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HORIZON EUROPE PROJECT
Addressing skill shortages and
mismatches through innovative
methods including AI



TOWARDS A POLICY MIX FOR FAIR SKILLED MOBILITY

EU's labour-market challenges call for a coordinated response. Migration, AI and automation, skills development, skills recognition, job quality and integration all have roles to play. Drawing on Link4Skills findings, this brief sets out a policy mix that responds to specific labour-market imbalances and supports fair outcomes for workers and countries of origin and destination.

EXECUTIVE SUMMARY

Policymakers should begin with a clear question: what kind of labour-market imbalance are we trying to address? A vacancy can reflect a genuine shortage of workers, but it can also result from unattractive conditions, weak recognition systems, regional mismatch or barriers to career mobility. Each diagnosis requires a different combination of measures. Link4Skills evidence points to the limits of relying on any single intervention. AI and automation may reduce vacancies but increase underutilisation. Human-capital strategies might simply shift mismatches between skill levels. Migration can help meet unmet specific demand, but its contribution depends on whether workers' skills are recognised and used and whether employment offers decent conditions and prospects¹.

Achieving the right policy mix means combining six mutually reinforcing components: domestic skills development; selective migration; responsible automation and AI adoption; skills recognition and matching; better job quality, wages and retention; and ethical recruitment with shared-development safeguards.²

Skills Mobility Partnerships (SMPs) provide a practical mechanism for linking international skills development with fair mobility. They can pilot new forms of cooperation between countries of origin and destination, bring together employers and training institutions, and build trust within migration skill corridors. When intentionally designed to include joint training investments, dual-track pathways and safeguards for countries of origin, SMPs can help address labour-market needs while creating opportunities for mutual benefits and brain gain³.

² Marois, G., Potančoková, M., Bezat, A., & Crespo Cuaresma, J. (2026). Projecting labour market imbalances and skill mismatch under demographic change in the EU. *European Journal of Population*, 42(1), 4.

³ Grama, M., Katsiaficas, C., Huss, D., Hohwieler, L., & Hendow, M. (2026). *Mutually beneficial skills mobility: Skills mobility partnerships in potential and practice*. Policy paper. Link4Skills Policy Toolkit.

Migration skill corridors between origin and destination countries need institutions that connect recruitment with recognition, protection, training and sustained employment⁴. Their capacity to convert potential skills into effective participation is central to fair skilled mobility⁵.

The Link4Skills Navigator can support this approach by helping policymakers explore evidence, refine diagnoses and communicate policy options⁶. A context-sensitive policy mix can address real labour-market needs while reducing mismatch, preventing deskilling and supporting shared development.

EVIDENCE AND ANALYSIS

Understanding the problem behind a vacancy⁷

EU's labour markets are often described as facing generalised shortages. This synthesis of findings from the Link4Skills research project suggests that many apparent shortages are better understood as structural mismatches between demand, workers' qualifications, job quality, hiring practices and recognition systems. Highly educated workers may remain underutilised while vacancies persist in medium- and lower-skilled occupations. Selectively increasing migration can do little to help resolve these problems if migrants' skills are not recognised, working conditions remain unattractive or employers lack the capacity to recruit, train and retain workers. Policy needs to address the factors that prevent available skills from being put to use.

A vacancy may reflect a genuine lack of workers. It may also reflect poor wages, unattractive working conditions, slow recruitment procedures, regional mismatch, non-recognition of qualifications or insufficient career mobility. Treating these situations as if they were the same risks selecting an instrument that leaves the underlying problem unchanged.

The Link4Skills meta-analysis therefore stresses the need to distinguish labour shortages, skill shortages, recruitment difficulties, skill gaps and skill mismatches. These terms should guide diagnosis rather than be used interchangeably⁸.

Automation and migration together⁹

Automation and AI can reduce demand for some routine tasks while creating demand for complementary skills. They

⁴ Ullmann, J., & Schwenken, H. (2026). Migration skill corridors – Comparative report: Synthesis of 14 migration skill corridor reports. Link4Skills Deliverable 4.2. Institute for Migration Research and Intercultural Studies (IMIS), University of Osnabrück.

⁵ Grabowska, I., & Boatemaa Setrana, M. (2026). *Fair Skilled Mobility: A Manifesto* (p. 248). Taylor & Francis. [e-Reader | Fair Skilled Mobility | A Manifesto | Izabela Grabowska, Ma](#)

⁶ To log in to Link4Skills Navigator: <https://navigator.link4skills.eu/L4slnitView>; for evaluation report: Stroińska, K., Makohon, K., Katsiaficas, C., Wierzbicki, A., & Skorupska, K. (2026). Evaluation report: Evaluation of AI-assisted skill Navigator [Project deliverable]. Link4Skills.

⁷ See also Policy Brief in Population Europe: <https://www.population-europe.eu/research/policy-insights/firms-short-talent-workers-short-opportunity-europe-needs-rethink-its>

⁸ Bezat, A., Potančoková, M., Rahimli, N., Sowa, K., Nicoletti Altamari, M. P., & Grabowska, I. (2026). Meta-analysis and report on skill shortages in EU countries (Link4Skills Deliverable 2.1, Grant Agreement No. 101132476). International Institute for Applied Systems Analysis (IIASA).

⁹ Grabowska, I., Potančoková, M., & Marois, G. (2026). Automation and selective migration: A policy mix in migration skill corridors. Manuscript prepared for the Journal of Ethnic and Migration Studies (JEMS).

can also change the occupational profile of migrant recruitment. Link4Skills' work on automation and selective migration argues these instruments can be mutually reinforcing.

Technological adoption should therefore be planned alongside workforce development and migration. The aim is to improve productivity while helping workers move into changing roles. Reskilling and mobility pathways are needed to support people affected by technological change.

Recognition and job quality¹⁰

Recruiting skilled workers does not guarantee that their skills will be used. Slow or opaque recognition procedures

can leave migrants overqualified, deskilled or working below their competence. Recognition, bridging programmes, language support (the most important) and employer guidance belong at the centre of labour-market policy.

Job quality is equally important. Where recruitment problems stem from unattractive conditions, foreign recruitment without reform risks high turnover and dependence on continuous recruitment. Adequate pay, safe conditions, career pathways and workplace inclusion are integral to a sustainable response.

SIX COMPONENTS OF THE POLICY MIX

Link4Skills proposes a policy mix for fair skilled mobility that brings together six components. Their relative weight should reflect the type of imbalance, the sector and the migration skill corridor.

1. Domestic skills development

Invest in vocational education and training, upskilling, reskilling and lifelong learning. Education systems should be more closely aligned with changing labour-market demand. Upskilling is particularly important where technological and green transitions are reshaping tasks and occupational requirements.

The mix also includes opportunities for later retirement, including as a voluntary choice. Domestic skills development and labour-supply measures should be considered alongside migration and technological change.

2. Responsible automation and AI

Treat automation and AI adoption as part of the wider policy mix. Technologies can reduce some routine tasks and create demand for complementary skills, changing the profile of recruitment and training needs.

Use automation to improve productivity and complement workers. Combine adoption with reskilling and mobility pathways, so that technological change is accompanied by investment in people.

3. Skills recognition and matching

Make recognition procedures faster, fairer and more transparent. Without effective recognition, destination countries may recruit migrants whose qualifications and competence remain underused.

¹⁰ Link4Skills. (2026). Skills mobility partnerships: Partnership inventory overview. Horizon Europe Link4Skills Project (Grant Agreement No. 101132476).

Combine credential recognition with bridging programmes, language support, employer guidance and matching services. These are core labour-market measures that should be built into mobility arrangements from the beginning.

4. Job quality wages and retention

Include adequate pay, safe working conditions, predictable career pathways and decent employment standards in the response to recruitment problems (e.g. inspections, monitoring employer compliance etc). Workplace inclusion and opportunities to progress in one's career help connect recruitment with sustained participation.

Where shortages are driven by unattractive conditions, address those conditions directly. Continuing to recruit without improving job quality risks reproducing costly turnover.

5. Fair, selective migration

Use fair selective migration where domestic labour supply and training pipelines cannot meet short- and medium-term demand. Migration skill corridors, Talent Partnerships and other Skills Mobility Partnerships can support this response. Selective migration does not only mean highly skilled but also skilled, matched with needs.

Design these arrangements as shared-development infrastructures. Recruitment should be connected to recognition, training and safeguards,

with attention to labour-market needs in both origin and destination countries.

6. Ethical recruitment and shared development

Ensure that skilled mobility does not deepen shortages in countries of origin. Pay attention to local labour-market needs, training investment and sector-specific risks of skill depletion.

Include ethical recruitment, bilateral safeguards and monitoring. Circular or reciprocal advantages may form part of the approach where appropriate. Fair mobility depends on how skills are developed, recognised, used and shared across countries.

Policymakers should consider: 1) skills and qualification recognition in the design stage of creating an SMP and 2) going beyond the use of standard approaches in SMPs, e.g. by investing in the provision of bridging/adaptation training or the development of co-designed, mutually recognized training curricula.

MATCHING INSTRUMENTS TO LABOUR-MARKET NEEDS

Policy instruments should follow diagnosis. The table below links problem types to appropriate combinations of measures.

Labour-market problem	Main risk	Appropriate policy mix
Genuine shortage of workers	Unfilled demand despite decent conditions	Targeted recruitment, training expansion, retention measures: skills mobility partnerships combining recruitment and joint skills development
Skills mismatch	Workers available but not matched to jobs	Recognition, bridging, matching, career guidance, employer engagement
Recruitment difficulty	Vacancies caused by poor job attractiveness	Wage adjustment, working conditions, job redesign, retention; workplace and community integration of international workers
Migrant underutilisation	Deskilling and overqualification	Credential recognition, mobility ladders, anti-discrimination, language support
Automation-driven restructuring	Displacement or polarisation	Reskilling, transition support, complementary migration, social protection
Origin-country shortage risk	Skill depletion in sending countries	Ethical recruitment, training investment in origin countries, bilateral safeguards, monitoring; SMPs incorporating dual-track training and brain-gain measures
Limited cooperation and institutional capacity within migration skill corridors	Fragmented recruitment practices, weak coordination, limited trust and unequal distribution of benefits	Pilot skills mobility partnerships to test mutually beneficial policy solutions on a smaller scale, build trust among countries of origin and destination, employers and institutions, develop joint training and recognition mechanisms, and gradually strengthen sustainable migration skill corridors

EU AND MEMBER STATE POLICY RECOMMENDATIONS

Fair skilled mobility requires coordinated policies that enable skills to be developed, recognised, effectively utilised and shared across countries. Addressing labour-market shortages and mismatches calls for combining automation and AI, training, recognition, integration, improvements in job quality and migration rather than treating them as competing solutions. The EU should strengthen common frameworks, cross-border cooperation, funding and knowledge exchange, while Member States should translate these approaches into coordinated national and sectoral policy packages. The appropriate mix of measures should follow a careful diagnosis of labour-market needs, with safeguards for migrants and countries of origin integrated from the outset.

Diagnose before acting

Member States should distinguish genuine labour shortages, skill shortages, recruitment difficulties and skill mismatches before selecting policy instruments. Assess whether vacancies reflect insufficient labour supply or barriers related to wages, working conditions, recruitment practices, location, recognition or career mobility. At EU level, strengthen comparable labour-market intelligence, skills forecasting and knowledge exchange to support evidence-based national responses.

Adopt combined policy packages

Member States should design migration, automation, upskilling, recognition, wage policies and job-quality reforms as complementary elements of coordinated labour-market strategies. Policy packages should account for differences across sectors, regions and skill levels, as well as interactions between instruments. The EU should support policy experimentation, mutual learning and investment in complementary approaches rather than promoting one-size-fits-all solutions.

Strengthen coordination across policy areas

Member States should establish or reinforce coordination mechanisms among ministries and agencies responsible for labour, education, migration, integration, foreign affairs and economic development, involving employers, trade unions, training institutions and civil society. Such coordination is essential to align skills development, recruitment, recognition, integration and retention policies. At EU level, facilitate cross-sectoral cooperation, policy coherence and exchanges of effective institutional practices.

Invest in recognition and matching infrastructure

Member States should make skills and qualification recognition faster, fairer and more transparent, combining it with bridging programmes, language support, employer guidance and career mobility pathways to prevent deskilling and underutilisation. The EU should facilitate cross-border cooperation on skills transparency and recognition, including through Skills Mobility Partnerships (SMPs). Recognition, integration and skills matching should be embedded in the design of migration skill corridors and partnerships before recruitment takes place.

Use automation responsibly

Member States should promote automation and AI in ways that improve productivity and complement human labour, while providing reskilling, upskilling and occupational mobility pathways for affected workers. Technological adoption should be planned alongside training and migration policies, recognising that automation can both displace tasks and generate demand for complementary skills. The EU should support research, investment, knowledge exchange and coordinated approaches to fair technological transitions.

Improve job quality and retention

Member States and employers should address wages, working conditions, career progression and workplace inclusion as central components of labour-market strategies. Recruitment alone cannot resolve shortages where jobs remain unattractive or workers face barriers to integration. Retention policies should include workplace and community integration, language support and opportunities for professional development, including for international workers already employed in destination countries. The EU should support exchange of effective practices and reinforce relevant labour standards and worker protections.

Design corridors and partnerships for shared development

The EU and Member States should promote migration skill corridors and Skills Mobility Partnerships that combine ethical recruitment, joint training investment, skills recognition and safeguards for countries of origin. SMPs can provide opportunities to pilot new forms of cooperation on a smaller scale, build trust among governments, employers, training institutions and other stakeholders, and progressively strengthen sustainable mobility pathways. Partnerships should be intentionally designed to promote mutual benefits, including through dual-track training, mixed-mobility approaches and investments in origin-country skills development, rather than assuming that brain gain occurs automatically. Monitoring should assess outcomes for migrants, employers and both origin and destination countries, including risks of skill depletion.

Use evidence tools for policy learning

The EU and Member States should strengthen the use of evidence-based tools, including the Link4Skills Navigator, to support labour-market diagnosis, scenario analysis, stakeholder dialogue and policy learning. Such tools can help policymakers move beyond general claims about labour shortages towards a more differentiated understanding of skills mismatch, underutilisation, recruitment difficulties and gaps in migration corridor governance. They can also inform the design and evaluation of complementary policy measures.

Build institutions for fair and sustainable skilled mobility

The EU and Member States should invest in institutional capacity and sustained cooperation that enable skills to be developed, recognised, utilised and shared fairly across borders. Effective skilled mobility governance requires linking labour-market adjustment with migrant protection, social integration and development objectives in countries of origin. The priority is not simply to increase migration or accelerate recruitment, but to create coordinated, evidence-informed policy mixes that reduce mismatch, improve labour-market outcomes and support mutually beneficial development.

THE LINK4SKILLS NAVIGATOR

<https://navigator.link4skills.eu/L4sInitView>

The Link4Skills Navigator provides practical support for the policy-mix approach. It is designed to help users explore labour-market and migration data, compare regions and countries, generate visualisations, access curated knowledge resources and communicate findings in policy-ready formats. Its policy value lies in supporting a more precise diagnosis. Policymakers can use evidence to distinguish mismatch, underutilisation and recruitment difficulty, and to identify gaps in corridor governance. This provides a basis for choosing, testing and communicating more balanced policy mixes. The Navigator should support scenario thinking, stakeholder dialogue and policy learning. Its role is to connect evidence with the combination of migration, skills development, automation, recognition, job quality and safeguards that a particular context requires.



ABOUT LINK4SKILLS

Link4Skills is an EU-funded research project addressing skill shortages and mismatches through innovative and sustainable solutions. It examines skills development, automation and migration as policy options and seeks fair skills utilisation and exchange across parts of Europe, Africa, Asia and North America. The project brings together researchers, policy stakeholders, employers, workers and civil society to support evidence-informed responses to labour-market needs.

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