ESSA
EUROPEAN STEEL SKILLS AGENDA

Funded by the Erasmus+ Programme of the European Union

Blueprint “New Skills Agenda Steel”:
Industry-driven sustainable European Steel Skills Agenda and Strategy (ESSA)

ESSA Online Mid-term Conference

Skills and Jobs in the Future-Proven Steel Industry

27/28th of May 2021

ESTEP
European Steel Technology Platform

27 May 2021 - First Day (1pm to 5pm // 13:00-17:00 CET)	
Sectoral Blueprint ESSA: How to define and adjust skills and jobs for a future proven Steel Industry?	
Moderation by Scott Chubbs (worldsteel)	
13:00-13:15	**Welcome and Agenda** Antonius Schröder, Project Leader ESSA (TU Dortmund University) Klaus Peters, Secretary General of ESTEP
13:15-13:35	**Welcome Notes European Commission:** • Gabriele Morgante (DG Internal Market, Industry, Entrepreneurship and SMEs) • Felix Rohn (DG Employment, Social Affairs and Inclusion)
Day 1	**ESSA - On the road to clean, green and smart steelmaking and its impact on future skills and high-value Jobs**
13:35-14:35	**ESSA Blueprint in a Nutshell - First Tools and Measures** • Overview of the Project - Blueprint Outline (Antonius Schröder, TU Dortmund) • Online Skills Ecosystem - Pilot Training Course (Jorge Muract, worldsteel) • Image and Recruiting - Steel Sector Careers Campaign (Phillip Babalis, Intrasoft) Moderator: Scott Chubbs (worldsteel)
14:35-14:45	Erasmus+: Sector Skill Alliances: **Greening Technical VET (GT VET)** (Video) Veit Echterhoff (thyssenkrupp Steel Europe)
14:45-15:00	Break
15:00-15:45	**ESSA findings - Bringing Technology and Skills together (parallel Break-Out Sessions)** Moderator: Scott Chubbs (worldsteel)
Session 1	**Technological and Economic Development** in Steel Industry Moderation: Maria Murri (Rina/CSM), Valentina Colla (SSSA)
Session 2	**Industry Skills Requirements** for a future-proven Steel Industry Moderation: Felix Bayon / Aitor Goti / Tugce Akyazi (Sidenor)
Session 3	**VET Systems Requirements** to meet New Skills and Training Demands Moderation: Dean Stroud / Martin Weinel / Luca Antonazzo (Cardiff University)
15:45-16:50	**Future Skills - Other Findings and Perspectives** • Sectoral Blueprint: Automotive, Jakub Stolfa (DRIVES) • Clean Steel Partnership, Klaus Peters (ESTEP) • Green Steel Project, Milan Elkerbout (CEPS) • BEYOND4.0, Michael Kohlgrüber (TU Dortmund University) Moderation: Antonius Schröder (TU Dortmund University)
16:50-17:00	**Wrap-up Day 1 - Introducing Day 2** Dean Stroud (Cardiff University) / Antonius Schröder (TU Dortmund University)

28 May 2021 - Second Day (1:00 pm to 4:30pm // 13:00-16:30 CET)	
Bringing the Blueprint to Life - Implementation and Rollout	
Moderation by Scott Chubbs (worldsteel)	
12:30	Time for **Networking, Impressions and Feedback & Pulse Check** Moderator: Clara Behrend / Mathias Cuypers (TU Dortmund University)
13:00-13:10	**Welcome and Topics of Day 2: Implementation and Rollout of the European Blueprint** Scott Chubbs (worldsteel) / Antonius Schröder (TU Dortmund University)
13:10-14:15	**Step into Action: Implementation and Rollout of the European Blueprint - Shaping the Future Steel Transformation together** Panel: Gabriele Morgante (DG Grow), Martin Kunkel (CIELFFA), Angels Orduna (A.SPIRE), Axel Eggert (EUROFER), Klaus Peters (ESTEP), Elspeth Hathaway (industriALL) Moderator: Miikka Nieminen (EUROFER)
14:15-14:30	**Break**
14.30-16:00	**Skills and Jobs in the Future Steel Industry** (parallel Break-Out Sessions) – Moderator: Scott Chubbs (worldsteel)
Session 1	**The Skills Perspective: How to detect new skills and improve learning arrangements** • Skilled Labour, Competence and Attractivity Analysis (Dennis Ostwald / Kay Petrisor, WifOR) • How to get steel workers (back) on the learning track (Christian Stamov Roßnagel, Jacobs University Bremen, Nawid Network) • Vocational training 4.0 - Qualifications and Skills for the Digitized Work of Tomorrow (Inga Schad-Dankwart, Bundesinstitut für Berufsbildung, BIBB) Moderator: Carolin Eitner (thyssenkrupp Steel Europe)
Session 2	**The Member States Perspective: National VET System Strategies for the Steel Industry of Tomorrow** • European VET Systems (Jörg Markowitsch, 3s) • Steel industry's training and skills challenges: the responsiveness of VET (Luca Antonazzo, Cardiff University) • A country case: Poland (Wojciech Szulc, IMZ) Moderator: Dean Stroud/Martin Weinel (University of Cardiff)
Session 3	**The Regional Perspective: Regional Strategies for Future Skills in the Steel Industry** • Regional Ecosystem TataSteel (Joanne Kuipers) • Clusters of Interest for the rollout: – SIDEREX, Felix Bayon (Sidenor) / Asier San Millán (SIDEREX) – Polo del Acero, Daniel Fernandez (Polo del Acero) / Juan José Arias Alvarez (Arcelor Mittal Spain) – Sustainable Steel Region North Middle Sweden, Larz Ignberg Moderator: Joanne Kuipers (TataSteel)
16:00-16:15	**Future Funding Possibilities by Erasmus+** Urška Primec (The Education, Audiovisual and Culture Executive Agency EACEA)
16:15-16:30	Wrap Up, Next Steps and Farewell

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Blueprint “New Skills Agenda Steel”:
Industry-driven sustainable European Steel Skills Agenda and Strategy (ESSA)

ESSA Online Mid-term Conference Skills and Jobs in the Future-Proven Steel Industry

Overview of the Project - Blueprint Outline

Antonius Schröder
TU Dortmund University

ESTEP
European Steel Technology Platform

Erasmus+: Sectoral Blueprints (Skills Alliances)

2018
- Automotive
- Maritime Technology
- Space - Geo Information
- Textile
- Tourism

2019
- Additive manufacturing
- Construction
- Maritime Shipping
- Steel Industry

2020
- Industrial Symbiosis
- Digitalisation of Energy
- Batteries
- Defence
- Bio-Economy
- MicroElectronics

2021
- Blockchain
- Cultural heritage
- Cybersecurity
- Rail supply and transport industries
- Work integration social enterprises
- Software services

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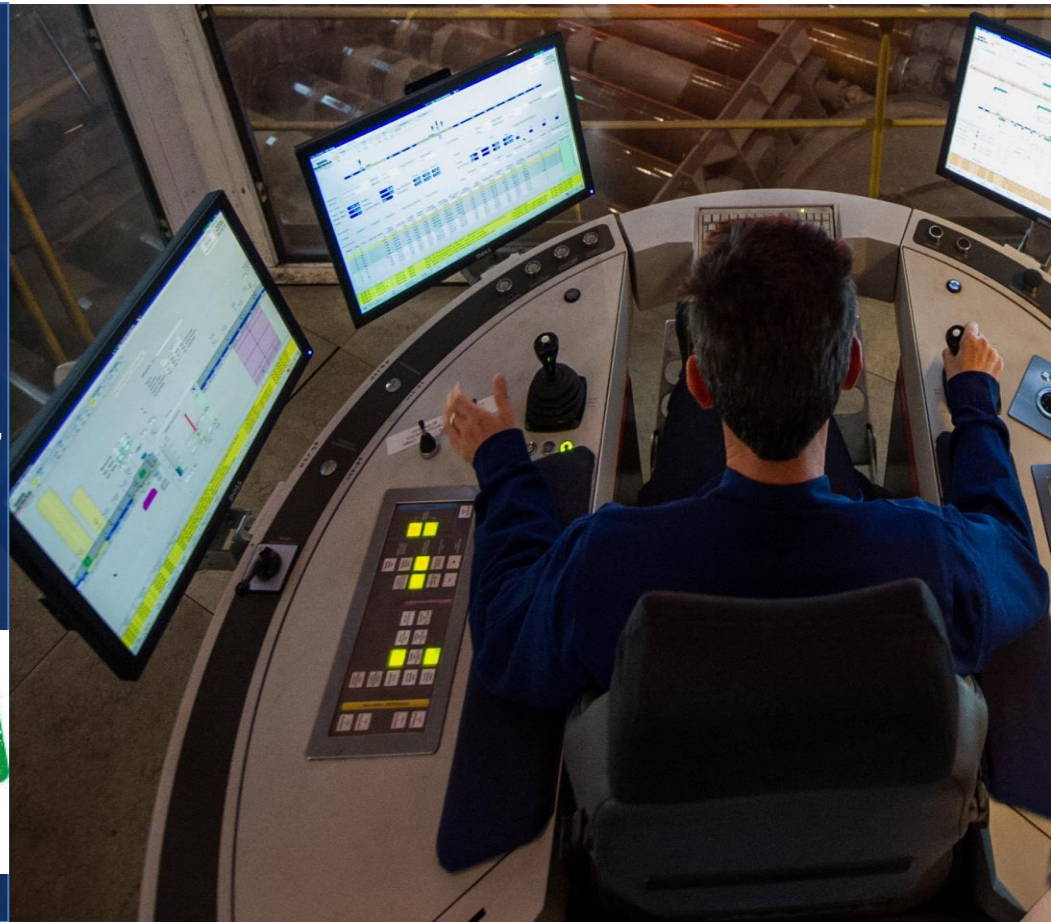
European Steel Skills Alliance

Blueprint “New Skills Agenda Steel”:
Industry-driven sustainable European Steel Skills Agenda and Strategy (ESSA)

EU Programme: ERASMUS+ “New Skills Agenda”
Duration: January 2019 – December 2022
Funding: 4 Mio. Euro
24 Partners + 16 associated partners

Co-funded by the Erasmus+ Programme of the European Union



Objectives

Expected results:

- **Adjusting the workforce proactive**, to deploy and implement new technologies aiming at an optimisation of the production process
- **Monitoring and shorten the implementation of industry relevant qualifications and training**
- **Political support** measures by mobilising and integrating stakeholders and policy makers of the EU and national level;
- Successful cross-sectoral **upskilling schemes** and efficient management of knowledge;
- More **attractiveness of the industries** and careers for talented people (**recruitment and retention**)

➢ **Our mission:**

Industry driven proactive adjustment of future skills with the industry and for the industry

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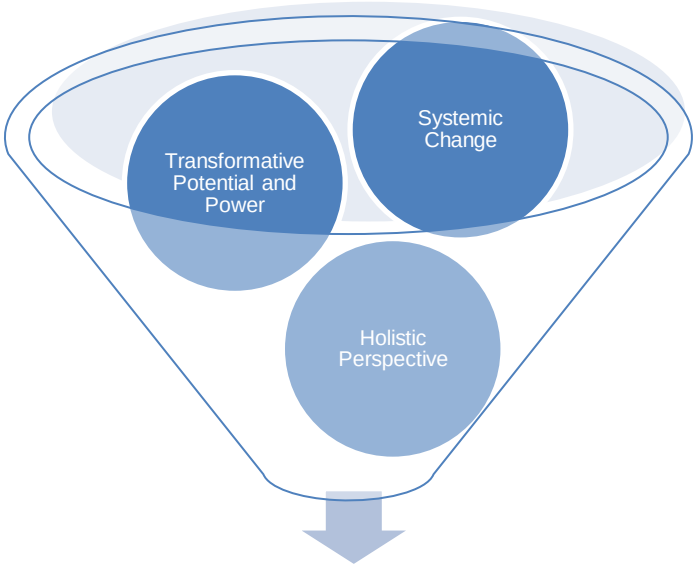
ESSA:
Programmatic orientation and main challenges

Main challenge:

- Broad range of
  - Relevant new technologies
  - Concerned job profiles
  - Affected production areas (including maintenance)

- What kind of skills adjustment strategy is needed?



New social practices

(based on new infrastructures, cultures, behaviour, mindsets, routines)

New Alliances

(new constellations; roles, tasks and responsibilities; reciprocal interplay)

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ESSA Partners:
A European Steel Community Involvement

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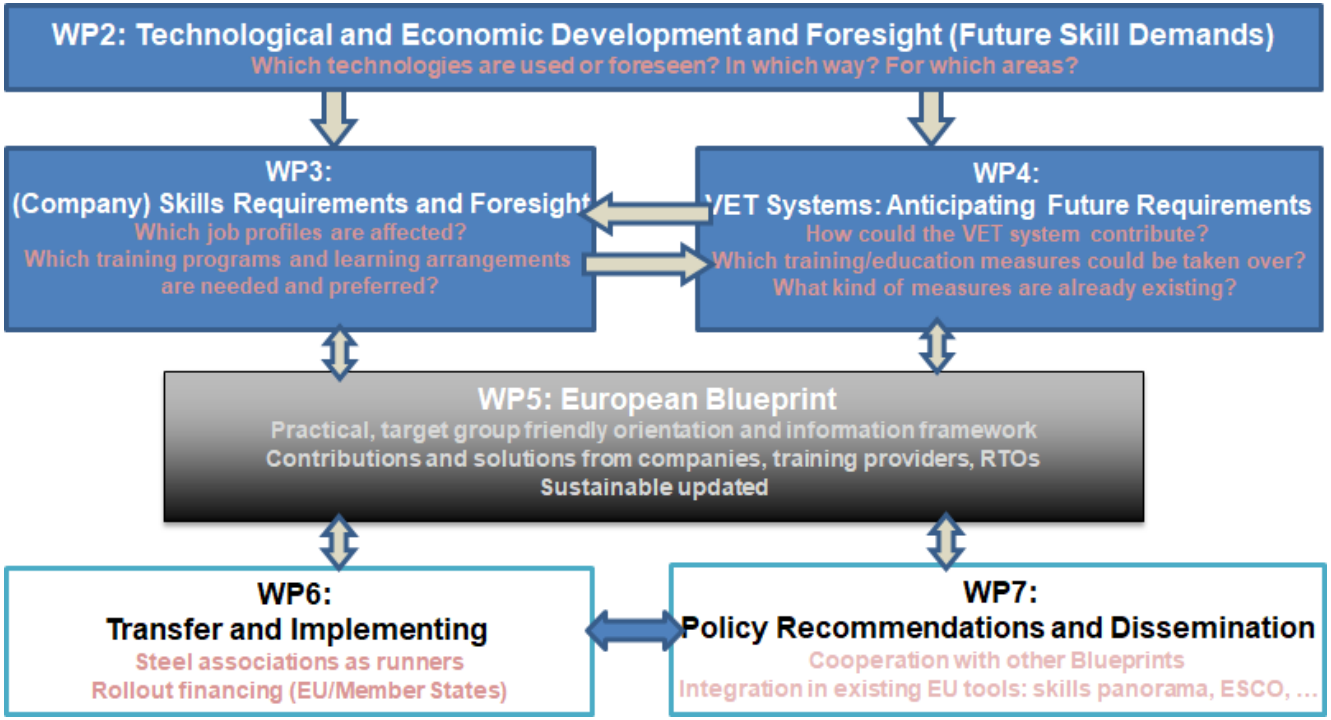
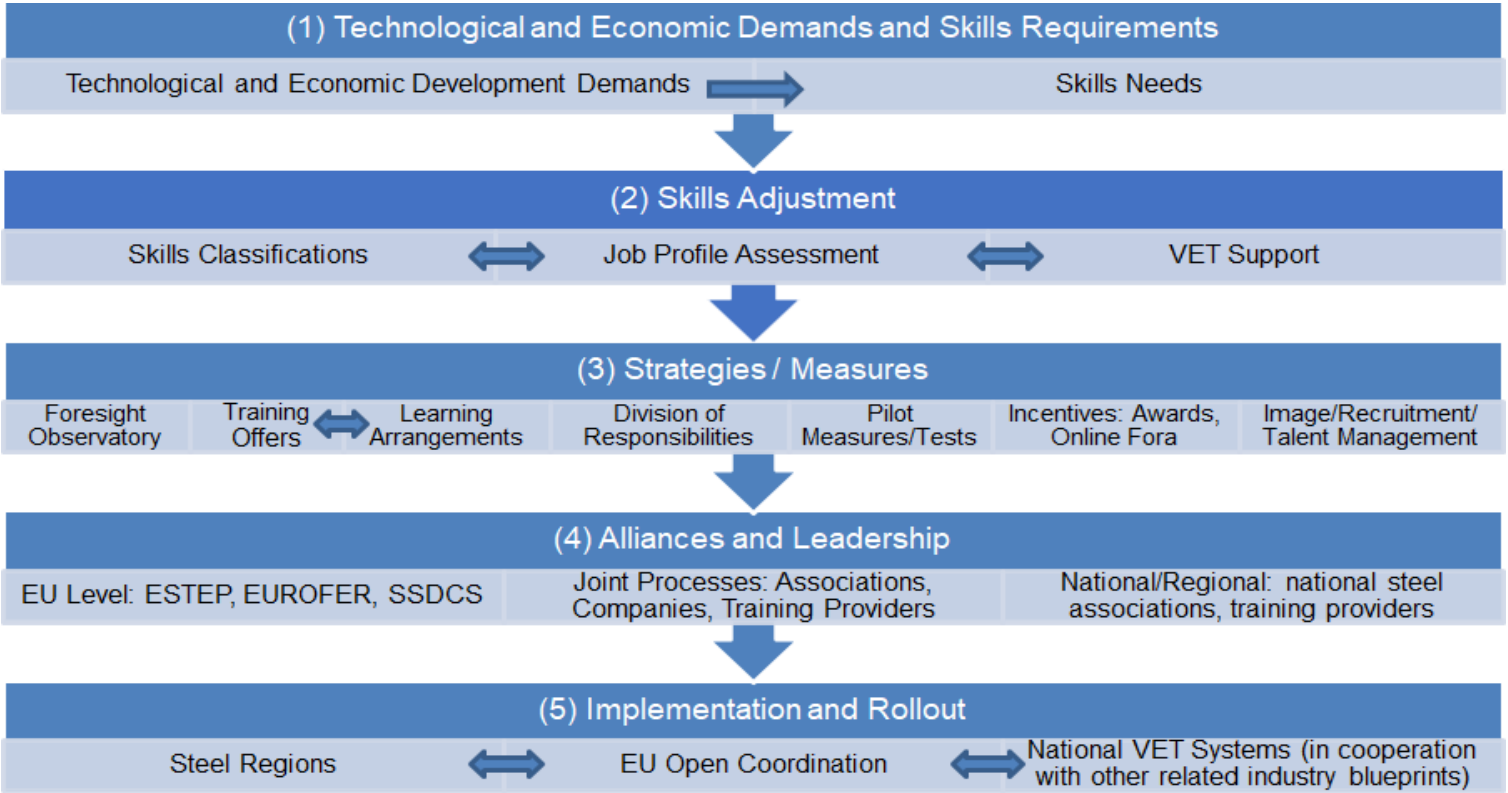
Approach (Work Packages)



ESSA Blueprint Prototype



(1) Technological and Economic Demands and Skills Requirements

Technology Development and Demands	Skills Needs
• All recent Industry 4.0 technologies are in place • Integration of all production systems	• Incremental up-skilling of existing job profiles: • Buy-in of missing digital competences • Recruiting talented people with digital skills

(2) Skills Adjustments

Skills Classifications ⟺ Job Profiles ⟺ VET Occupations

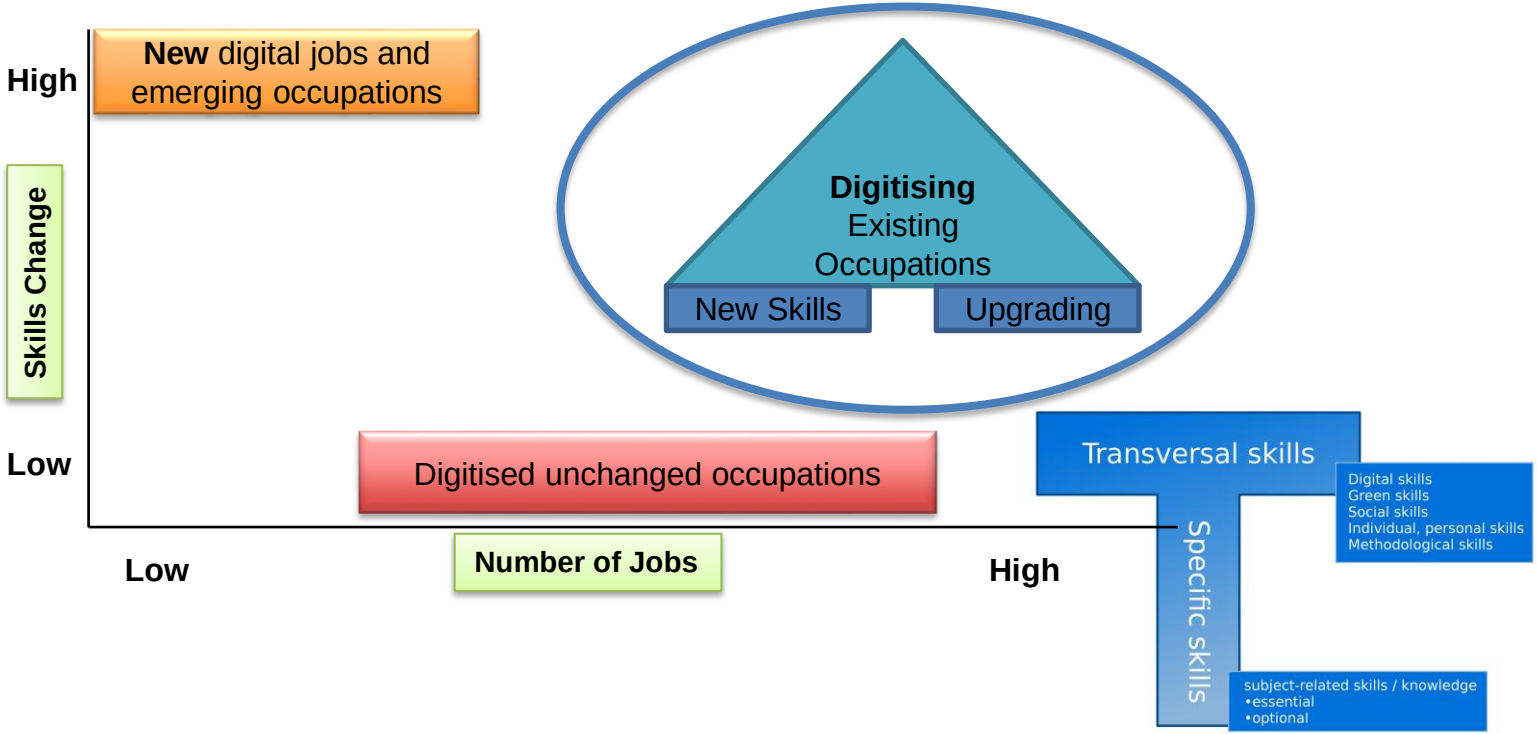
• 26 Family Trees with more than 200 Job Profiles • 9 selected Pilot Job Profiles • T-shaped skills (technical/professional, transversal)	• Combining job profiles with ESCO Occupations • 5 different VET systems analysis (DE, ES, IT, PL, UK)

(3) Strategies / Measures

Foresight Observatory | Training Offers ⟺ Learning Arrangements | Division of Responsibilities | Pilot Measures and Tests | Incentives: Awards, Online Fora | Image/Recruitment/ Talent Management

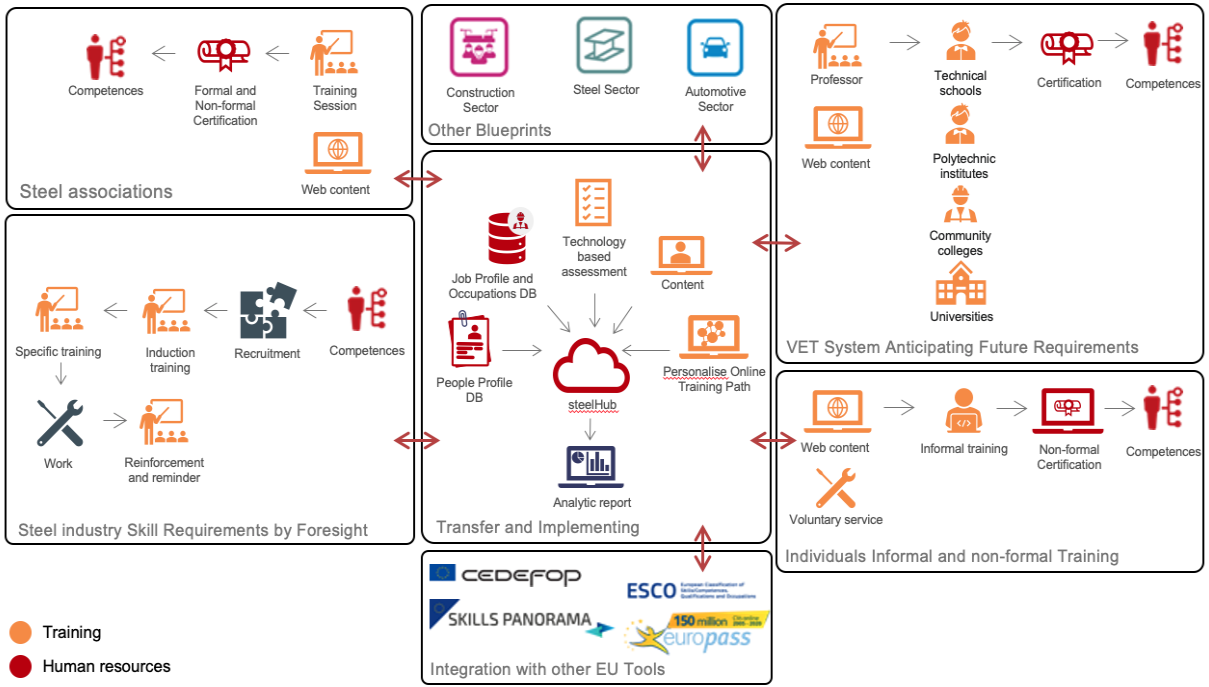
• European Technology and Skills Foresight Observatory (ESSA ETF) • European Technology and Skills Foresight Panel (ESSA ETP)	Connected Training Eco-systems: • European Online Training Eco-system: steelHub (ESSA OTS) • Regional Training Systems (ESSA RTS)

Scenario of Digital Skills Development



Based on Schmid, CEDEFOP, World Congress on TVET, 13-16 May 2012

ESSA Online Training Ecosystem (ESSA OTS)



European Steel Technology and Skills Foresight Observatory (ESSA ETF)

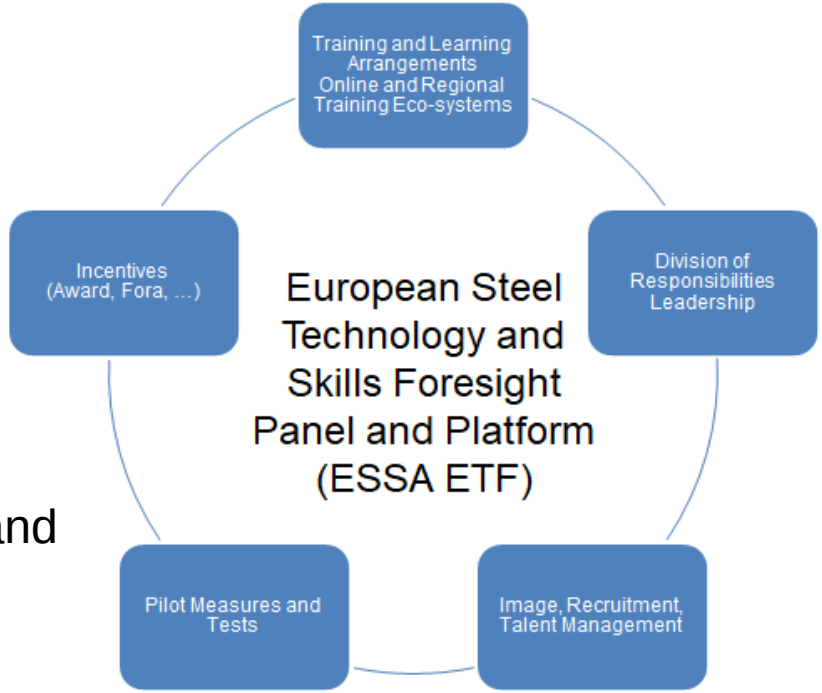
Monitor and evaluate regularly:

- Technological and Economic Development
- Industry Skills Requirements
- VET Systems Anticipation and Support of Future Skills

ESSA European Steel Technology and Skills Foresight Panel (**ESSA ETP**)

Online and Regional Training Eco-Systems connection and support

Train the trainer programs



ESSA ETF Observatory Roadmap

Monitoring and adjustment of **skills (demand side)** and to organise **education and training (supply side)**

Monitor and anticipate new skills demands of the EU steel industry via the Foresight Panel (ESSA ETP)

Provide and promote training in **T-shaped skills** of the main job profiles concerned

Set-up and support the **Online and Regional Training Eco-Systems:**

- new learning arrangements, digital and on-the-job training, importance of lifelong learning, promote **(reverse) mentorship** as a way of knowledge transfer

Improve the **image** of the sector and careers within it

- EU-wide communication campaigns, advertise and promote job opportunities and good working conditions, image and awareness-raising campaigns (including underrepresented groups, such as women and migrants)
- Document and award best practices (of skills adjustments)

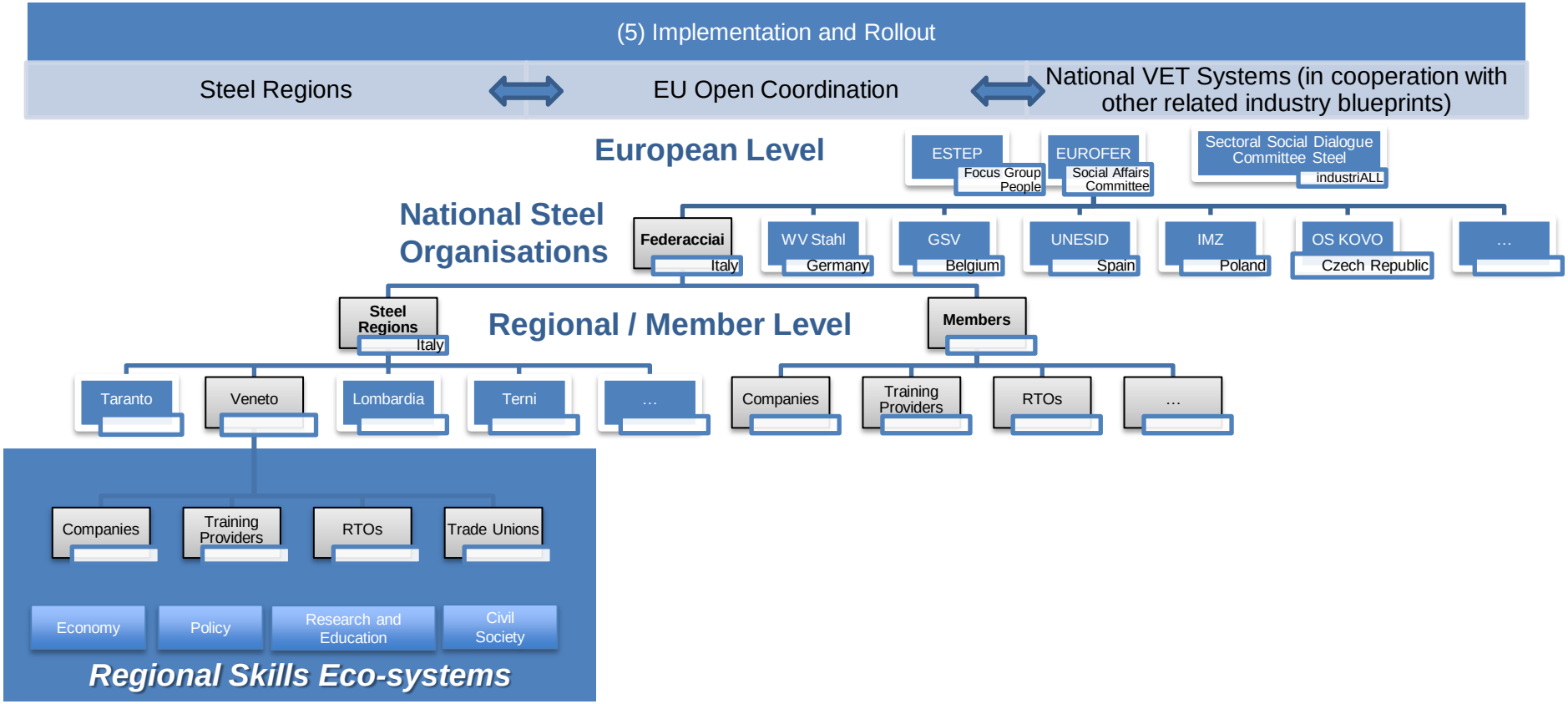
(4) Alliances and Leadership

EU Level: ESTEP, EUROFER, SSDCS	Joint Processes: Associations, Companies, Training Providers	National/Regional: national steel associations, training providers
• Implementation strategy for gaining political support, mobilizing human resources and engaging stakeholders for Blueprint and Skills Alliance • Blueprint implementation, operation and monitoring • …	• Common platforms: Foresight Observatory, Training Eco-systems • Specific collaborations • …	• Implementation and transfer plan elaborated with the national steel associations • Skills Committees – mainly incorporated in existing committees • …

Integration of ESSA measures (ETF, ETP, OTS, RTS) in existing European – national - regional infrastructures

(5) Rollout

Steel Regions	EU Open Coordination	National VET Systems (in cooperation with other related industry blueprints)
• Main steel regions in Europe • Combining ESSA with national/regional skills approaches • Integration of social partners (esp. unions) at the regional level • …	• General ESSA framework (EU level) as an orientation • Support for national regional adjustments • Co-financing of ESF/EFRE and national/regional funds • …	• Common strategy to integrate the Blueprint results / demands in the national VET systems • Joint process of industry related Blueprints: Construction, Automotive, Manufacturing, Textile, Industrial Symbiosis, … • …



ESSA Regional Training Ecosystem (ESSA RTS)

Overview of steel regions so far

Overview of already mapped regions:

Italian Steel Regions	Friuli Venezia Giulia – Puglia – Toscana – Veneto – Umbia - Lombardia - Valle D'Aosta – Liguria – Piemonte - Emilia-Romagna - Basilicata
Polish Steel Regions	Silesia – Malopolska - Opolskie Province – Mazowsze - Świętokrzyskie Province - Podkarpackie Province
German Steel Regions	Western Germany /Rhein-Ruhr Area - Southern Germany /Saar Area - Northern Germany - Eastern Germany
Belgian Steel Regions	Flemish Region - Walloon Region
Bulgarian Steel Regions	Pernik – Burgas – Ruse - Montana
Additional Steel Regions	•Coming: Austria, Spain, Finland •Requested: Czech Republic, Greece, Hungary, France, Slovakia, Netherlands, Sweden, Romania, Slovenia

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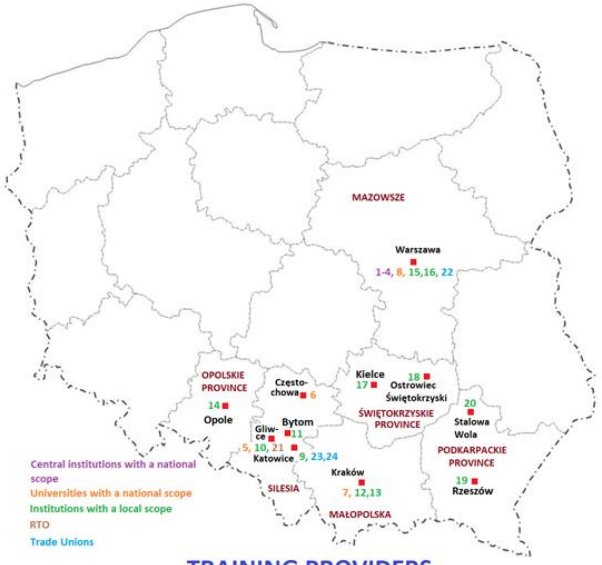
Regional Training Eco-systems (Example Poland)

Regional Training Eco-systems

Economy | Policy | Research and Education | Civil Society

STEEL COMPANIES



TRAINING PROVIDERS

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ESSA RTS:
Collaboration with existing platforms

- European **Centres of Vocational Excellence** (CoVEs)
- European **Smart Specialisation** Platform
- European **Cluster Collaboration** Platform

EUROPEAN CLUSTER COLLABORATION PLATFORM .eu

SIDEREX BASQUE STEEL CLUSTER
(Basque Country, Spain)

SIDEREX

Steel Innovation Cluster / Polo del Acero
(Aviles, Spain)

polo del acero

Triple Steelix / Jernkontoret
(Norra Mellansverige, Sweden)

TRIPLE steelix Industrial Region

Sustainable Steel Region North Middle Sweden

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Steel Region Example: Western Germany Rhein-Ruhr Area

Economy/Companies	• Thyssenkrupp Steel Europe AG, HKM Hüttenwerke Krupp Mannesmann GmbH, Arcelor Mittal Duisburg GmbH, Benteler Steel / Tube GmbH, BGH Edelstahl Siegen GmbH, Böllinghaus Steel GmbH, Thyssenkrupp Rasselstein GmbH, VDM Metals GmbH, WW-K Warmwalzwerk Königswinter GmbH, Schmolz und Bickenbach Deutschland GmbH, Thyssenkrupp Electrical Steel GmbH, Thyssenkrupp Hohenlimburg GmbH, R.Kind GmbH, Karl Diederichs KG, Mannstaedt GmbH, Outokumpu Nirosta GmbH, EZM Edelstahlzieherei Mark GmbH, Deutsche Edelstahlwerke GmbH, DK Recycling und Roheisen GmbH, ERAMET Alloys GmbH, Walzen Irle GmbH, Walzwerke Einsal GmbH,(SMS Group)
Trade Unions (national scope)	• IG Metall
Trade Unions (local scope)	• IG Metall regional branch • IG Metall NRW • IG Metall Duisburg-Dinslaken
Training Providers (national scope)	• Stahl-Akademie (VDEH Institut) • RWTH University Aachen (Lehrstuhl für Metallurgie von Eisen und Stahl am Institut für Eisenhüttenkunde (IEHK) • TU Clausthal (Institut für Metallurgie) • Universität Duisburg-Essen - Institut für Metallurgie (Metallurgy and Metal Forming (B.Sc./M. Sc.)) • Institut für Eisenkunde und Stahltechnologien IEST, Freiberg
Training Providers (local scope)	• Niederrheinische IHK • Duisburg · Wesel · Kleve
Research Institutions (national scope)	• Stahlinstitut VDEh • VDEh-Betriebsforschungsinstitut GmbH (BFI) • Max-Planck-Institut für Eisenforschung GmbH
Research Institutions (local scope)	• Niederrheinische IHK • Duisburg · Wesel · Kleve • **(e.g.** Verfahrensmechaniker/-in der Hütten- und Halbzeugindustrie, Industriemeister Hüttentechnik)

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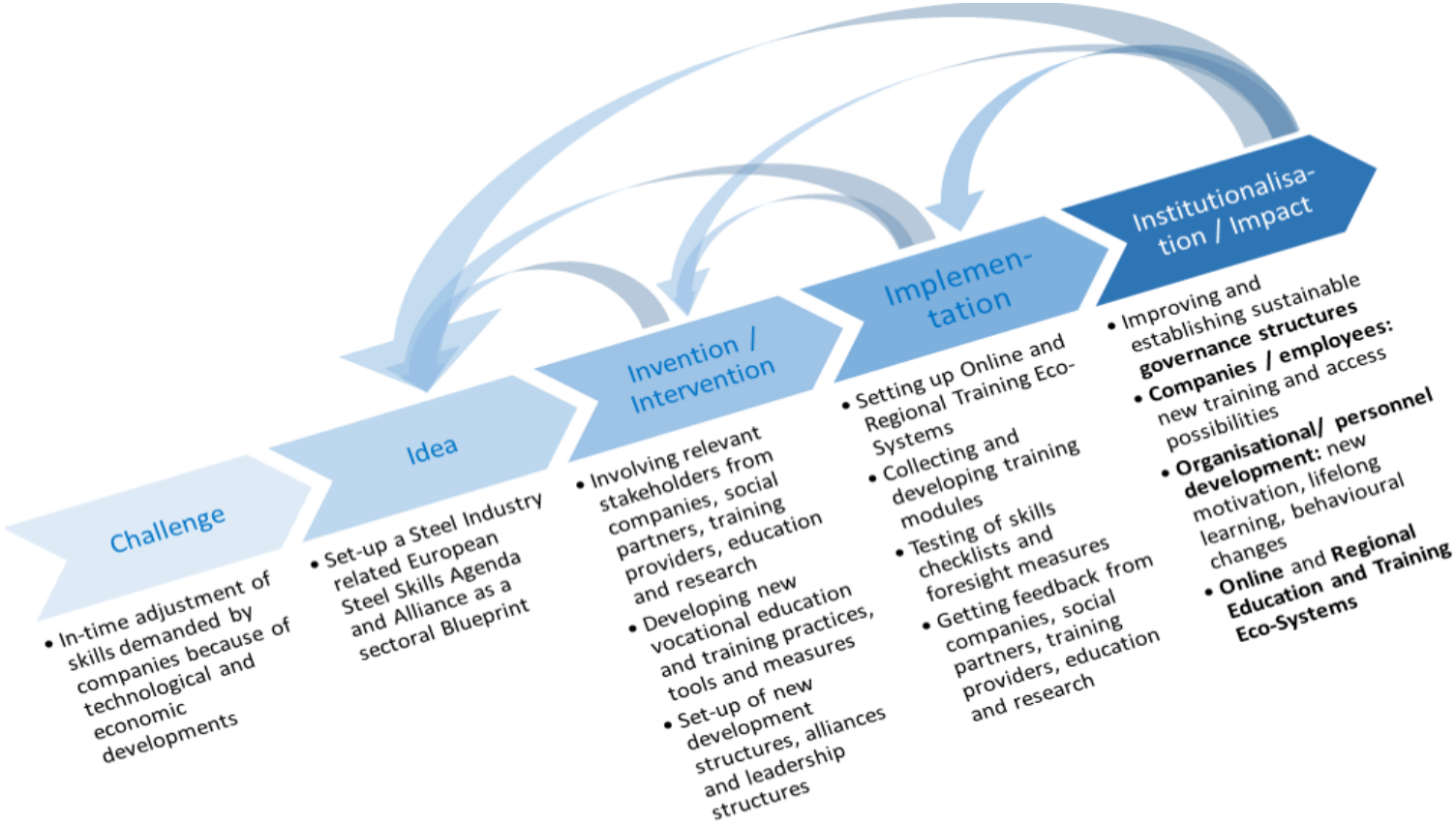
Next Steps of Implementation and Transfer: Blueprint Prototype Testing and Improving

- **European Steel Technology and Skills Foresight Observatory** (ESSA ETF)
- **ESSA European Steel Technology and Skills Foresight Panel** (ESSA ETP): combining technological development and skills (job profile) assessment
- **Testing and further development:**
  - **Online and Training Eco-System "steelHub"** (ESSA OTS): Integration of new trainings, business model, connection with ESSA RTS
  - **Regional Training Eco-Systems** (ESSA RTS): Selection of regions, establishing frameworks, partnerships and development processes
- **Integration of stakeholders:**
  - **Associations / Social Partners:** Structure and Leadership
  - **VET system** institutions: Pathways for skills supply, integration of ESSA trainings
  - **Companies:** Training offers and usage
  - **Training Providers:** Collecting training and train the trainer offers
  - **Civil Society:** Integration of social innovations in education and employment, social integration

Blueprint Development as Social Innovation Process



Further ESSA Results

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Agreement Number: 2018-3059/001-001
Project Number: 600886-EPP-1-2018-1-DE-EPPKA2-SSA-B

Thanks for your attention

ESSA website: https://www.estep.eu/essa

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Break
Back at 15.00

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Day 2:
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ESSA Blueprint
Implementation and Rollout Strategy

- **General:**
  - Integration in existing governance and coordination structures
  - Alignment with other steel industry related Blueprints (automotive, construction, industrial symbiosis, additive manufacturing, …)
- **European Level:**
  - Open Coordination in close cooperation with ESTEP, EUROFER, industriALL, Sectoral Social Dialog Committee
  - European Steel Technology and Skills Foresight Observatory (ESSA ETF)
  - Online and Training Eco-Systems (ESSA OTS)
- **Member State Level:**
  - National Steel Associations as connection points
  - Trade Unions
  - VET System Institutions
- **Regional Level:**
  - Regional Training Eco-Systems (ESSA RTS): establishing regional skills frameworks, partnerships and development processes
- **Integration of Stakeholders:**
  - Associations / Social Partners: Structure and Leadership
  - VET system institutions: Pathways for skills supply, integration of ESSA trainings
  - Companies: Skills requirements, training offers and usage
  - Research and Education: Research, education and training
  - Civil Society: Integration of social innovations in education and employment, social integration

ESSA Implementation and Rollout

Steel Regions ⟷ EU Open Coordination ⟷ National VET Systems (in cooperation with other related industry blueprints)

Online Training Eco-system

European Level

ESTEP – Focus Group People

EUROFER – Social Affairs Committee

Sectoral Social Dialogue Committee Steel – industriALL

National Steel Organisations

Federacciai – Italy

WV Stahl – Germany

GSV – Belgium

UNESID – Spain

IMZ – Poland

OS KOVO – Czech Republic

…

Regional / Member Level

Steel Regions – Italy

Members

Taranto

Veneto

Lombardia

Terni

…

Companies

Training Providers

RTOs

…

Companies

Training Providers

RTOs

Trade Unions

Economy

Policy

Research and Education

Civil Society

Regional Skills Eco-systems

Break
Back at 14.30

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