TRAILS
Enabling Data Analytics for Actions Tackling Skills Shortages & Mismatch

ENABLING DATA ANALYTICS FOR ACTIONS TACKLING SKILLS SHORTAGES & MISMATCH

ABOUT

TRAILS seeks to build on current data in skills mismatches and create novel tools and databases, harnessing the power of Artificial Intelligence. It will empower Vocational and Adult Education training to match employers with educational opportunities to reallocate workers efficiently.

MOTIVATION

TRAILs motivation is driven by the:

- urgent recognition of skills mismatch as a multidimensional challenge affecting productivity, social welfare and overall cohesion
- changing labour market requirements triggered by several external trends and shocks, such as the pandemic COVID-19 pandemic or the energy crisis.
- the need to allocate work efficiently, minimise unemployment and fill the skills gaps created by the "great restructuring".

SCOPE

Novel tools and databases

for measuring and classifying skills mismatches, gaps and shortages, using cutting-edge technologies like Machine Learning and Artificial Intelligence.

VET and Adult Learning training

match employees with educational opportunities involving VET and AL authorities

AI real time skill profiling and matching

for reducing skill gaps

Policy implications

contribute to the European Skills Agenda, by laying the groundwork for inclusive and resilient European labour markets

ARCHITECTURE IN A NUTSHELL

TRAILS aims to create a complete ecosystem that serves as a basis for research-led, policy-relevant and social impact-oriented actions. It will establish the necessary conditions for the successful development of competences adapted to the needs of the European Union. The novel approach of TRAILS is that its concept is based on an open-loop architecture.

1 Identify skills mismatch trends and novel mismatch indicators

2 Assess the impact of mismatch

3 Identify new skills protocols

4 Assess the role of Adult Learning and Vocational Education

5 Empower skills matching
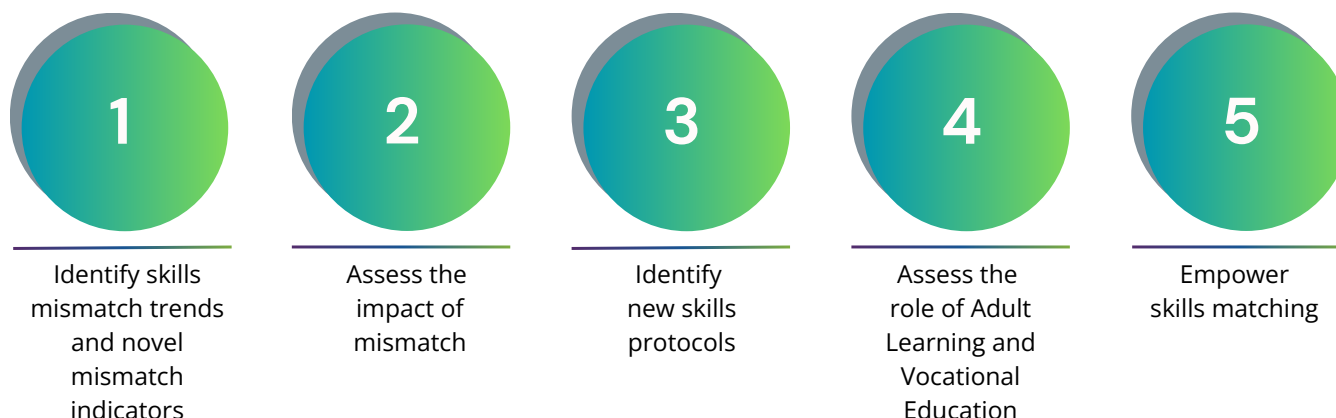
OBJECTIVES

O1 Generate innovative European primary survey data
This will enable TRAILS to gather insights into regional and demographic disparities in skills mismatch while improvising upon existing databases.

O2 Create a novel framework of analysis for identifying the main causes of labour shortages
TRAILS will asses skills needs and gaps and the impact of green and digital changes (known as the twin transition) on the resilience of European households and companies.

O3 Enable new instruments and indicators based on machine learning and Big-Data methods
This will allow TRAILS to address the skills mismatch and assess factors that mitigate the polarisation and segmentation of the labour market induced by the post-Covid-19 megatrends.

O4 Develop new instruments for balanced training
This will improve the coordination of VET providers, employers and other labour market institutions, and enable effective search and matching in the labour market, by harnessing the power of technology and artificial intelligence.

O5 Initiate and improvise upon a bottom-up approach to identify the determinants of education and training choice, and enable skills profiling that classifies and promotes transferable skills for the needs of inclusive labour markets in Europe

O6 Assess the role of behavioural, social and cultural factors in the decision for participation and choice of VET and Adult Learning programmes, including informal learning

O7 Enable wide communication and scientific dissemination of the innovative results to the labour market institutions, citizens, employers, VET providers, and policy actors.

EXPECTED IMPACT

Among its results will be an innovative methodology to measure skills mismatches; an analysis framework of training in the area of artificial intelligence, as well as a selection of best practices for tackling skills shortages and mismatches in Europe.

PARTNERSHIP

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