Interreg CENTRAL EUROPE
European Union
European Regional
Development Fund
InnoPeer AVM

TAKING
COOPERATION
FORWARD

InnoPeer AVM 5th SC Meeting
Munich | 11th December 2019

WP 1 – Strategy Roadmapping Frame
Minutes of 3ʳᵈ Action Planning Workshop

InnoPeer AVM | Brigitte Hatvan / ConPlusUltra

ACTIVITY 4 (RP): DELIVERABLES

D.T1.4.1 - Deadline 10/2019

Regional strategic stakeholder workshops on AVM (on occasion of PP meetings)

D.T1.4.2 - Deadline 12/2019

Draft of CE strategy roadmap

D.T1.4.3 - Deadline 04/2020

Final CE strategy roadmap in AVM (including Board feedback)

INNOPEER AVM - STRATEGIC FRAME

MEGATRENDS IN DIGITALISATION
I4.0 Technologies / Functioning of Markets

EU STRATEGIES ON DIGITALISATION OF INDUSTRY

DEMAND-ORIENTED QUALIFICATION PATHS FOR CE COMPANIES IN AVM/I4.0

... 2022   ... 2025   ... 2030

INTEGRATION IN EU-LEVEL / NATIONAL STRATEGIES TO ENSURE ENHANCED SUPPORT FOR CE COMPANIES

IMPACT ON CE COMPANIES

Central European Strategy Perspective 2030

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DEMAND-ORIENTED QUALIFICATION PATHS FOR CE COMPANIES IN AVM/I4.0

Where to position INNOPEER AVM results within the vocational training / further qualification system?
For which target groups and how?
Which support measures to raise awareness and involve target groups?
Central European perspective!

... 2022   ... 2025   ... 2030

INTEGRATION IN EU-LEVEL / NATIONAL STRATEGIES TO ENSURE ENHANCED SUPPORT FOR CE COMPANIES

Learnings and recommendations from INNOPEER AVM as contributions
- for strategic initiatives at European level
- For strategic positionning of Central Europe within EU Digitalisation strategies
- for national S3 strategies until 2030

IMPACT ON CE COMPANIES

Central European Strategy Perspective 2030

INFORMATION SOURCES

EU Strategy for the Digitalisation of Industry

- DESI Digital Economy & Society Index
- European Commission, Digital Single Market: DEI Brochure, 2018

Megatrends in Digitalisation

- PWC: Chancen und Herausforderungen der vierten industriellen Revolution (Survey 2014)
- Deloitte Insights: The Industry 4.0 paradox (2018)
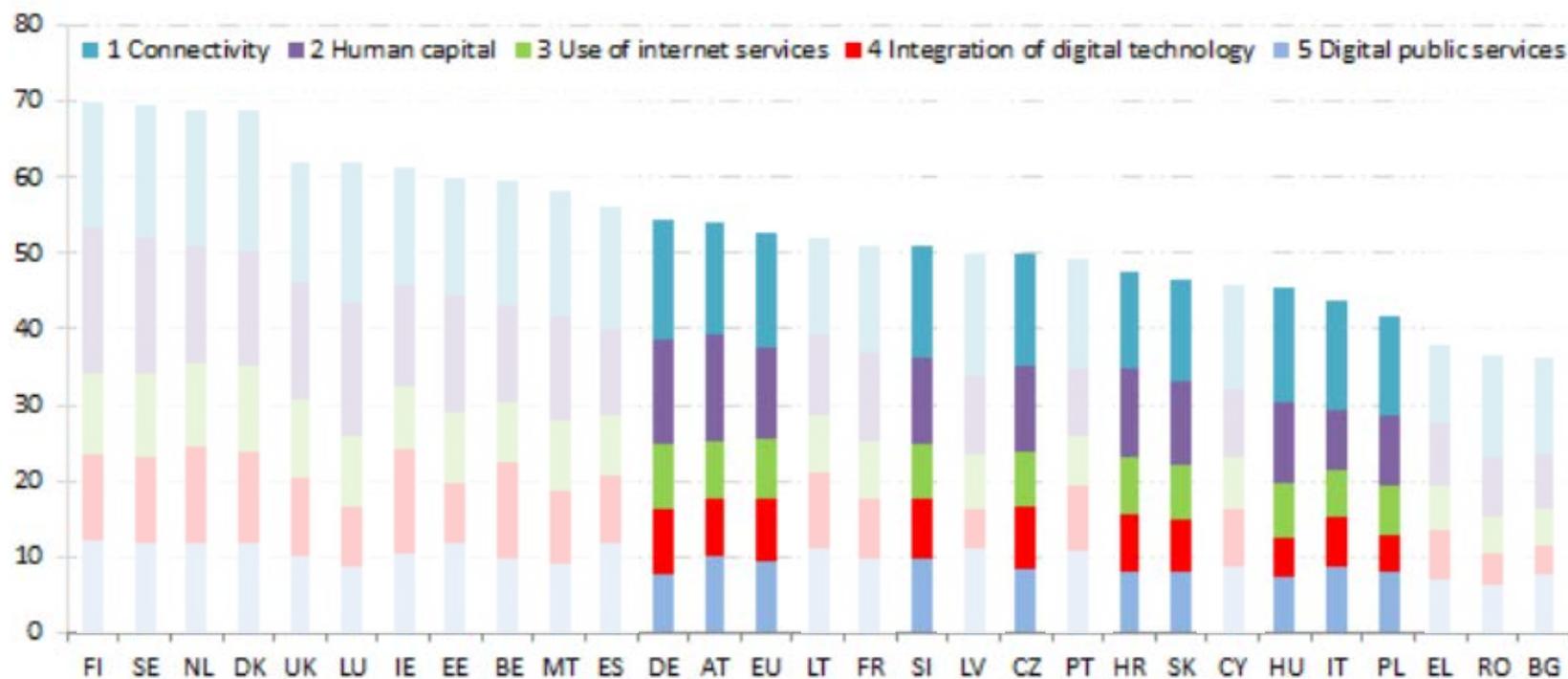
Qualification of SMEs for Digital Transformation

- VDMA: Industrie 4.0 – Qualifizierung 2025 (2016)
- Austria Wirtschaftsservice AWS: Qualifizierungsmaßnahmen im Zusammenhang mit der Einführung von Industrie 4.0 (2016)
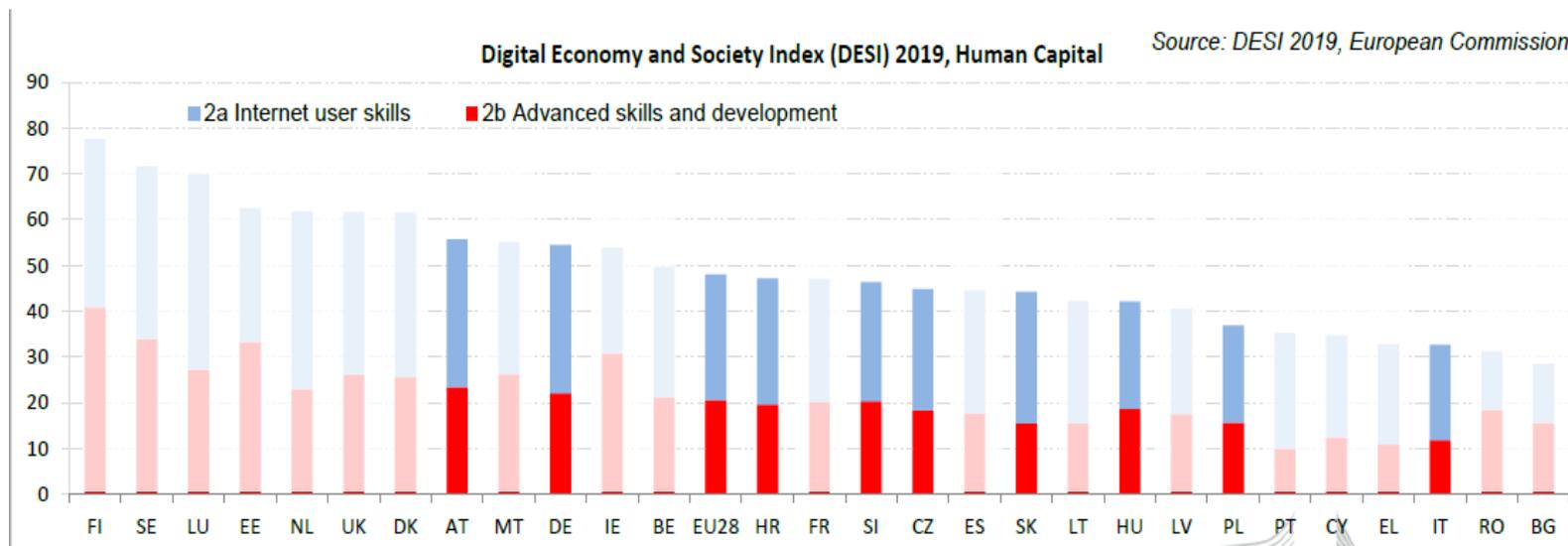
DESI - Main Dimensions, 2019

Digital Economy and Society Index (DESI) 2019 ranking

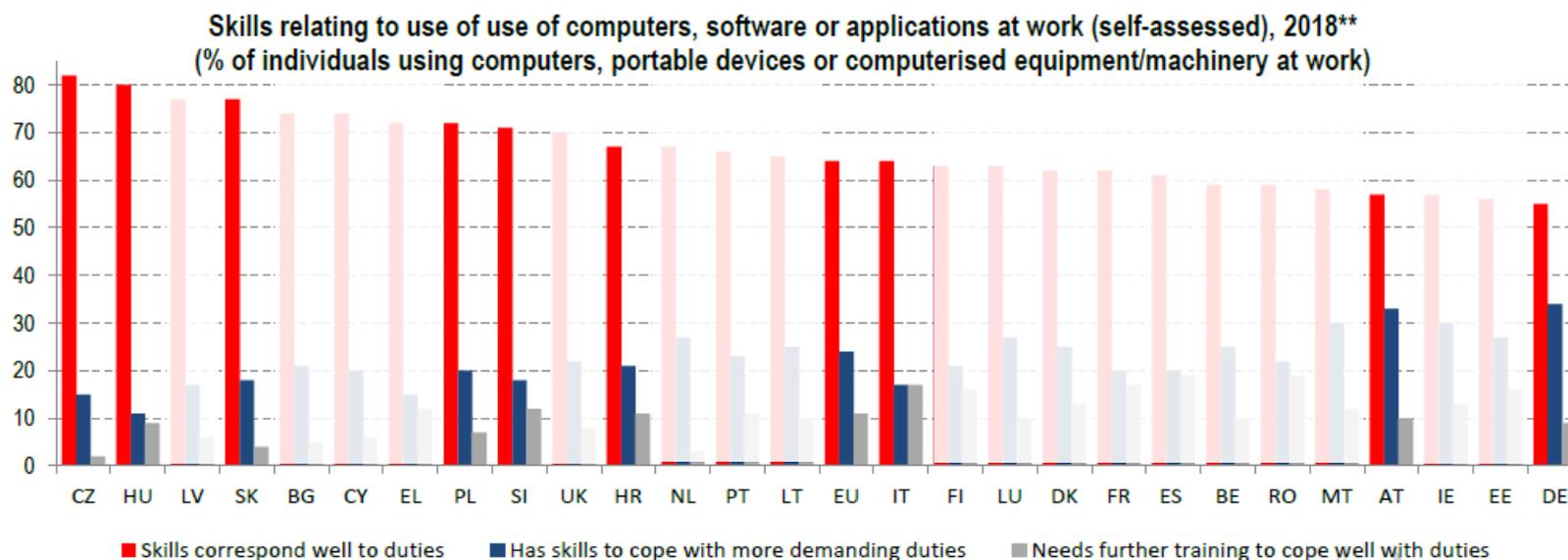# DIGITAL ECONOMY & SOCIETY INDEX (DESI)

Human Capital Dimension, 2019

Self-Assessment of workers regarding their digital skills

Skills relating to use of use of computers, software or applications at work (self-assessed), 2018**
(% of individuals using computers, portable devices or computerised equipment/machinery at work)

Source: Eurostat

■ Skills correspond well to duties   ■ Has skills to cope with more demanding duties   ■ Needs further training to cope well with duties

EU average: 64%   EU average: 24%   EU average: 11%
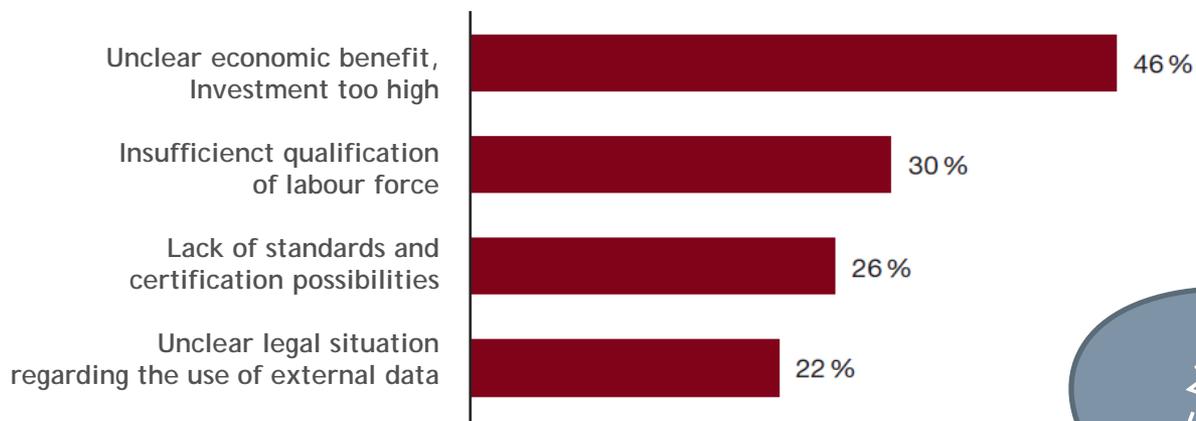
ROADMAPPING QUESTIONS

- Realistic goals regarding the impact of upskilling measures as developed and piloted by the InnoPeer AVM project on CE companies for Central Europe as a whole ?
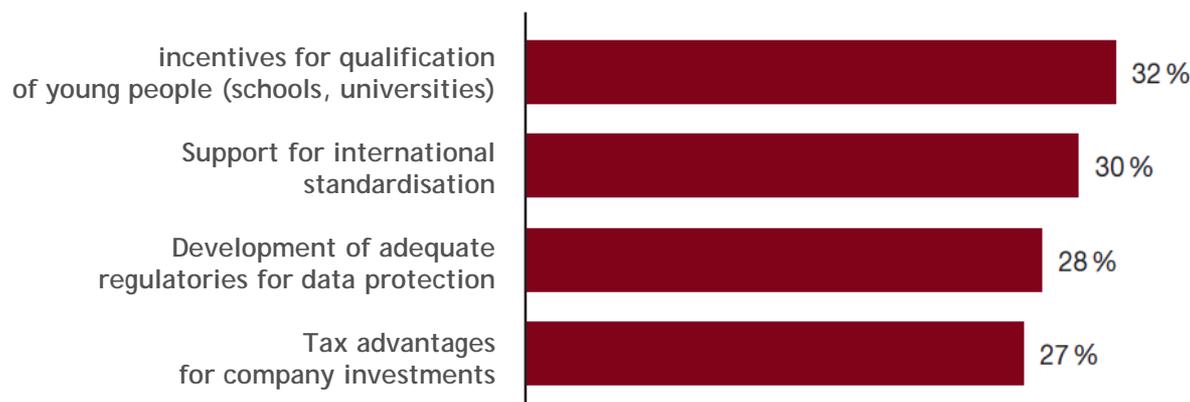
MEGATRENDS IN DIGITALISATION PWC STUDY 2014

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Main barriers

Barrier	Percentage
Unclear economic benefit, Investment too high	46 %
Insufficienct qualification of labour force	30 %
Lack of standards and certification possibilities	26 %
Unclear legal situation regarding the use of external data	22 %

Survey of 235 managers of large industrial enterprises in DE

Support demand

| Support demand	Percentage
incentives for qualification of young people (schools, universities)	32 %
Support for international standardisation	30 %
Development of adequate regulatories for data protection	28 %
Tax advantages for company investments	27 %

MEGATRENDS IN DIGITALISATION DELOITTE STUDY, 2018

The top three operational, cultural, and environmental challenges organizations face in their pursuit of digital transformation are closely interlinked
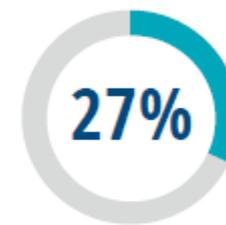
Which of the following are the most common operational, culture-related, and environmental challenges your organization faces as it seeks to pursue digital transformation initiatives?

35%
Finding, training, and retaining the right talent
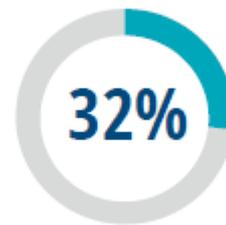
32%
Lack of internal alignment about which strategies to follow

27%
Emergence of new business or delivery models

Source: Deloitte Industry 4.0 investment survey, 2018.

Survey of 361 executives in 11 countries in the Americas, Asia, and Europe.

MEGATRENDS IN DIGITALISATION
DELOITTE STUDY, 2018

Digital transformation is more likely to be driven by the desire to improve current processes than by the desire for innovation

What are the top factors driving digital transformation initiatives within your organization?

Productivity goals (e.g., improved efficiency)	**50%**
Operational goals (e.g., reduced risk)	**47%**
Customer requirements	36%
Internal strategy focus	29%
Competitive pressures	29%
Increased desire for innovation	**23%**

Source: Deloitte Industry 4.0 investment survey, 2018.

Concerns about talent appear to grow as organizations realize greater return on investment due to digital transformation

	Respondents reporting moderate or lower ROI	Respondents reporting significant ROI
Total respondents that indicated finding, training, and retaining the right talent is a challenge	50	69
Percentage of total	31%	39%

Source: Deloitte Industry 4.0 investment survey, 2018.

- Build digital capabilities with, not for a company´s employees.
  -> Digital integration process
     to avoid skepticism or confusion

- Hire for design.
  -> Better user interface design as the channel
     to greater employee engagement with digital
     technologies

- Sustaining success requires continual investment in talent development.
  -> Upskilling existing employees to interact and use
     the full capabilities of digital technologies.

Source: Deloitte Industry 4.0 investment survey, 2018.

ROADMAPPING QUESTIONS

- Who will drive digital transformation in Central European companies, and for what reason ? How does this relate to the upskilling demand ?

- Which kind of support will CE companies at different levels of maturity for digital transformation need the most ?
Which will be the predominant target group by maturity level ?

- Which support activities of innovation system actors will be required to motivate and involve regional companies?

Expected staff competences of company representatives

~ 25 focus groups and interviews with AT companies (CEOs / HR), worker councils and experts

FORMAL EDUCATION

Fachlich breiteres Kompetenzspektrum & Spezialisierte Fachkompetenzen

Universität oder FH

Höhere Ausbildung v.a. HTL

Mittlere Ausbildung (Lehre, Fachschule)

Anlern-kompetenzen

DIGITAL COMPETENCES

Datenschutz

Suchen, Auswählen, Bewerten von Informationen

Programme konzipieren können

Programme adaptieren können

Programme nutzen können

Digital Literacy

Touchscreen & Maus bedienen

PROCESS UNDERSTANDING

Gesamtunternehmen

Geschäftsprozess

Herstellungsprozess Produkt

Unmittelbare Vor- & Nachschritte

Meine Aufgabe

SELF-COMPETENCE ATTITUDES / ORIENTATION

Innovationsorientierung

Verantwortungsbewusstsein und -bereitschaft

Flexibilität

Lern- und Entwicklungsbereitschaft und -initiative

Impulse zur Weiterentwicklung des Unternehmens

Impulse zur Weiterentwicklung des Geschäftsprozesses

Impulse zur Weiterentwicklung des Herstellungsprozesses

Impulse zur Weiterentwicklung der Aufgabe

Aufgabe selbstständig hochwertig erfüllen

Source: Prospect Research & Solutions

Relevance of Industry 4.0 in Initial VET / Further Qualification

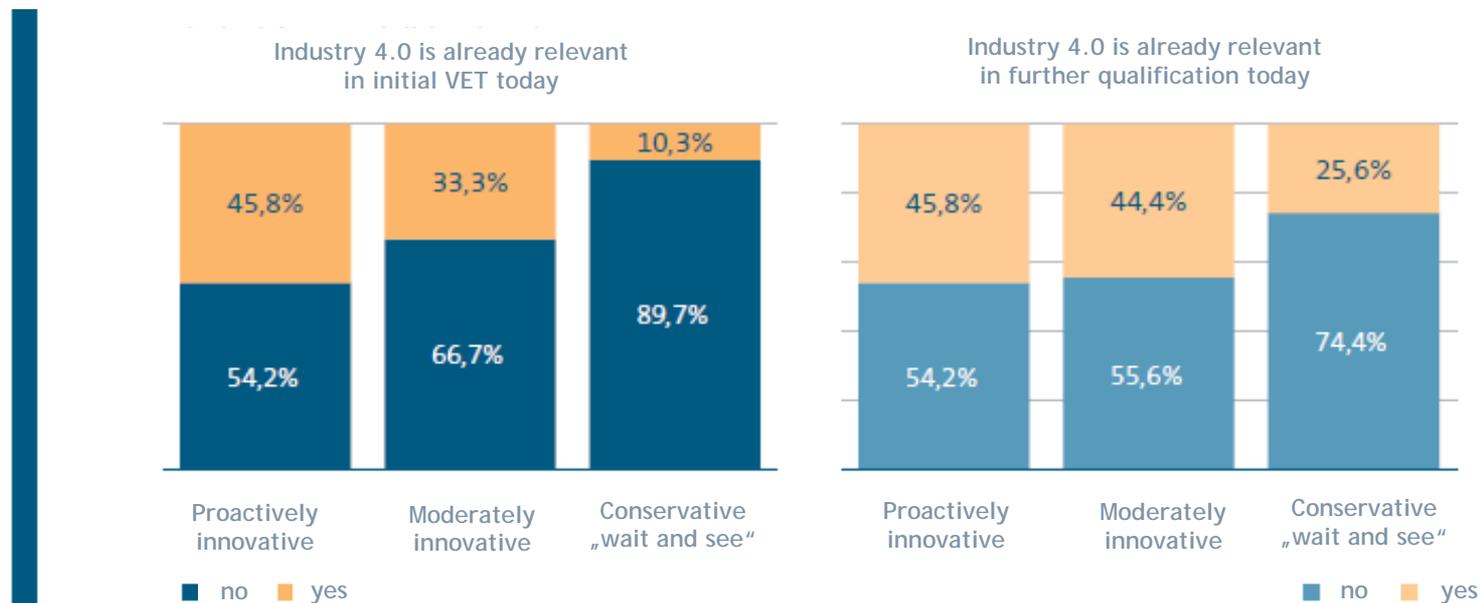Survey of >500 DE companies from machine building / plant engineering sector

I4.0 qualification …

38,0%

29,1%

70,9%

62,0%

- ◼ … Is already relevant in initial VET today
- ◼ … Is not relevant in initial VET today

- ◼ … Is already relevant in further qualification / upskilling today
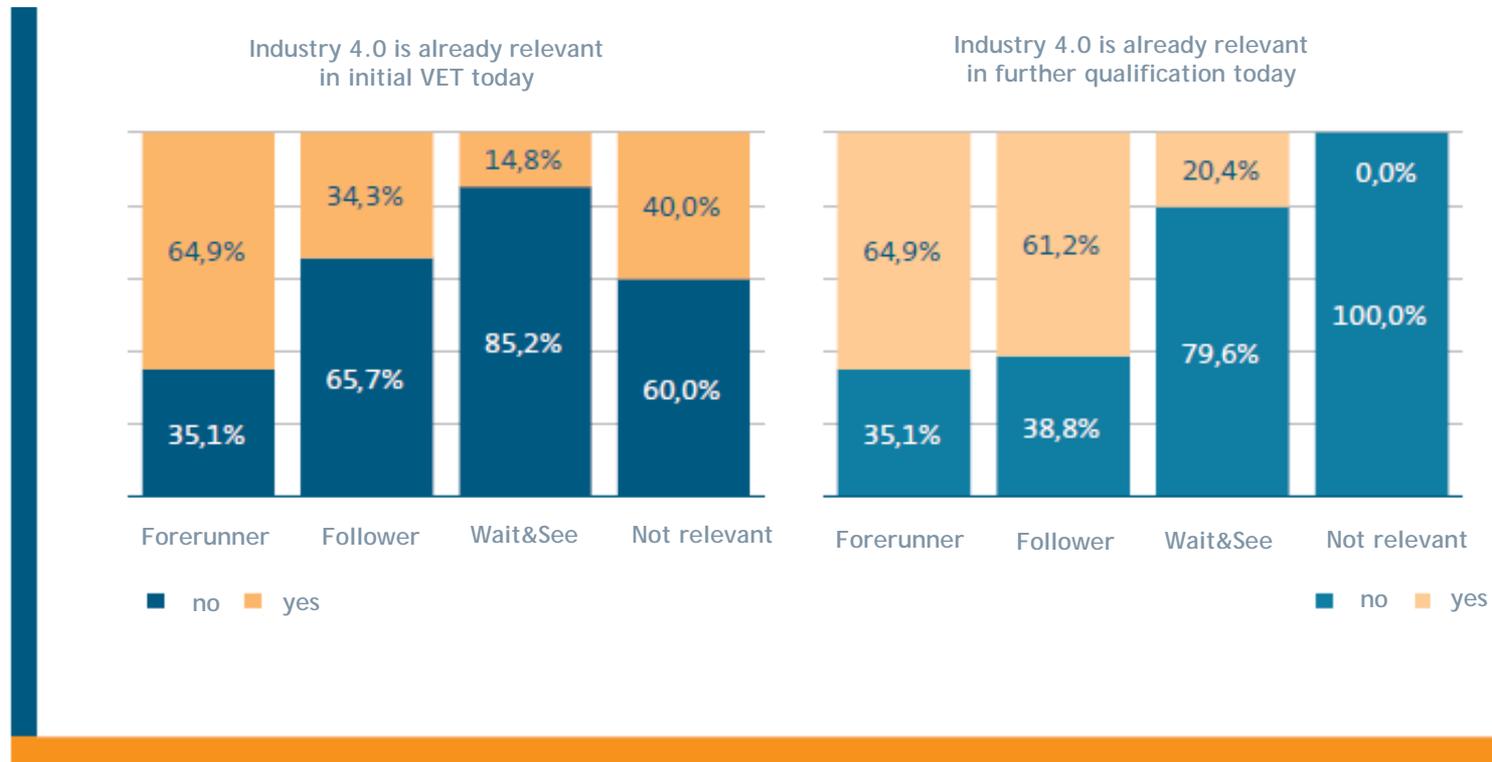- ◼ … Is not relevant in further qualification / upskilling today

Q2025, n= [197]
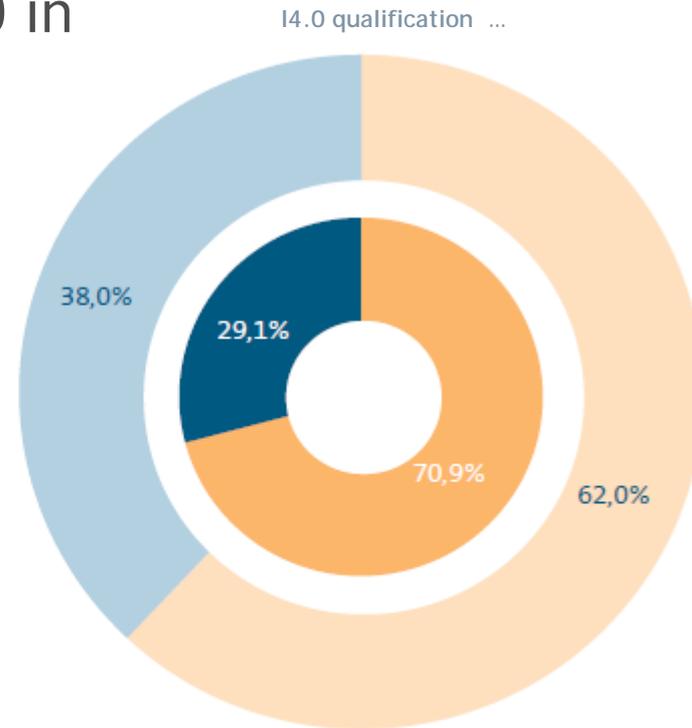
Companies´ attitude towards innovation in qualification
## vs. I4.0 qualification activities (Initial VET/Further Qualification)

Industry 4.0 is already relevant in initial VET today

	Proactively innovative	Moderately innovative	Conservative „wait and see"
yes	45,8%	33,3%	10,3%
no	54,2%	66,7%	89,7%

Industry 4.0 is already relevant in further qualification today

	Proactively innovative	Moderately innovative	Conservative „wait and see"
yes	45,8%	44,4%	25,6%
no	54,2%	55,6%	74,4%

Companies´ innovativeness and I4.0 qualification today
(Initial VET / Further Qualification)

Industry 4.0 is already relevant in initial VET today

	Forerunner	Follower	Wait&See	Not relevant
yes	64,9%	34,3%	14,8%	40,0%
no	35,1%	65,7%	85,2%	60,0%

no ■ yes

Industry 4.0 is already relevant in further qualification today

	Forerunner	Follower	Wait&See	Not relevant
yes	64,9%	61,2%	20,4%	0,0%
no	35,1%	38,8%	79,6%	100,0%

no ■ yes
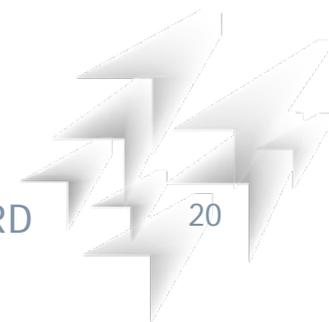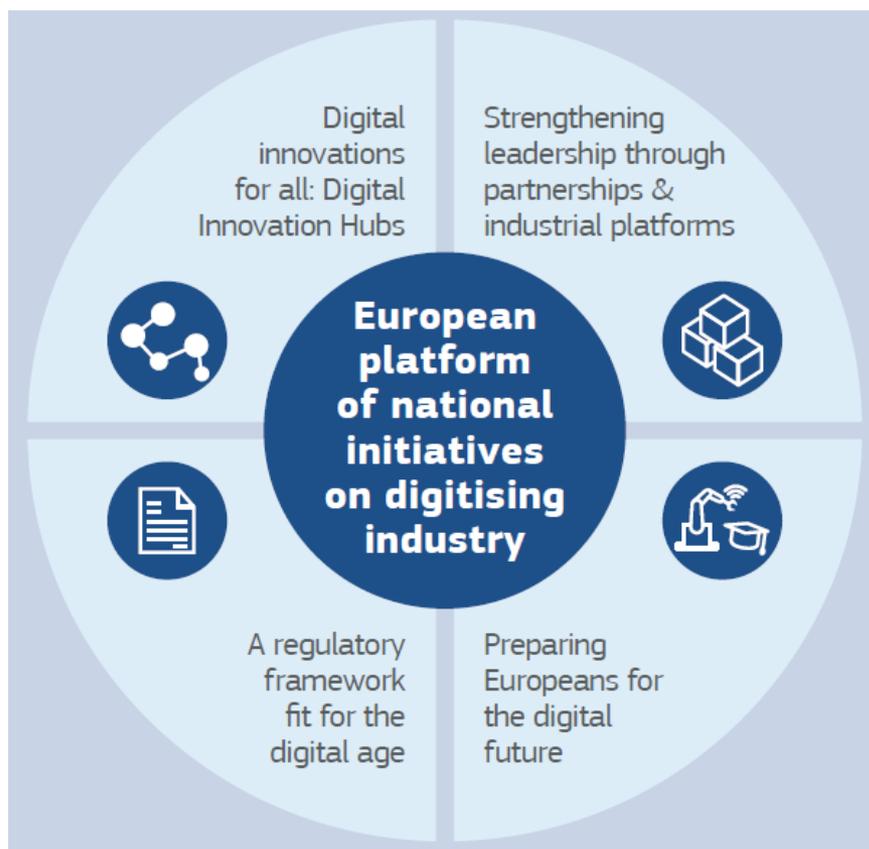
- Which qualification goals will be relevant for CE companies ?
  Which level of trainings will be needed ?

- Which kind of support will CE companies at different levels of maturity for digital transformation need the most ?
  Which will be the predominant target group by maturity level ?

- Which support activities of innovation system actors will be required to motivate and involve regional companies to participate in I4.0 qualification measures?
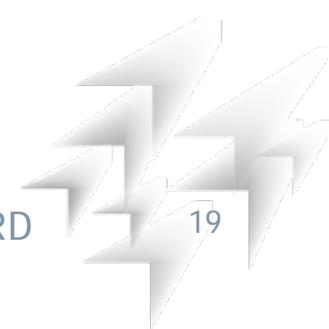
DIGITISING EUROPEAN INDUSTRY INITIATIVE (DEI)

Building on and complementing the national initiative for digitising industry, the DEI strategy is structured around five main pillars.
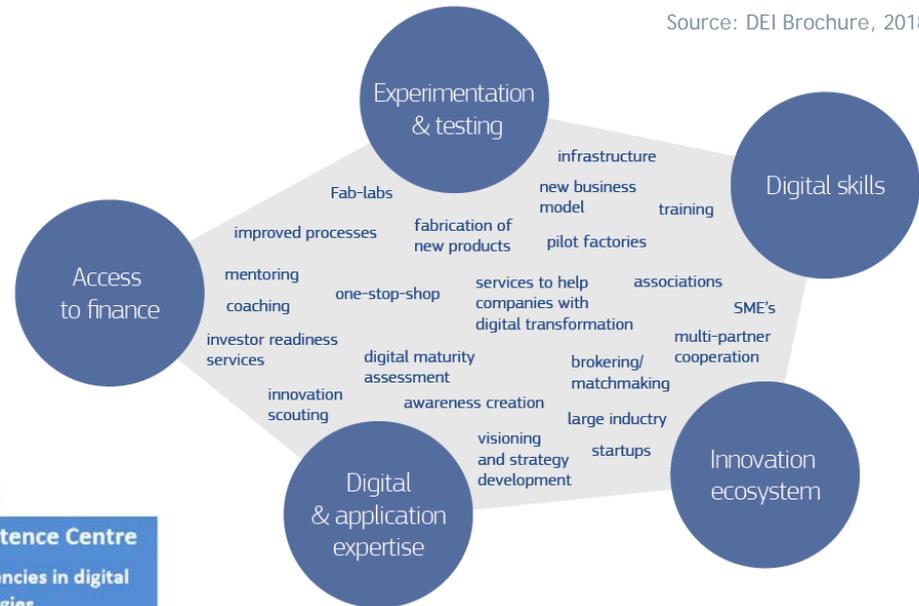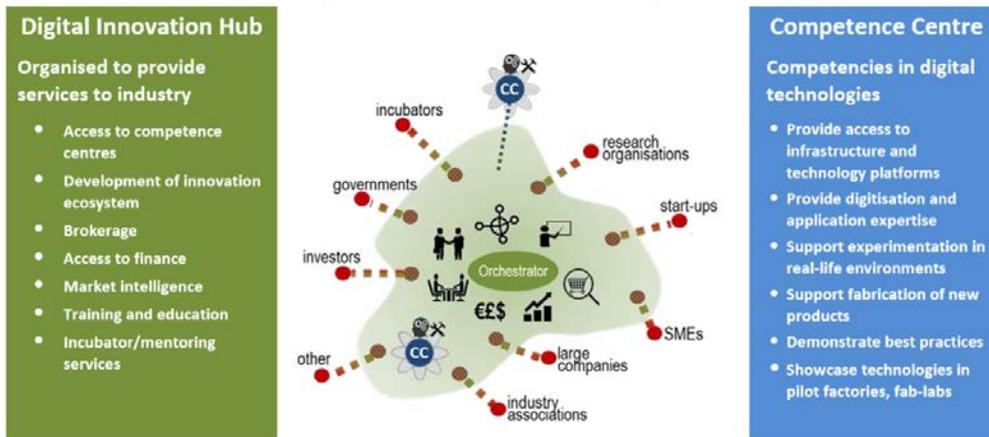
DIGITAL INNOVATION HUBS

Source: DEI Brochure, 2018

The Digital Innovation Hub Model[7]

Sector specific expertise

Technology expertise

Business model expertise

Digital innovation hub

Solution

Source: DEI Working Group 1, 2017

Experimentation & testing

Access to finance

Digital skills

Digital & application expertise

Innovation ecosystem

Fab-labs
infrastructure
new business model
training
improved processes
fabrication of new products
pilot factories
mentoring
one-stop-shop
services to help companies with digital transformation
associations
coaching
SME's
investor readiness services
digital maturity assessment
multi-partner cooperation
brokering/ matchmaking
innovation scouting
awareness creation
large inductry
visioning and strategy development
startups

Key elements and services of a Digital Innovation Hub

Figure 7: Competence Centres as an Element of Digital Innovation Hubs

Digital Innovation Hub

Organised to provide services to industry

- Access to competence centres
- Development of innovation ecosystem
- Brokerage
- Access to finance
- Market intelligence
- Training and education
- Incubator/mentoring services

incubators
governments
investors
other
research organisations
start-ups
SMEs
large companies
industry associations
Orchestrator

Competence Centre

Competencies in digital technologies

- Provide access to infrastructure and technology platforms
- Provide digitisation and application expertise
- Support experimentation in real-life environments
- Support fabrication of new products
- Demonstrate best practices
- Showcase technologies in pilot factories, fab-labs

Digital Innovation Hubs Catalogue

https://s3platform.jrc.ec.europa.eu/
digital-innovation-hubs-catalogue

ROADMAPPING QUESTIONS

- How to interlink InnoPeer AVM results with ongoing strategic initiatives supported by EU and / or national strategies?

- Which contributions can InnoPeer AVM concretely deliver for substantiation of S3 strategies of CE countries ?

- Steps towards a more effective integration of Central Europe into EU-level strategies for the digitalisation of industry ?
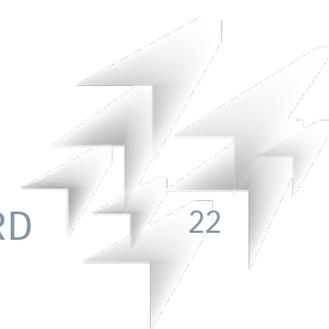
INNOPEER AVM – MAIN PROJECT RESULTS

The newly developed AVM qualification standard (up to "InnoPeer AVM certificate") will be implemented in Central Europe and rolled out across EU ensuring a demand-oriented qualification upgrade of innovation managers in regional companies and enabling them to get involved in innovative AVM-based value chains.

CE enterprises, esp. SME, will have improved capacities and managerial competences to implement innovative AVM processes and to handle their technological, organisational and strategic implications at company level and in peer-to-peer cooperation with their industrial cooperation partners - Innovation managers from regional companies, innovation agencies, researchers and industrial cooperation partners will be interlinked across CE and with leading European regions in a peer-to-peer network in which further learning processes on AVM will be triggered by a mutual exchange of experience and good practice.

Students and young industry experts will perceive AVM-competences as a basis for their professional career and will find adequate employers offering qualified jobs in this field in CE enterprises.

The InnoPeer AVM Board will strengthen the awareness of international industry stakeholders and innovation policymakers regarding AVM-related competences and capacities in Central Europe at the transnational and EU level.

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IMPACT ON CE COMPANIES

Central European Strategy Perspective 2030

SUMMARY OF PARTNER INPUTS

Group 1 (group facilitator PL)

- Actions should provide some overall knowledge to different companies so they know where to start, give orientation where their industry is going to

- Raising awareness in the target group of companies in transition

- Companies´long-term goals: ROI, successful business case, precise examples of business cases from CE companies are required -> use cases developed by InnoPeer AVM

- Motivating companies to upskill their staff

Group 2 (group facilitator IT)

- Focus on what kind of skills should be spread

- To raise awareness that the the process of innovation/ change has no starting point and ending point – continuous change

- Focus on upskilling of change managers

- Change from product perspective to customer service focus

- Give practical examples / case studies

- Network basis with transnational aspects to enhance change management

- Becoming part of existing platforms and hubs to raise sustainability

Group 3 (group facilitator AT)

- 2 main target groups: companies & educational sector

- Labour market support organisations and their target groups as additional multiplier

- Raise appreciation towards offered trainings – free trainings plus for-charge advanced sessions to gain more respect?

- More specific trainings acc. company needs with specific topic-related advice which is not provided in the basic training, companies should choose their specific training path at the advanced level

- InnoPeer AVM offers different paths through selection of different modules

- Integration into existing courses of studies to open the focus – not as obligatory course but possibly as an elective course
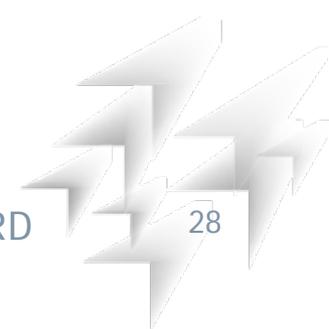
NEXT STEPS IN ROADMAPPING PROCESS

- Integration of partners´ inputs into outline of transnational InnoPeer AVM roadmap

- 2nd Teleconference with Advisory Board before X-Mas

- On this basis:
  -> Final integration of relevant aspects into Regional Action Plans
  -> Development of Draft of Transnational Roadmap