Bridges 5.0 Masterclass summary: VET and Industry 5.0

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Key Outcomes from the Bridges 5.0 Masterclass on 15th May 2026

Technology Is Not the Destination — People Are

The session opened with a provocation from moderator Iñigo Araiztegui that set the tone for everything that followed: we have spent too long measuring success purely in terms of productivity, efficiency, and cost reduction. Industry 5.0 challenges us to ask a different question — not *what can technology do?* but *what do we want from it, and for whom?*

“Technology isn’t external to society,” he argued. “It’s shaped by our values, our institutions, our culture. And that means we have the power to direct it to work towards different goals.”

This human-centric framing was the thread running through all three presentations.

The AI Skills Gap Is Real — and Growing

Ralph Hippe from CEDEFOP (the European Centre for the Development of Vocational Training) presented findings from two major surveys: the EU AI Skills Survey (2024), conducted with over 5,300 adult workers across 11 countries, and the European Skills and Jobs Survey.

Key findings:

AI adoption is rising, but unevenly. Around one in seven adult workers currently uses AI-powered tools at work — a figure that is climbing rapidly. However, a troubling divergence is emerging: countries already leading in AI adoption (such as Luxembourg and Belgium) are accelerating further ahead, while those lagging

behind (notably in southern Europe) are not catching up. Left unaddressed, this gap risks deepening economic inequality across the EU.

Jobs are being redesigned, not just automated. Rather than wholesale job replacement, the picture is more nuanced. Some 67% of AI users report tasks being completed faster, while 41% say they are taking on entirely new or different tasks. At the same time, 17% of workers report *less* control over their work — a warning sign of the risks of algorithmic management, where technology monitors and directs workers rather than empowering them.

Fear is widespread, particularly where AI is least used. Approximately 14% of workers fear losing their jobs to AI. Counterintuitively, this fear is highest in countries where AI is used least — suggesting that unfamiliarity breeds anxiety rather than agency. Workers who don't engage with AI may be less likely to upskill proactively, creating a self-reinforcing cycle of exclusion.

VET graduates face a digital skills deficit. Compared to graduates of general education programmes, VET graduates tend to work in less digitally intensive jobs, are less likely to encounter new digital technologies at work, and take up fewer digital upskilling opportunities. This is a structural challenge that the sector must urgently address.

Training provision is not keeping pace. A striking mismatch emerged from the survey data: 61% of workers say they will need new knowledge and skills to work with AI, yet 44% do not believe their employer will provide the necessary training. This gap — between what workers know they need and what organisations are delivering — is one of the most pressing challenges facing the European labour market.

Who needs the most support?

Hippe was clear: the groups furthest from AI adoption — **older workers, women, and employees in small and medium-sized enterprises (SMEs)** — require targeted investment. Critically, those who already have some AI competency are more likely to seek further training, creating a virtuous cycle for the already-advantaged. Policy must actively reach those outside this loop.

Demand-Driven Learning: The Metro Lines Approach

Anneloes van Delft and Martijn Bos from Catapult (Netherlands) presented a practical methodology for bridging the gap between what companies need and what education systems currently offer — the Metro Lines approach, developed and tested within the Bridges 5.0 project.

The problem with supply-driven training

Traditional VET provision starts with a programme and then looks for takers. Time and resources are consumed in acquisition and conversion — selling a pre-built course to businesses. The result is often a mismatch between what is taught and what companies actually need.

The Metro Lines model inverts this logic entirely.

Start with the challenge, not the curriculum

Under this approach, the starting point is always a concrete challenge faced by a business or sector — whether that is skills shortages, resistance to innovation, or the need to implement new technologies like AI. Only once these challenges are understood does co-creation of a learning pathway begin — and crucially, commitment is secured *before* development starts, not after.

“The go or no go is at the beginning,” van Delft explained. “Then you start the development together.”

Trust is foundational

The approach is built on trust — established through neutrality (not trying to sell a product) and delivered through quality. Business advisors, sector orchestrators, and education providers each play distinct roles. The orchestrator — often a sector association — is the key actor, bridging the world of companies with the world of education.

In practice: learning culture in Dutch industry

One example saw a cluster of smart manufacturing companies in eastern Netherlands, facing acute skills shortages, work together to design a “learning culture” development pathway. Rather than a top-down training programme, the

Metro Lines methodology engaged directors, HR managers, middle managers, and frontline workers — each with their own strand of the journey, coming together at shared learning moments.

Another example involved construction companies transitioning to bio-based building methods. By involving all layers of the organisation — from executive board to workers on construction sites — the process surfaced deeply held assumptions and biases, and built genuine commitment to transformation.

“It’s not our project or our process,” Bos emphasised. “It’s their process.”

Learning Factories: Bringing Industry 5.0 into the Classroom

Unai Ziarsolo from Technica (Basque Country) described how his organisation is using learning factories to embed Industry 5.0 principles directly into VET programmes — without waiting for slow-moving national qualification frameworks to catch up.

The structural challenge

Spanish occupational standards remain rooted in Industry 4.0 thinking. Updating them is a lengthy, bureaucratic process. Rather than waiting, Technica is acting within the 35–45% of curriculum space that regional bodies control — changing learning outcomes, teaching methods, and assessment to reflect Industry 5.0 values now.

What a learning factory looks like

At the ECAS Fàbrica at Miguel Altuna VET Centre, students from six different study programmes — spanning mechatronics, mechanical manufacturing, and business administration — work together as a team to manage a complete skateboard production process. Every phase, from design and manufacturing to quality control and logistics, is experienced first-hand.

The factory integrates CNC machines, automated systems, industrial robots, augmented reality, and digital planning tools — but the emphasis is not on technology for its own sake. The point is human-centred design: students learn to

analyse problems, make decisions, and collaborate across disciplines, just as they would in a real industrial environment.

“Without a doubt, the most important factor here is the people who learn to work, think and build together,” the factory’s video narration concludes.

What the pilots achieved

Results from the Bridges 5.0 pilots are encouraging. Students reported strong engagement, improved understanding, and development of both technical and transversal skills — communication, decision-making, and collaborative leadership. Teachers redesigned their courses, introducing interdisciplinary project-based learning. And the pilots created shared spaces where educational institutions, companies, and research organisations could meet as genuine partners.

Across the Basque Country, 22 learning factories have now been established, each linked to local industry clusters — from manufacturing and energy to bioscience — creating a regional infrastructure ready to scale these approaches further.

Five Key Messages for the Field

Drawing together the insights from all three presentations, the masterclass pointed to five overarching messages:

1. Industry 5.0 is not a technical upgrade — it is a shift in values. The goal is technology that serves human flourishing: creating better quality jobs, supporting workers rather than replacing them, and building resilient, sustainable economies.

2. The AI skills gap demands urgent, targeted action. VET systems must accelerate digital upskilling, with particular attention to those groups most at risk of being left behind: older workers, women, and SME employees.

3. Informal learning matters. For fast-moving technologies like AI, formal training alone cannot keep pace. Peer learning, on-the-job experimentation, and self-directed development are essential complements — and VET systems should design for this.

4. Demand-driven co-creation is the future of lifelong learning. Education

providers that start from employer challenges, build trust, and co-design solutions with industry will be more effective than those pushing pre-packaged programmes.

5. Public-private collaboration is not optional. Whether through learning factories, metro line partnerships, or sector-level orchestration, the evidence is clear: education and industry cannot solve the skills challenges of Industry 5.0 alone. Institutional support, public investment, and genuine co-ownership are essential.

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