



PANEL 4: Apprentices as agents for a sustainable future

Greening of European economies and societies relies on technical development and innovation. Emergence of high-skilled new occupations is only part of the picture, as changes extend across occupations and sectors. New skillsets are needed not only in emerging jobs but also to existing ones, due to the widespread restructuring of tasks within jobs.

[‘Skills for the green transition’](#) refer in fact to a wider set of skills and competences including knowledge, abilities, values and attitudes needed to live, work and act in resource-efficient and sustainable economies and societies. They can be technical (either occupation-specific or cross-sectoral), linked with production processes; or soft and more transversal, linked to sustainable thinking and acting, relevant to work and life. Many ‘green skills’ are in reality often skills that ‘have no colour’, hence the difficulty in identifying them, let alone predicting them.

In this landscape, it becomes hard to reliably assess and quantify changes in skill demand as a result of the green transition. Companies themselves lack understanding of the skill needs accompanying the green transition. Skill intelligence mechanisms that are able to produce granular data (by sector, occupation, region, skill type) are needed to help apprenticeship stakeholders get a better, and timely grasp of what needs to be trained. Next to those, partnerships at the local and regional level are another response to the same challenge.

Evidence from Cedefop [skill foresight studies](#) shows that local and regional skills ecosystem stakeholders are well-placed to leverage the power of partnerships because they are able to interpret how trends and challenges related to the green transition affect local labour market and skill supply specificities.

The [Council conclusions on skills and competences for the green transition](#) of 7 March 2023 invite the Member States to engage education and training providers, research organisations, employers, social partners and other relevant stakeholders to develop initial and continuing VET offers for the green transition and jointly identify relevant reskilling and upskilling needs, including public-private cooperation; the conclusions also mention the role of the EU funded Centres of vocational excellence among other initiatives.

Apprenticeships as an example of partnerships that bring up bottom-up changes

Apprenticeships, through cross-fertilisation between learning venues and mobilisation of actors at implementation level, have a great potential in bringing about change bottom up. Evidence from the [Cedefop Community of apprenticeship experts](#) shows that there are many examples of local, regional or sectoral adaptations that are not part of an overall national or sectoral initiative, but are set up by specific schools, teachers or even learners themselves. Such responses allow apprenticeships to train individuals for the sprint race of meeting pressing local needs, including those of vulnerable groups in regions and sectors most affected by the green transition or the energy crisis.

Moreover, the school-company-apprentice triangle that is strongly established in apprenticeships allows diffusion of knowledge, skills, attitudes across its three parties. It becomes therefore a platform for exchange and positive spillovers that can support a paradigm

shift, allowing apprenticeships to [train individuals for the marathon](#) of future career changes and long-term employability brought forward by greening and sustainability.

Apprentices as agents of change for sustainability

Within this triangle, evidence shows that the roles of each actor change in the light of the green transition. The rapid transformation of technologies and occupations means that teachers and in-company trainers do not always have the most up-to-date knowledge to pass on to learners. Teachers and trainers need both to be upskilled and to be able to assume a facilitating role, nurturing apprentice interest in sustainability and allowing them more space to inform and steer their own learning.

Apprentices themselves are also more motivated to explore how their jobs change. With their 'double identity' as employees and learners, apprentices are open to new knowledge and practices from both learning venues and can trigger cross-fertilisation, relaying green innovation from schools to companies and vice versa in their daily learning and work activities. Numerous grassroot examples have emerged in EU Member States, where apprentices take initiatives for greening their apprenticeship programmes: by reflecting on how their occupation can become greener, looking for new insights from technology experts or networking to generate ideas and innovate.

In Denmark, the project 'Apprentices for sustainability' was initiated by apprentices in carpentry in Copenhagen, who posed critical questions about conventional construction methods and materials and asked for new knowledge and skills on sustainable construction. Their interest was followed up by a group of teachers, who developed the project to embed sustainability in the school-based component of the apprenticeship carpentry programme. Next to the basics of sustainable building methods and how to use more sustainable materials (technical, craft knowledge), apprentices were introduced to a holistic approach of building processes and organisational development across professions.

In [Germany](#), apprentices of a VET school in Oldenburg, Lower Saxony founded *Kauflust*, a sustainable student cooperative to promote sustainability. Apprentices experience aspects of environmental and social management and gain insight into the special corporate form of the cooperative. Apprentices produce and sell sustainable products, using existing old materials. A weekly event (Fairdays) is organised with companies, promoting sustainability and the cooperative model.

In [Greece](#), the GRÆDUCATION project facilitated exchange between apprentices and their teachers in the process of designing new pilot curricula for electricians, focusing on renewable energy and energy-efficient, sustainable construction. The project set as a specific objective the empowerment of apprentices so that they can assume responsibility for their learning and their career. Apprentices designed advisory modules to help public buildings save energy and became ambassadors for environmental protection in peer groups.

Apprentices need space and support to reflect, generate and share their ideas, assume this new active role favouring sustainability. Next to overall programme updates, apprenticeship curricula should leave room for local, regional adaptation and innovation, so that green initiatives can sprout on both learning venues by the key actors themselves.