

Big Data for Labour Market Information



**9th Thematic Workshop of Make it
Match Network Eastern Partnership**
Milan, 21-22 November 2019

Eastern Partnership – multilateral - Deliverable 18: Mobility and People to People



2018-2020

- **20 deliverables 2020: monitoring**
 - 3 horizontal deliverables and 4 priority areas; monitoring
- **18th deliverables and people-to-people contacts**
 - Young people's skills, entrepreneurship and employability
 - Reduced mismatch skills with LM demands
- **1e: Mobility**

The 6 partners

- > ARMENIA
- > AZERBAIJAN
- > BELARUS
- > GEORGIA
- > MOLDOVA
- > UKRAINE

Eastern Partnership
Bringing the Eastern European Partners closer to the EU

Launched in **May 2009**

Goals

- > Promoting democracy and the rule of law
- > Supporting reforms
- > Closer political association
- > Economic integration

Benefits

- > Easier mobility
- > Creating jobs
- > More trade
- > More business opportunities

New Skills Agenda for Europe

Quality and relevance of skills

1. Upskilling pathways

2. Key Competences Framework

3. VET as a 1st choice

4. Digital Skills and Jobs coalition

Visibility and comparability qualifications

5. Revision of European Qualifications Framework (EQF)

6. Skills profile tool for 3rd country nationals

Skills intelligence

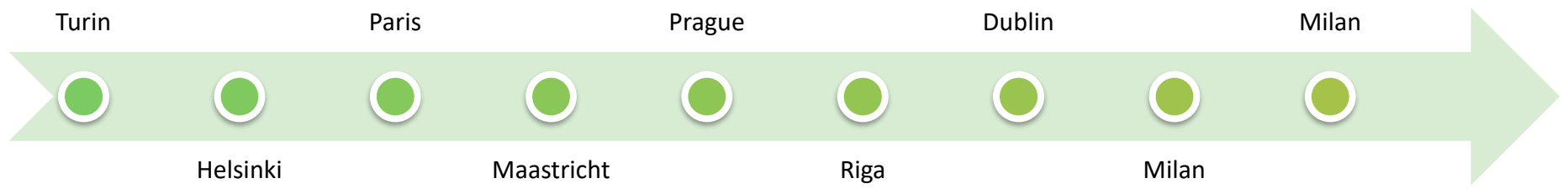
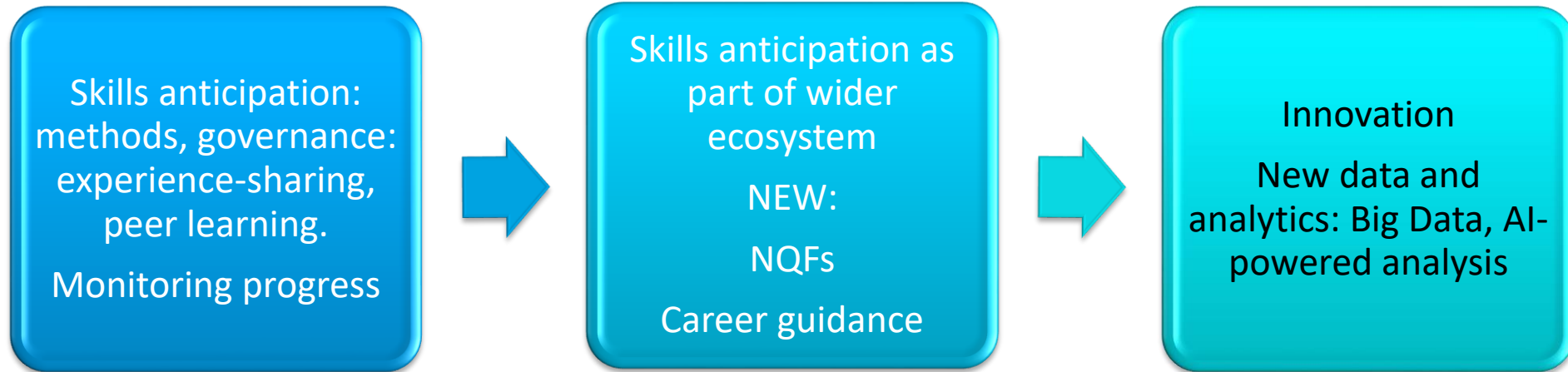
7. Revision of EUROPASS

8. Analysis of brain drain

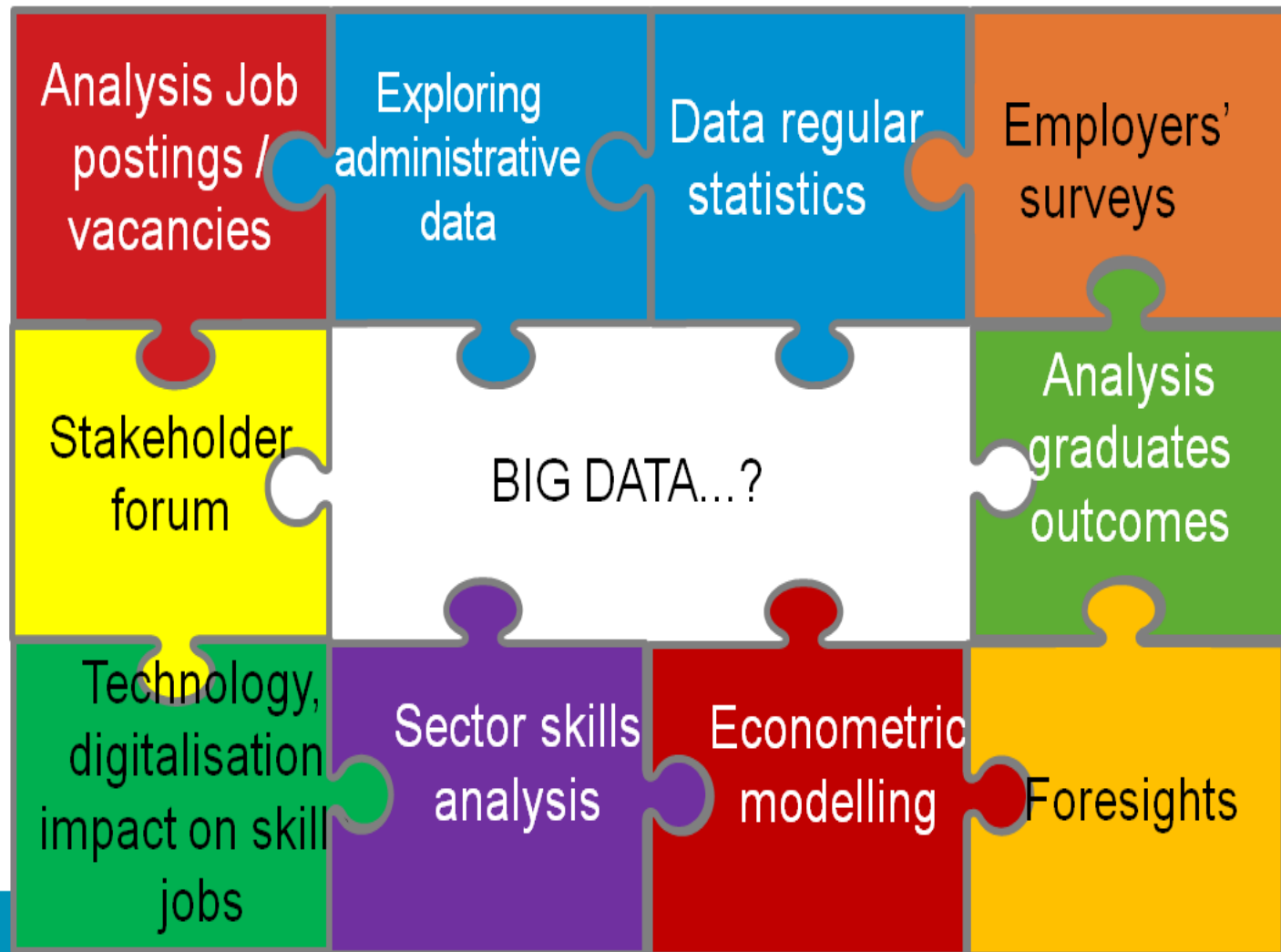
9. Blueprint for Sectoral Cooperation on Skills

10. Initiative on graduate tracking

Make it Match Network (2014-2019)



Skills anticipation – multiple dimensions: Combining data sources and methods



Big Data for LMI: revised mix of profiles Network



Teams:

Armenia, Azerbaijan,
Belarus, Georgia, Moldova,
Ukraine



Ministries

State Statistical Offices

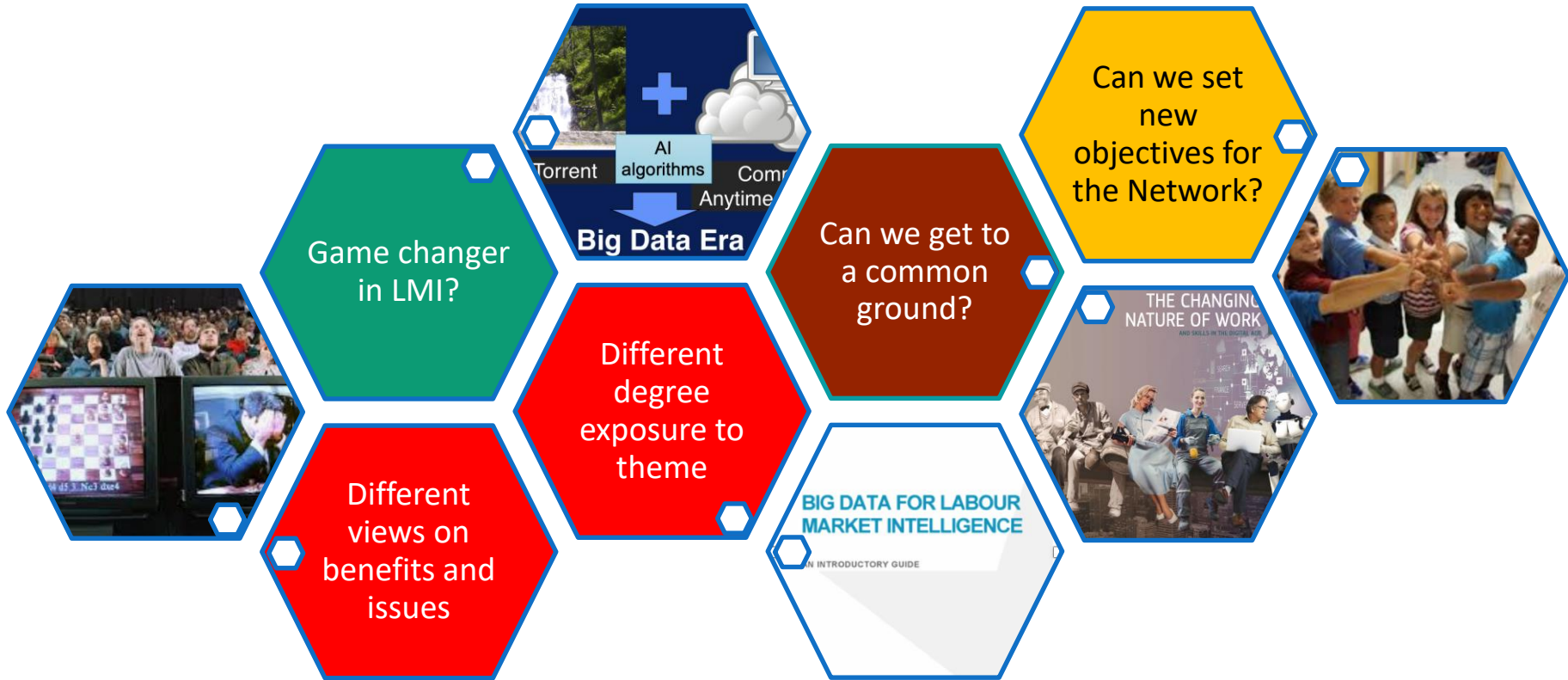
Public Employment Services

Research, academia

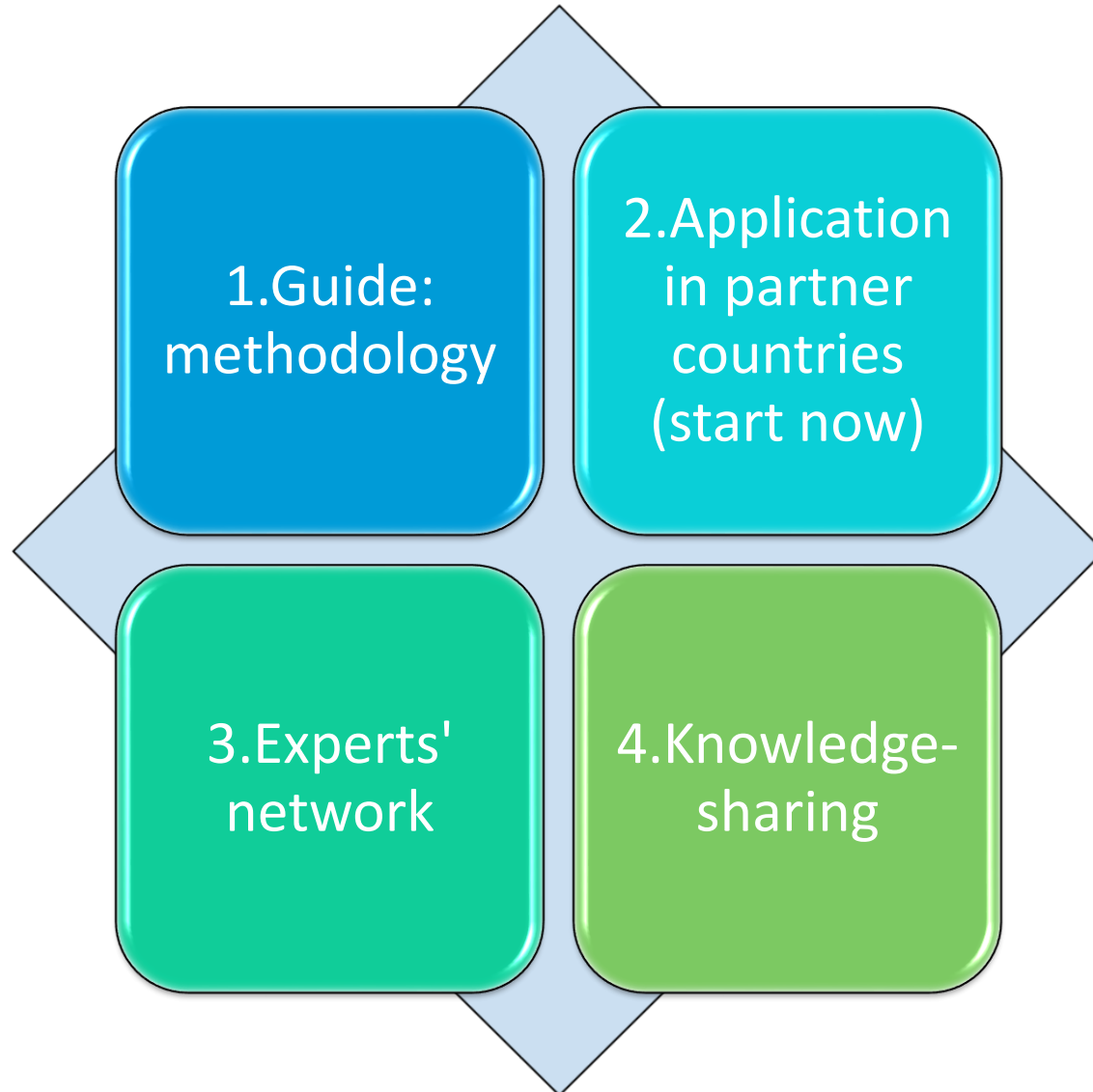
Mix of profiles:

LM analysts; data science,
software development;
statisticians;

Big Data for LMI: possibilities and issues in this workshop



ETF Big Data project 2019-2021



Big Data 4 LMI: agenda 21-22/Nov/2019

Day1:

- General overview of Big Data LMI; role AI
- Country cases: Big Data
- KDD: steps
- Data cleaning
- Machine learning, AI algorithms
- WG discussion: usage of results Big Data LMI (3 questions)

Day 2

- Architecture solutions for real-time LMI
- Country cases: OJV websites
- Interpretation & visualisation results Big Data LMI
- Big Data LMI and national statistics
- Group exercise: preparing a project Big Data LMI
- Future steps ETF project

Our trainers

- Fabio Mercurio
- Alessandro Vaccarino

Session 10: Big Data and Statistical Systems

Brief information on EUROSTAT project
ESSnet Big Data

Session 10: Big Data and National Statistics

ESSnet Big Data

Big data: from exploration to exploitation.

ESSnet Big Data is a project within the European statistical system (ESS) jointly undertaken by 28 partners. Its objective is the integration of big data in the regular production of official statistics, through pilots exploring the potential of selected big data sources, and through building and implementing concrete applications. ESSnet Big Data II has started in November 2018 and is to run for 26 months until December 2020.

It is a continuation of ESSnet Big Data I (from February 2016 until May 2018) and consists of 12 workpackages, A to L. Apart from *WPA Coordination* supporting and coordinating the project overall, these are grouped into an 'Implementation Track' covering *WPB to WPF*, a 'Pilots Track' covering *WPG to WPK* and the stand-alone workpackage *WPL* on smart statistics.

Session 10: Big Data and National Statistics

Workpackages

Implementation Track

WPB Online job vacancies

WPC Enterprise characteristics

WPD Smart energy

WPE Tracking ships

WPF Process and architecture

Pilots Track

WPG Financial transactions data

WPH Earth observation

WPI Mobile networks data

WPJ Innovative tourism statistics

WPK Methodology and quality

Smart statistics

WPL Preparing smart statistics

Session 10: Big Data and National Statistics

WPB Online job vacancies

Workpackage B (WPB) of [ESSnet Big Data](https://webgate.ec.europa.eu/fpfis/mwikis/essnetbigdata/index.php/WPB) focuses on **online job vacancies**.

<https://webgate.ec.europa.eu/fpfis/mwikis/essnetbigdata/index.php/WPB> **Overview**

Its aim is to produce statistical estimates for online job vacancies based on suitable techniques and concrete methodologies developed during the pilot phase of the project (see [Workpackage 1](#) of ESSnet Big Data I), and to explore the conditions under which these approaches can be used in the [ESS](#). The final objective of WPB is to develop and test methodologies and prototypes as well as to build capacity for integrating them into statistical production, both at the level of individual NSIs and the whole of the ESS.

WPB is carried out by representatives of twelve [ESSnet Big Data partners](#): SURS (Statistics Slovenia) which is leading WPB, and NSI (Statistics Bulgaria), FSO (Statistics Switzerland), DARES (Ministry of Labour, France), Destatis (Statistics Germany), CSO (Statistics Ireland), ISTAT (Statistics Italy), LSD (Statistics Lithuania), GUS (Statistics Poland), INS (Statistics Romania), SCB (Statistics Sweden) and ONS (Statistics UK).

Session 10: Big Data and National Statistics

Task 1 – Methodological framework

Performed by SURS (Statistics Slovenia), NSI (Statistics Bulgaria), FSO (Statistics Switzerland), DARES (Ministry of Labour, FR), Destatis (Statistics Germany), LSD (Statistics Lithuania), GUS (Statistics Poland), INS (Statistics Romania) and ONS (Statistics UK)

Task 2 - Statistical output

Task 3 - Implementation requirements of prototypes in the relevant statistical production processes at European and national level



The statistical office of the future

- ✓ **Data flows** in addition to **surveys and censuses**
- ✓ Embedded in data flow – **smart statistics**
- ✓ **Product designers** in addition to **data collection designers**
 - Statistical modelling will be a major activity
 - From descriptive indicators to nowcasting (and forecasting)
- ✓ **Trust** and **quality** will be key
- ✓ New role in teaching **digital literacy**
- ✓ **Accreditation** and **certification** instead of pure production
- ✓ Address issues linked to quality & transparency, privacy & confidentiality, access to third party data sources & data sharing, scientific standards & methodology, professional ethics, skills, ... 22