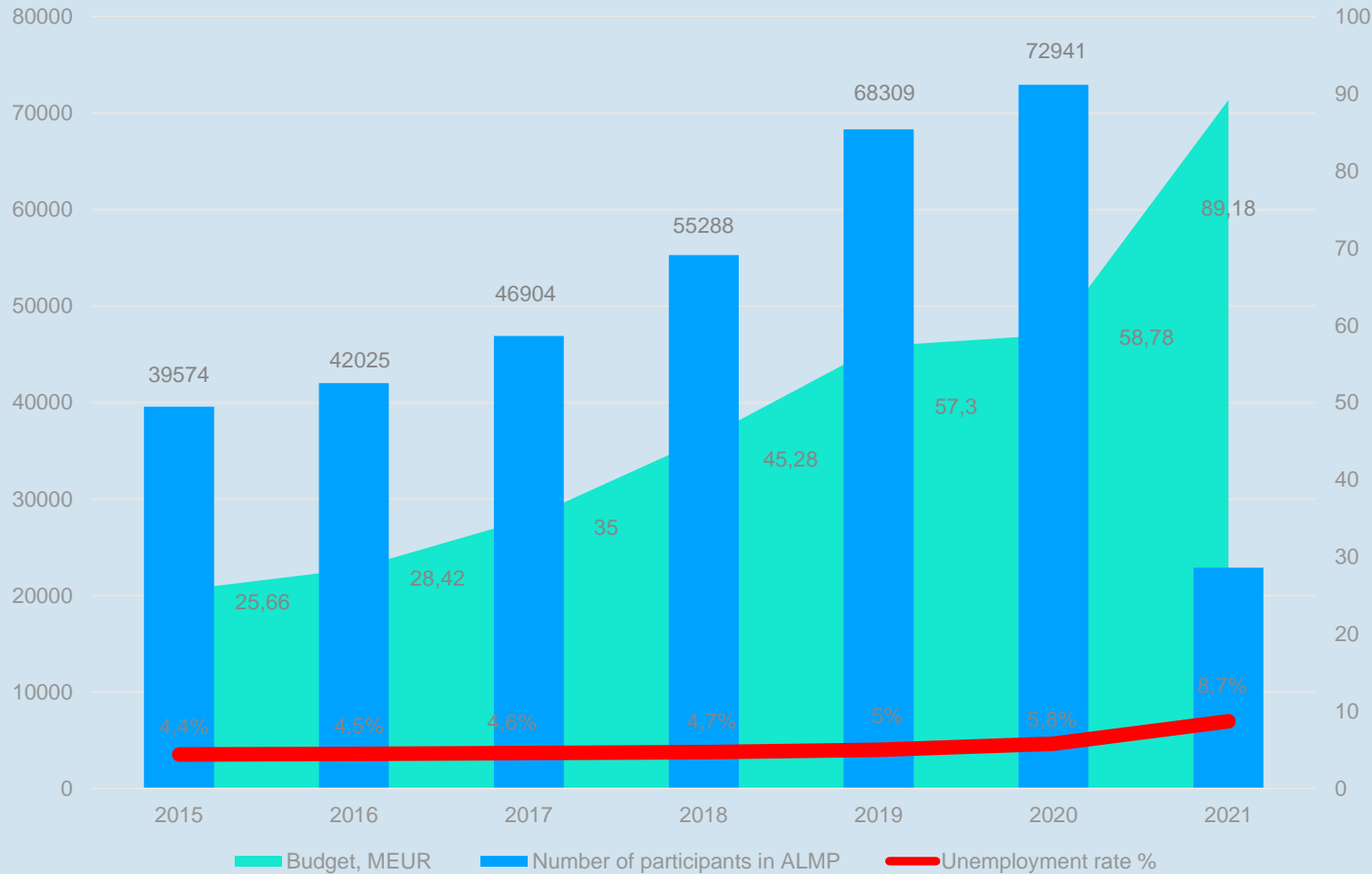
Partners

Thank you

For your attention

Applying an automated tool for impact evaluation of active labour market measures – Estonian experience

Mari Väli
March 25th 2021

The purpose of the tool

Eesti Töötukassa

ALMP in Estonia in 2015-2021*

EUIF spends increasing amounts on active labour market measures, but so far we haven't assessed the impact of these measures systematically

*forecast

Legend:
- Budget, MEUR
- Number of participants in ALMP
- Unemployment rate %

Bar values (Number of participants in ALMP): 39574, 42025, 46904, 55288, 68309, 72941

Budget, MEUR values: 25,66, 28,42, 35, 45,28, 57,3, 58,78, 89,18

Unemployment rate %: 4,4%, 4,5%, 4,6%, 4,7%, 5%, 5,8%, 8,7%

Years: 2015, 2016, 2017, 2018, 2019, 2020, 2021

Inevitable preconditions:

- **Availability of detailed data** in a well-accessible format – both for the unemployed and the employed
  data warehouse, overall infrastucture for data exchange

- In-depth **analytical competence**
  in-house or outsourced

- **Technical preparedness**
  dedicated infrastucture for impact assessment tool

- **Demand** by service „owners"
  The people responsible for service development and service provision

The methodology

The impact assessment tool uses **propensity score matching** and exact matching combined with regression adjustment to evaluate the effects of labour market programmes.

In other words we compare the participants in ALMPs with similar persons who didn't participate and assess the outcomes showing the effects of specific labour market services on the probability of being employed and on wages 1 to 24 months after participating in the labour market service.

Eesti Töötukassa

Work practice

Wage subsidy

Labour market training
- general skills
- Estonian language
- ICT
- vocational training

Work rehabilitation

ALMPs

Eesti Töötukassa

Work practice

Wage subsidy

Labour market training
- general skills
- Estonian language
- ICT
- vocational training

Work rehabilitation

ALMPs

- **Gender**
- **Age**
- **Education level**
- **Previous occupation**
- **Previous unemployment spells**

- **Duration of last employment**
- **Average earnings of last 12 months before unemployment**
- **Region of residence**

- **Risk group information**
- **Unemployment benefiits**
- **Services received during previous unemployment spells**

Background variables
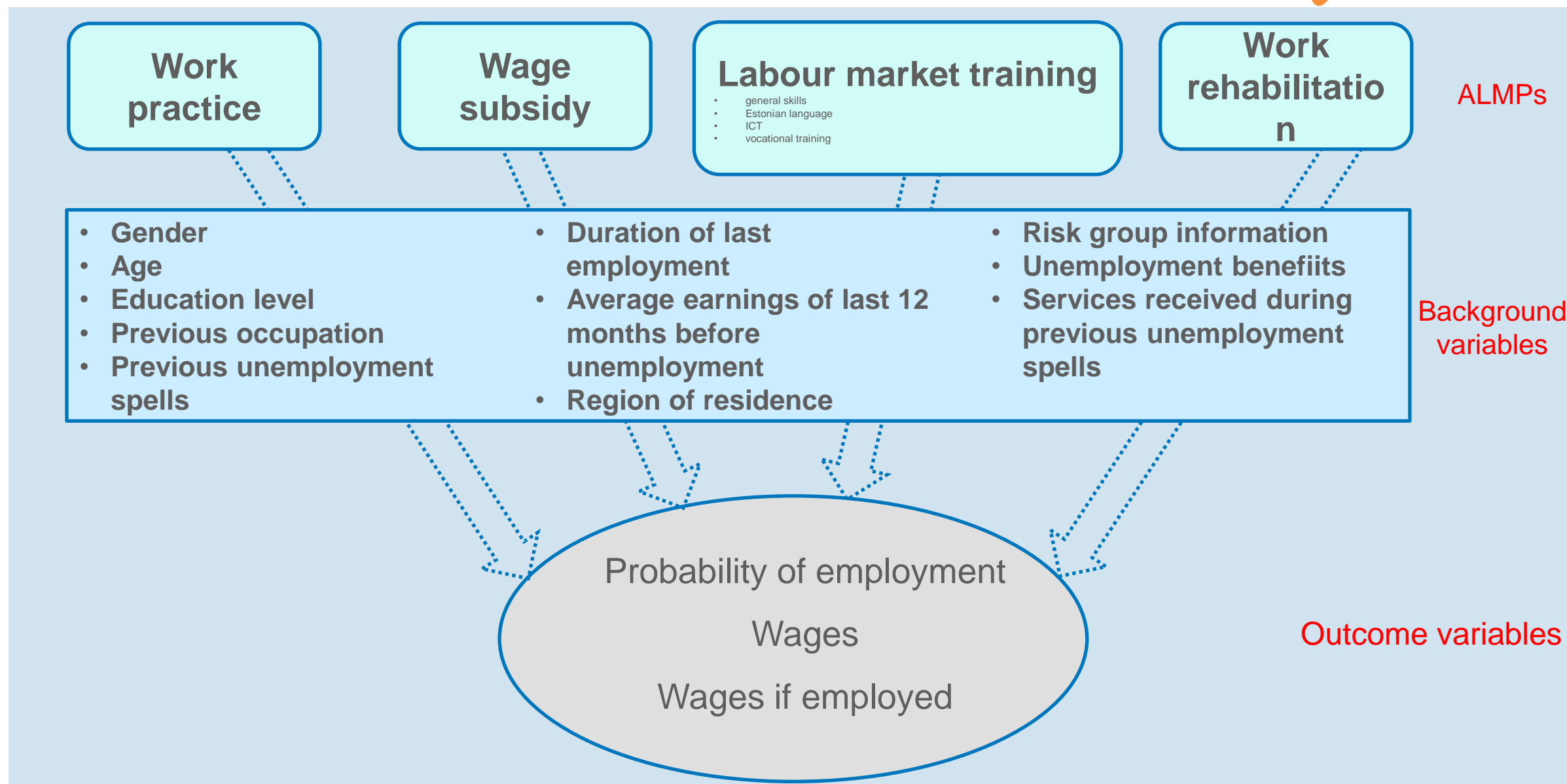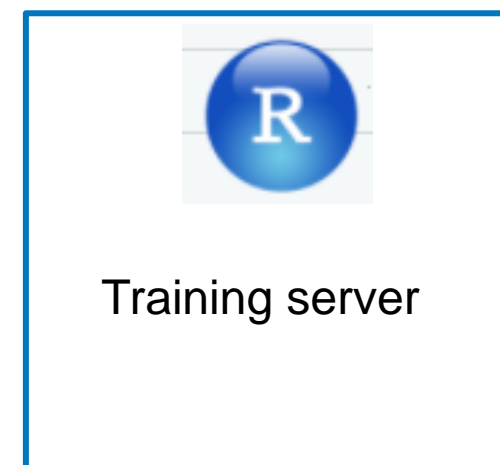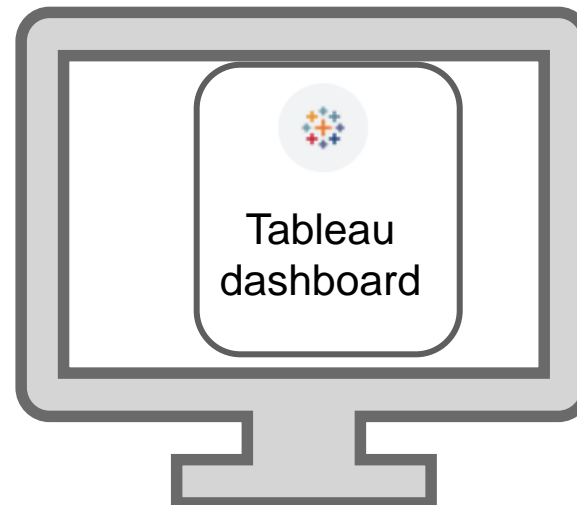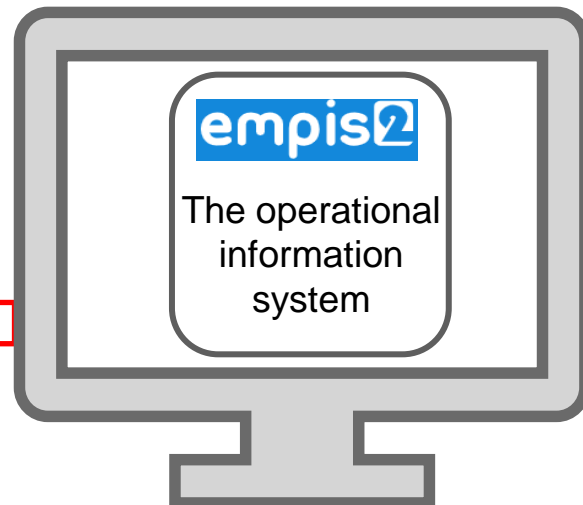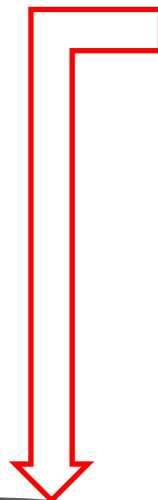
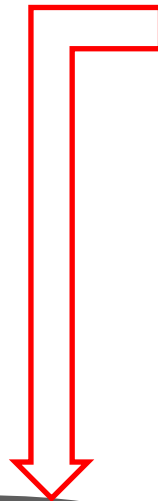Probability of employment

Wages

Wages if employed

Outcome variables

The data flow

empis2

The operational information system

Tableau dashboard

Eesti Töötukassa

1. Data about clients and services

TARU
Data warehouse

R

Training server

The data flow

empis2

The operational information system

Tableau dashboard

Eesti Töötukassa

1. Data about clients and services

TARU
Data warehouse

2. Data sets necessary for the impact evaluation

Training server

The data flow

empis2

The operational information system

Tableau dashboard

Eesti Töötukassa

1. Data about clients and services

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Training server
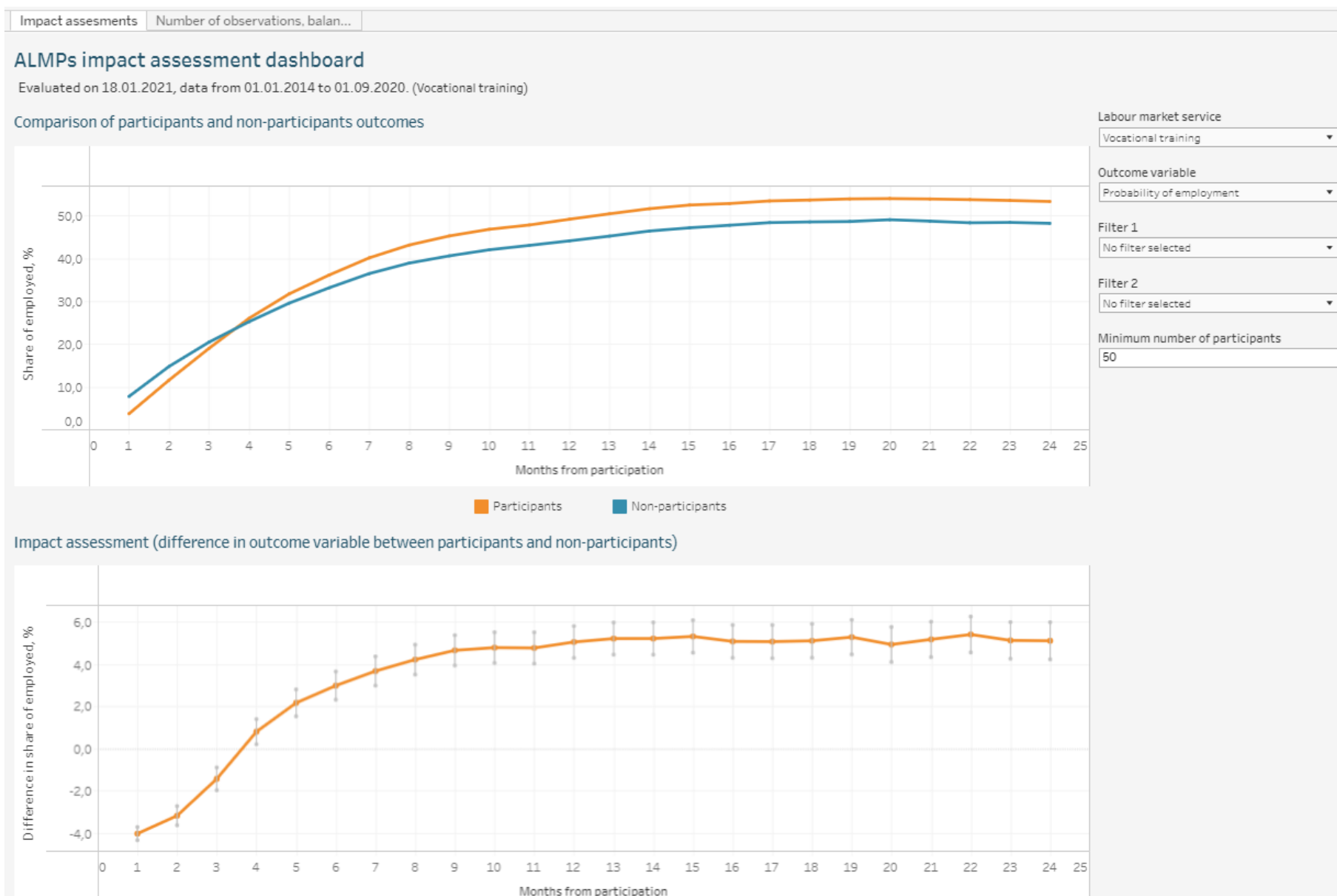
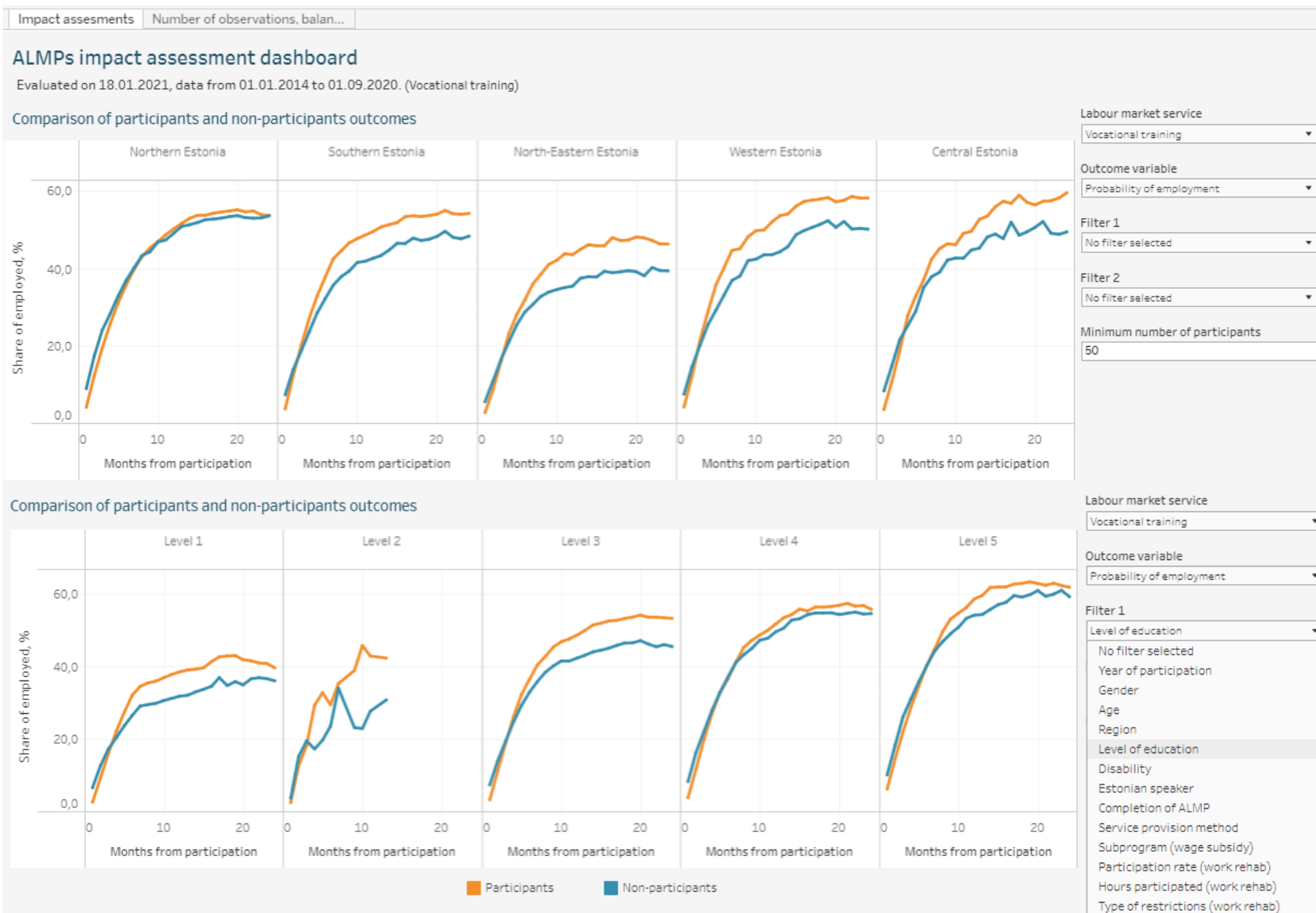3. Prepared data tables
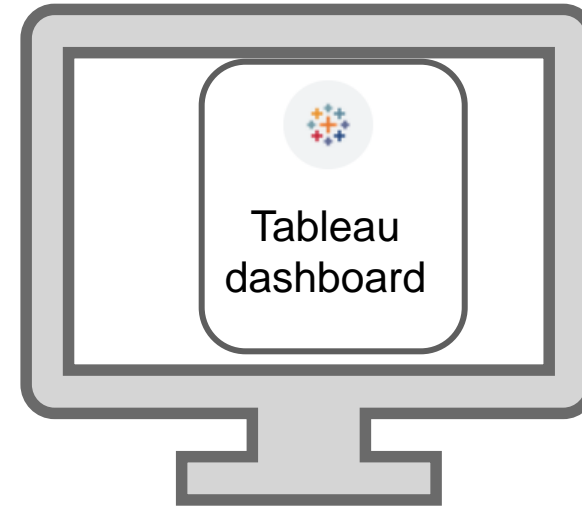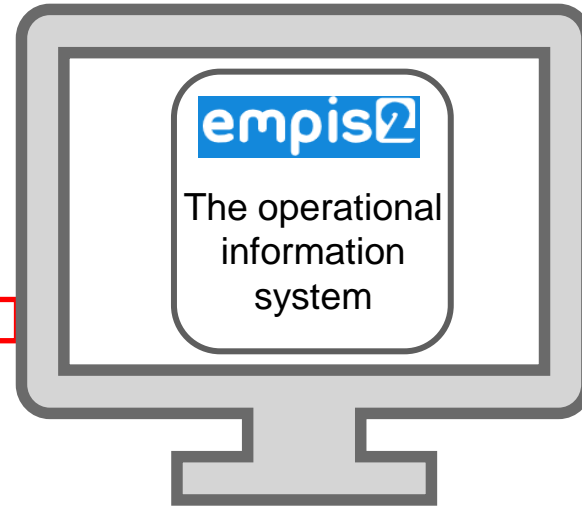
2. Data sets necessary for the impact evaluation
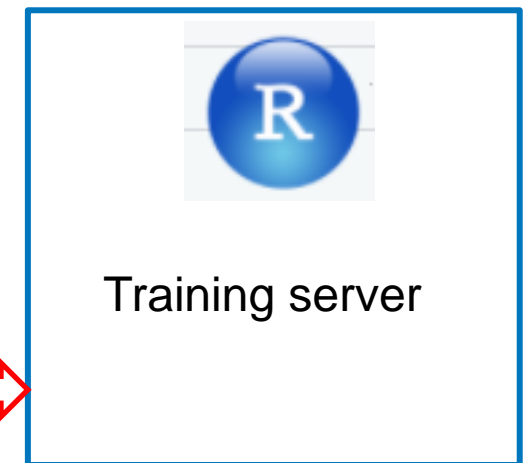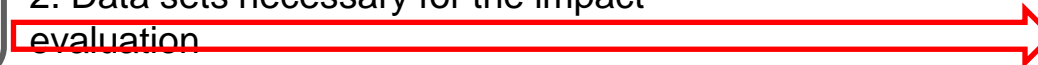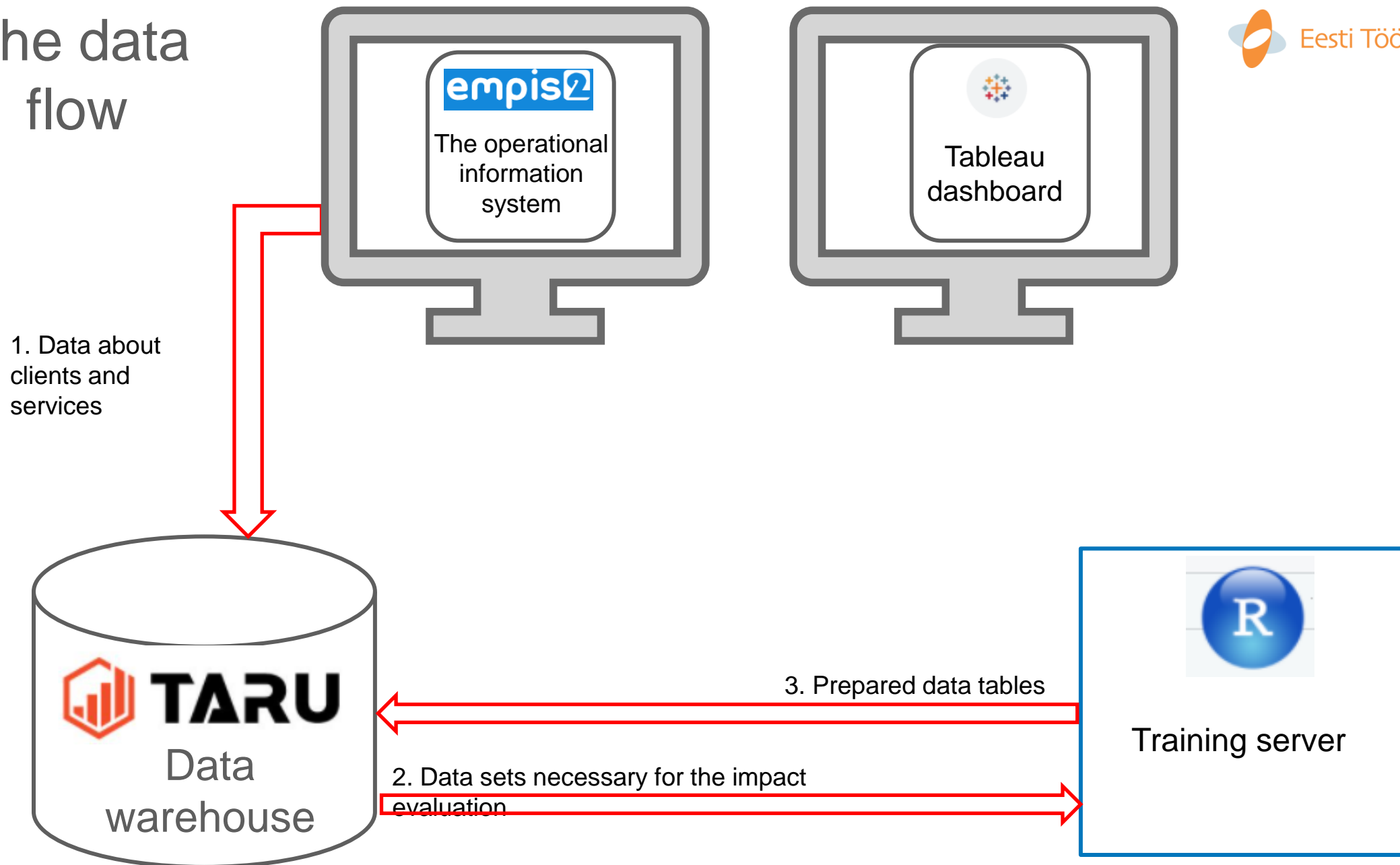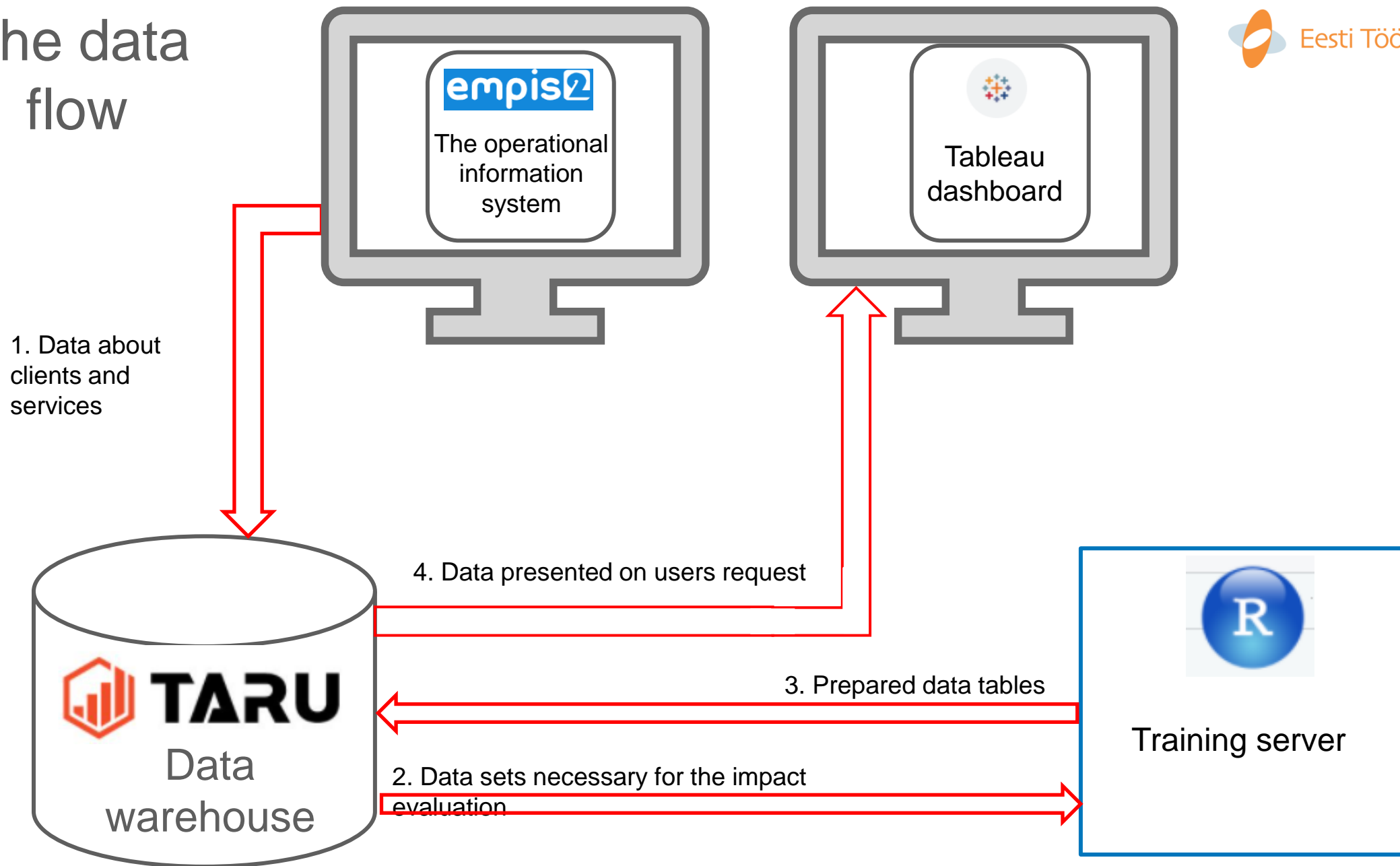
An example of the dashboard

An example of the dashboard

Limitations

- Due to small absolute numbers of participants, it is not possible to go into details

- Counsellors expectations to get personalised suggestions about suitable labour market services to their clients can not be met

Next steps

- Adopting the impact assessment tool to the business processes

- Regular updating of data

- Additional ALMPs impact to be assessed

- Automated cost-benefit analysis of ALMPs

- Adjustments made to targetting and provision of ALMPs based on outcomes

Eesti Töötukassa

Thank you!

mari.vali@tootukassa.ee