

Future of VET in Europe: Pathways to vocational excellence

Session 3 - The changing world of work and the future role of VET/CVET

Meeting Emerging Skills Needs in the European Steel Industry

Luca Antonazzo, Prague University of Economics and Business



Steel Industry Challenges



The Projects: ESSA - European Steel Skills Agenda

AIM:

- Present a strategy for meeting current and future skills demands, and pilot the development of modules and tools for building awareness and implementing new skills for a competitive steel industry.

SCOPE:

- European steel sector focus
- 5 case study countries (DE, ES, IT, PL, UK)

METHODOLOGY:

- Survey & Interviews with steel companies, VET experts, unions

The Projects: Meeting green skill needs for a sustainable steel industry

AIM:

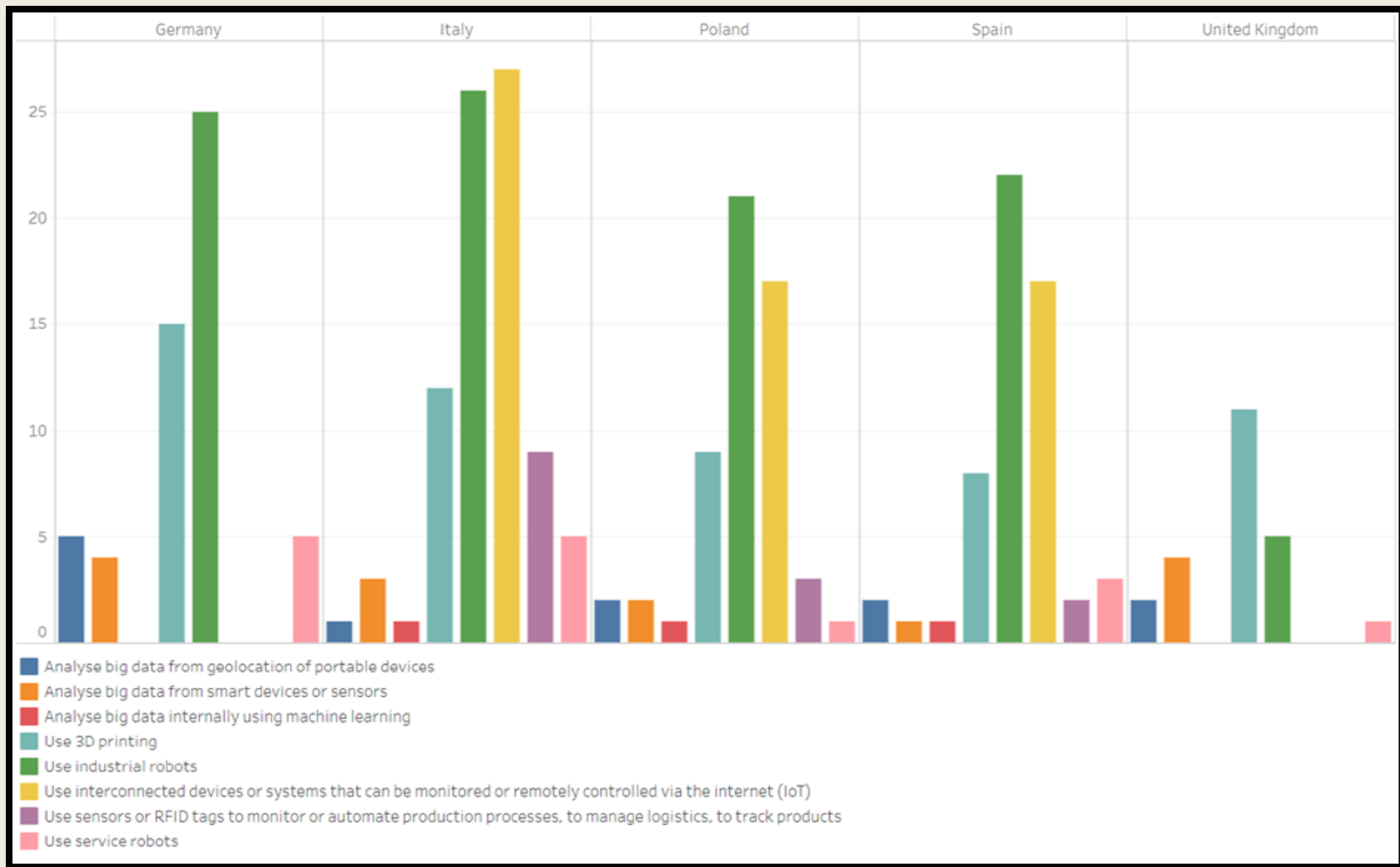
- Explore the preparedness of British steel companies towards meeting environmental targets, as well as the views of workers on the green transition and related training needs

SCOPE:

- UK-focused

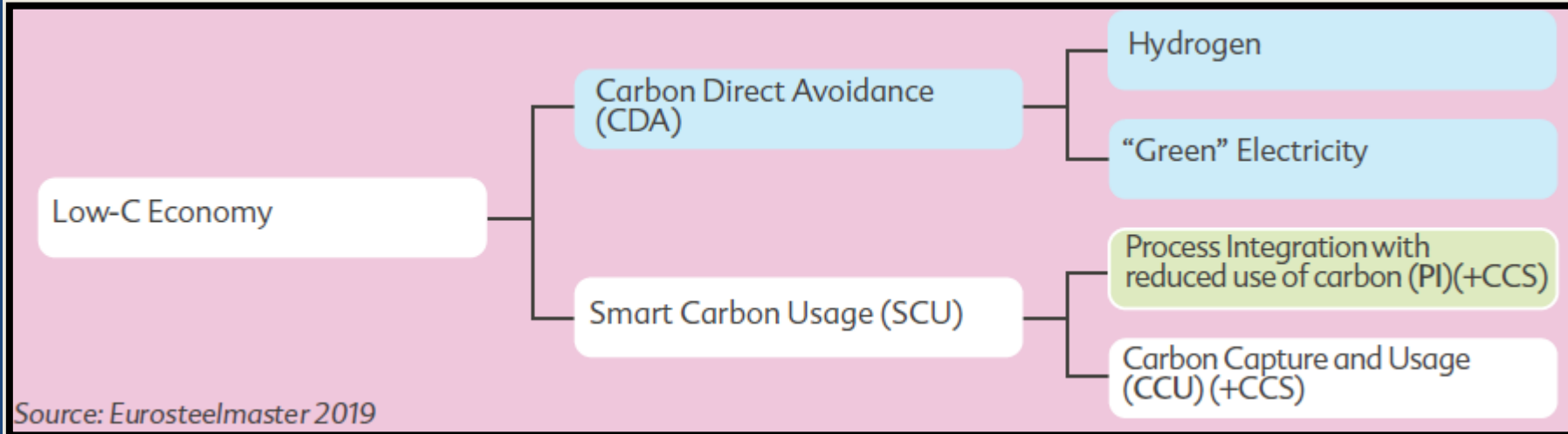
METHODOLOGY:

- Experts' interviews & workers' survey



Three Approaches to the Green Transition

1. Carbon Direct Avoidance: using hydrogen and/or electricity for producing iron and steel.
2. Smart carbon usage: making processes more efficient (partially cutting emissions) and using CCS or CCU.
3. Circular: the carbon input is substituted by other byproducts as carbon carriers.



Ten most cited skills needs in the ESSA case studies

Adaptation

Advanced engineering

Communication and connectivity

Data analysis

Digital skills (e.g. use digital devices, edit digital content)

IT skills (e.g. coding, cybersecurity)

Metallurgical skills

Problem solving and critical thinking

Process/system knowledge

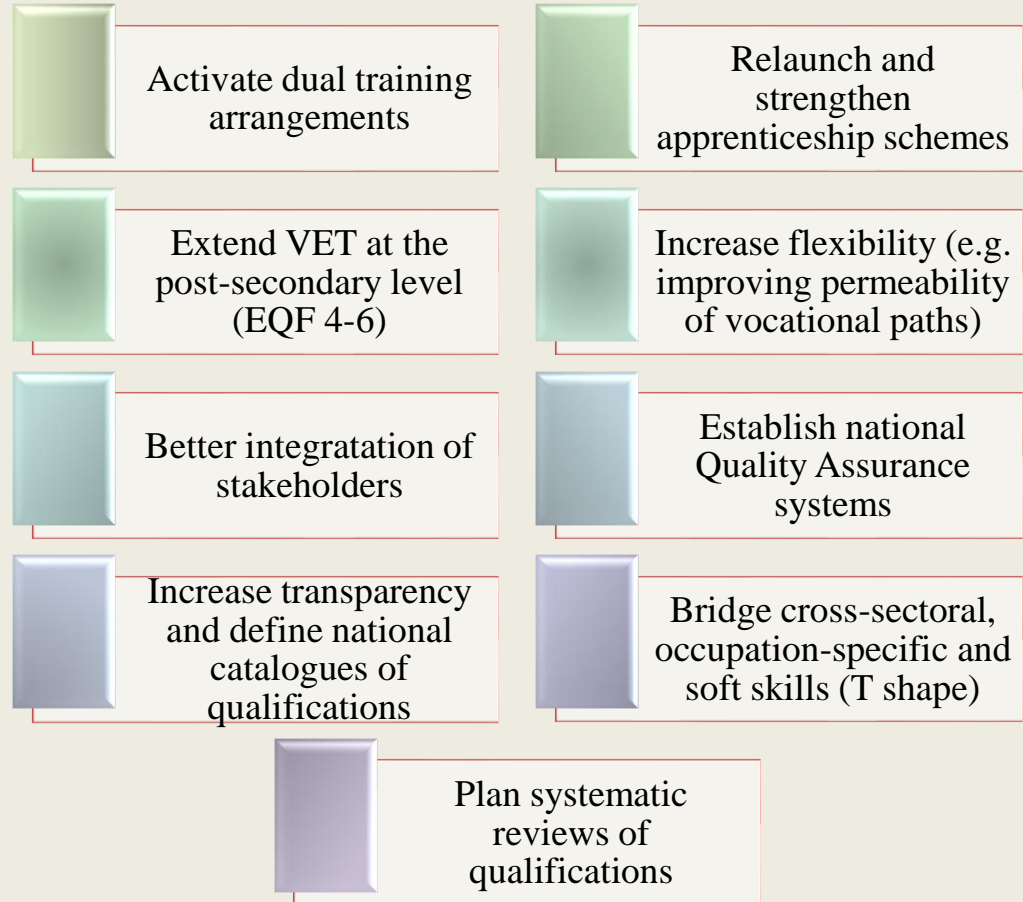
Teamwork

“Until now, much has been built on a mode that was particularly linked to a specialisation model that saw the fragmentation of skills, knowledge and the roles themselves. Recomposing this, also from the point of view of the overall ability to understand the production process, is one of the issues on which there is a stronger demand” (Union Rep, IT)

“Write in bold capital letters, transferable skills [...] It is very important that people understand that the green revolution doesn’t mean starting again. Yes, there will be some new skills, yes there will be some new roles. But it’s not that there is loss of people... [they are]... are clever and trained... [and]... will easily transition to those skills if people know what’s required” (HR Director, UK)

IVET and CVET will play a crucial role for those workers, addressing emerging skills needs and endogenously building the capacity to meet prospective challenges, in fact bridging the present and the future of the industry.

IVET reforms and trends in the case study countries



Recommendations to the steel industry

Companies' interests can be best articulated at the regional level

Sectoral specialisation through CVET

Engage with schools to promote dual training and placements

Engage with national programmes for mapping occupations and skills foresight

Engage with ECVET mobility

Consider the opportunities and limits of modular provision

Encourage workers to make use of schemes for validation of prior learning

Align internal provision with national/international frameworks

Make use of EQAVET framework for monitoring quality of provision

Nourish an innovation culture at all levels

Integrate with online training platforms

Adopt sectoral tools to compare national qualifications

Responsiveness model: impulsive & adaptive IVET reforms

Response type: *Impulsive vs Adaptive*

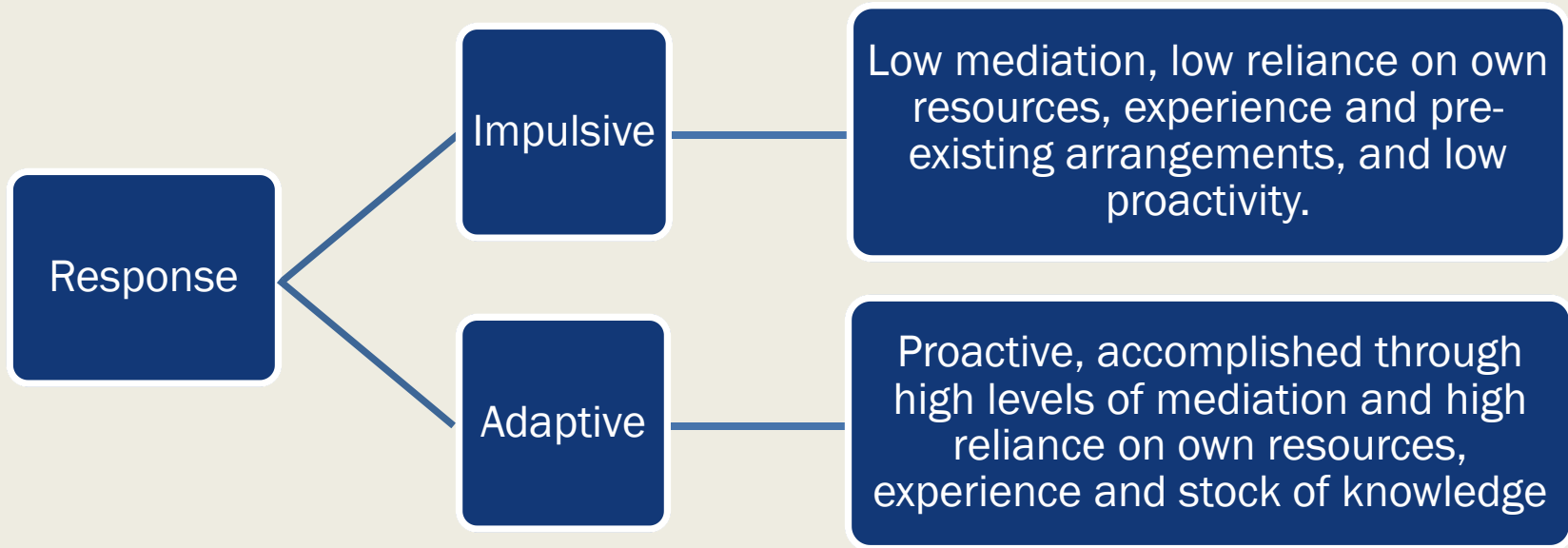
1. **Mediation:** will or capacity to translate exogenous pressures into a national agenda, selecting a response strategy among many possible. Proactively anticipate potential challenges. Define a trajectory of societal change.
2. **Optimisation:** systematic learning, rather than ad hoc solutions. Problems are confronted building on one's own resources, experience and stock of knowledge, and pre-existing arrangements.

Theoretical framework

VoC approach distinguishes between:

- **LMEs** characterized by the primary role of the market in regulating the economic system's dynamics. This leads to short-term strategies based on high returns and short payback and low trust relations between firms, and between firms and institutional actors.
- **CMEs** characterized by state intervention that regulates economic dynamics within the market. Here firms are strongly linked through sectoral associations and with the relevant social partners. Companies are encouraged to adopt more long-term strategies and are less dependent on financial markets.
- **Mediterranean model** based on more employment protection and less social protection than CMSs. It relies on a large set of family-based small firms and the prominent role of the state in the economy. It is also characterized by a relatively low level of market competition and by a workforce with more general than specialised skills.

VET responsiveness: impulsive & adaptive



VET is embedded in a **wider institutional context** (industrial relations, labour market etc.). The way VET responds also depends on how the broader environment conveys and supports such responses

VET reforms in Germany

- In 2018, completed review and update of the curricula for 11 metalworking and electrical qualifications to meet the new industry and market challenges
- Introduced new 'Module' on 'Digitalisation of work, data protection and information security'
- Skills gaps related to digitalisation and environmental sustainability have been tackled in dual apprenticeships by introducing new 'standard modules' and by updating existing modules on labour law and collective bargaining, as well as on occupational health and safety.

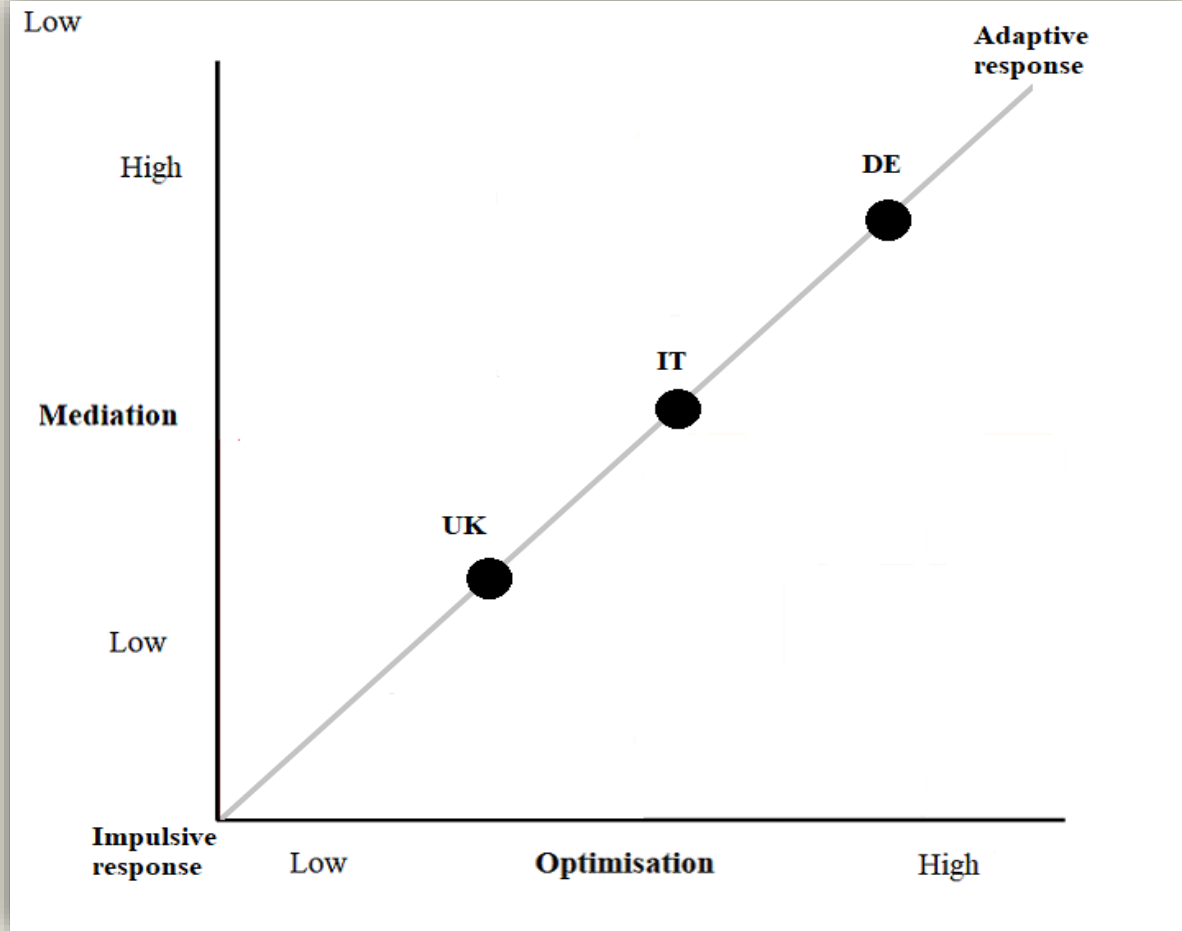
VET reforms in the United Kingdom

- Since 2015, apprenticeship frameworks being replaced by new standards developed by sectoral panels of employers, which are occupation-focused (rather than qualification-led) and combine on-the-job training and study
- Since 2017, development of new technical study programmes, T-levels, aiming to simplify and relaunch the national (England) IVET. T-levels are based also on the same standards as apprenticeships.

VET reforms in Italy

- Post-secondary level, new higher technical training programmes (ITS) established in 2008. Designed to have strong links with companies and to keep into account the industrial characteristics of the Regions.
- In 2015, established the opportunity for learners to obtain a secondary vocational qualification or a diploma in a dual-mode
- Vocational schools' curricula updated in 2017
- IVET profiles (IeFP) updated and integrated in 2019 after a two-years review process

Response model



Potential effects of IVET reforms can only be properly assessed when considered in their institutional context

Implications for workforce development

**Liberal/market driven
capitalism**

Risk of low engagement of
employers and/or workers

Tendency to produce more
impulsive responses and
higher degree of
hybridization

Risk of limited recognition of
standards

Undermining overall recognizability
of the system

Risk of occupational dead-ends

Implications for workforce development

**Coordinated (and
Mediterranean) capitalism**

Changes to curricula are recognised nationwide

Tendency to produce more adaptive responses and a less degree of hybridization

System consistency preserved

Longer-term time frame of curricula and programmes

Convergence of different stakeholders' interests

Consolidation of qualifications within broader occupational families

A few open questions

While we have been witnessing increased consolidation, transparency and interoperability at the level of IVET, CVET seems to remain a fairly independent domain with higher degree of fragmentation.

- a. *Are national frameworks for recognition and certification of competencies capable of reconnecting the two domains and establish an effective mechanism for upskilling and re-training?*
- b. *What are the best practices at the national level with regard to linking IVET and CVET in a coherent and organic path?*
- c. *What characteristics IVET needs to have in order to guarantee a smooth transition into CVET?*
- d. *What are the factors that could encourage or limit companies' engagement with CVET?*



Thank You

== For Your Attention ==

Email: luca.antonazzo@vse.cz