

The European Commission's science and knowledge service

Joint Research Centre



INDUSTRIAL TRANSITION REVIEW OF ROMANIA

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October 2020

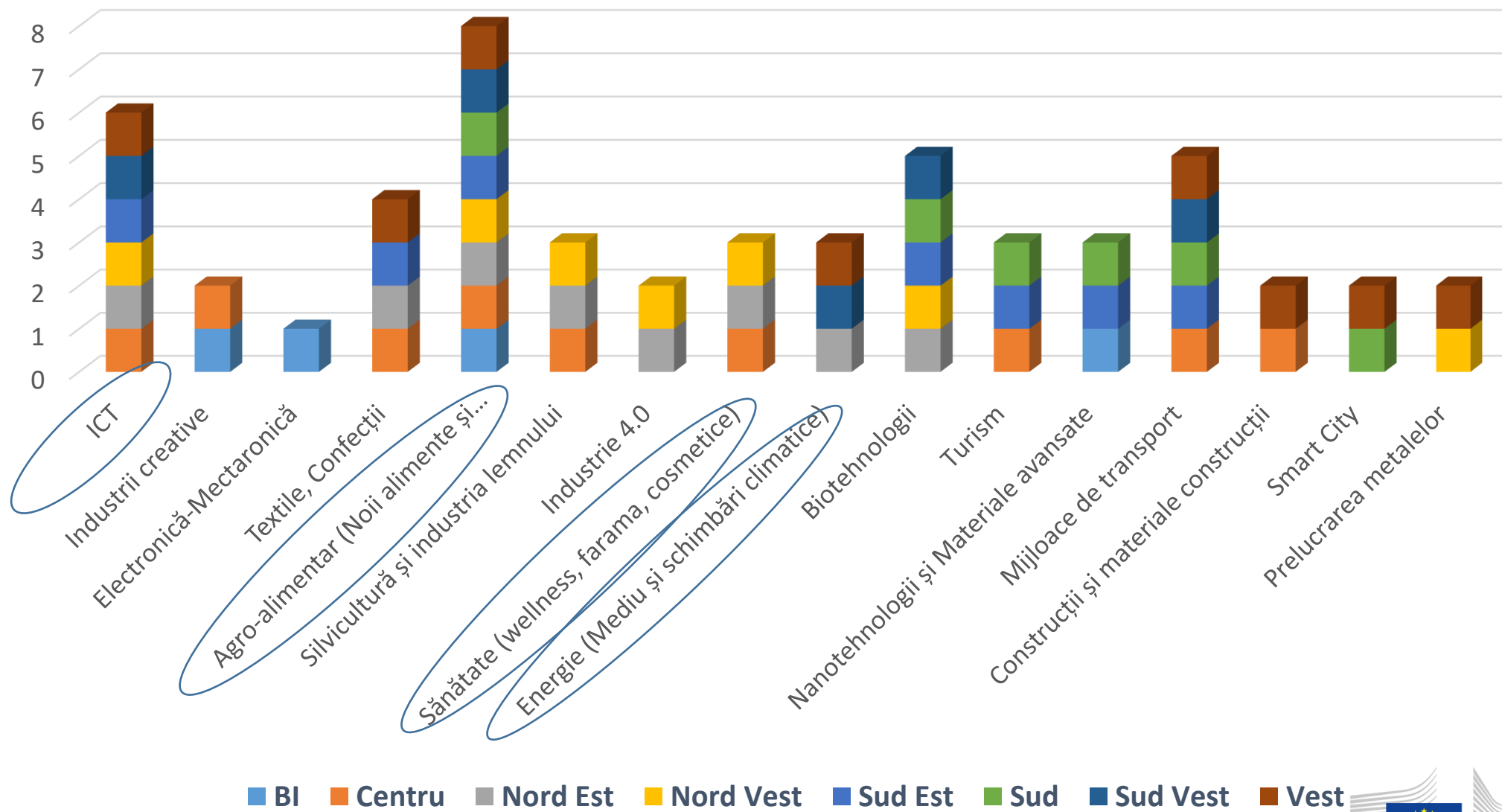
Outline

1. **The Industrial Transition review for Romania:**
 - ☐ Romania context
 - ☐ Theme selection
 - ☐ The review process
2. **Preliminary conclusions**
3. **Potential impact of the review**

Romania context

- Initial interest driven primarily by the need to fulfil Cr. 6 - "*Actions to manage industrial transition*" of PO1 "A smarter Europe" rather than by national economic and policy prioritisation
- Later interest increased by the COVID-19 crisis, 2021-2027 EU policies and funding ("twin transitions")
- Review theme proposed by the Romanian authorities
"Digitalisation (esp. integrated solutions) for: agri-food areas (smart agriculture and food traceability), urban development (smart energy efficiency) and health (high quality services)"
- Lead partner: Ministry of Economy (2019) as national coordinator of economic competitiveness policies, Romanian Agency for Digitalization emerging as key partner in 2020.
- Theme selected through consultation Ministry of Economy-RDAs based on match between:
 - RIS3 priorities identified in the eight regional RIS3 strategies
 - Regional concentration of innovation and technology transfer entities (EITT) and clusters in S3 priority areas

Distribution of RIS3 priority areas by region



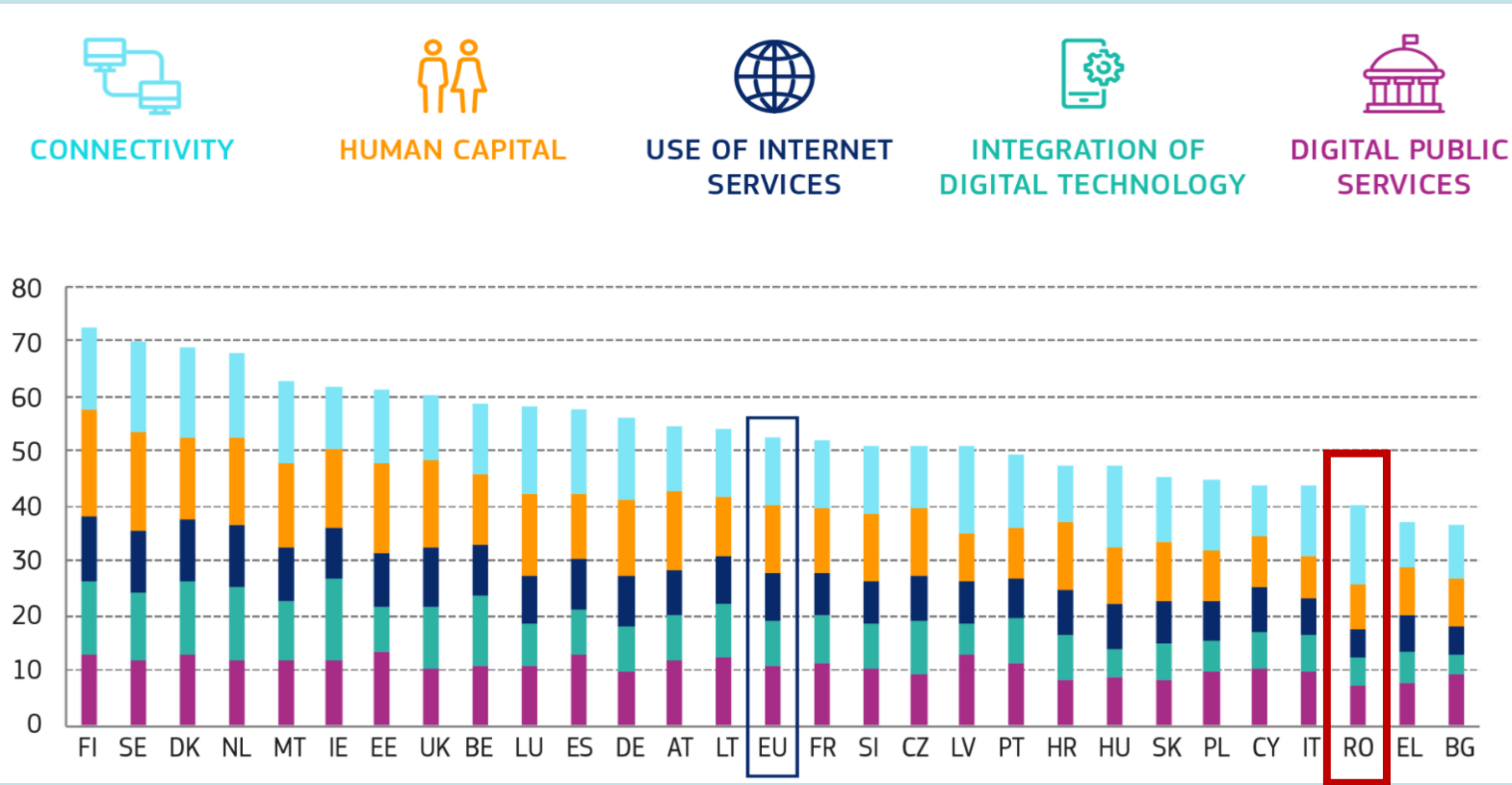
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Slow progress towards digital performance (DESI 2020)

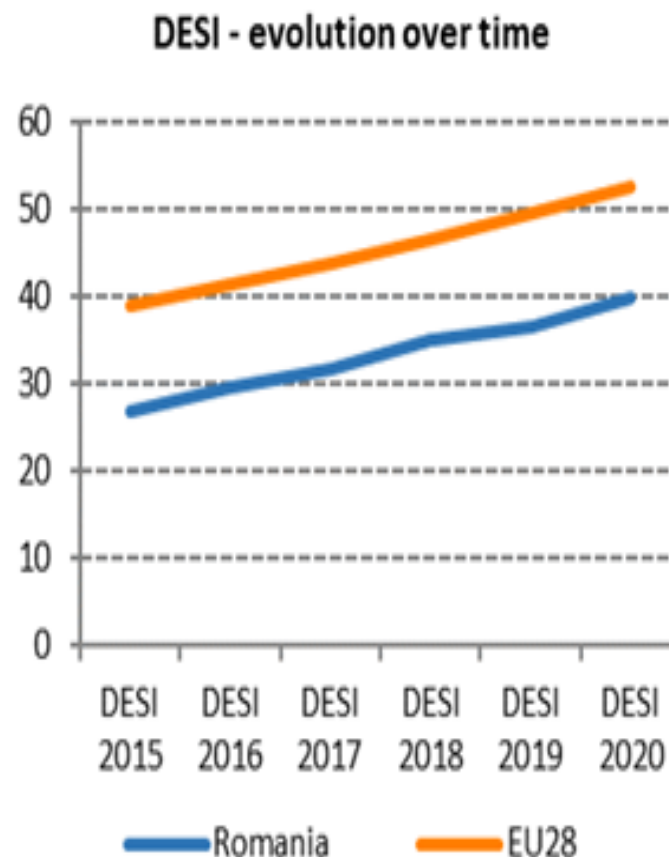
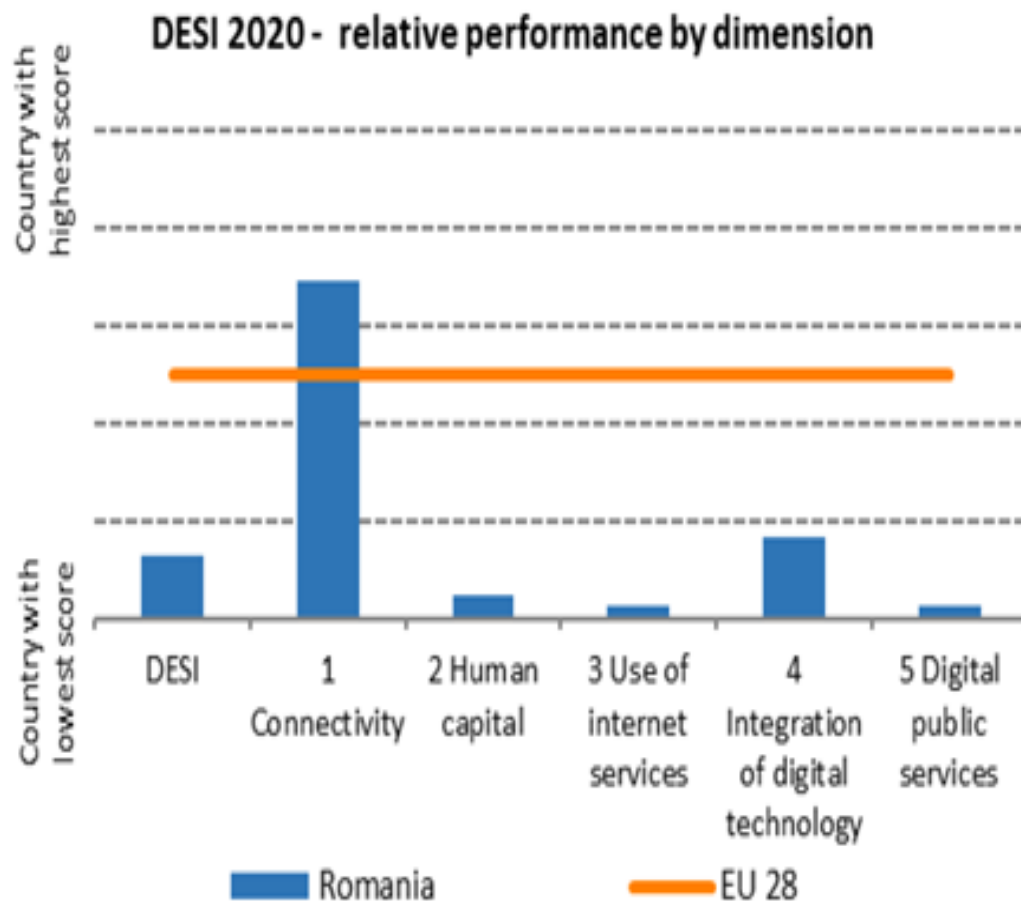
The Digital Economy and Society Index (DESI) 2020



- “Romania has made slow progress towards a digital economy and society, ranking 26th out of 28 EU MS in the 2020 DESI index.
- Based on data prior to the pandemic, Romania’s performance was the same in 4 of the 5 DESI dimensions measured.
- This is due to slow progress overall, but also due to political developments, as Romania has had four different governments over the last 3 years.”

[DESI 2020 Romania report](#)

Slow increase in DESI index 2016-2018

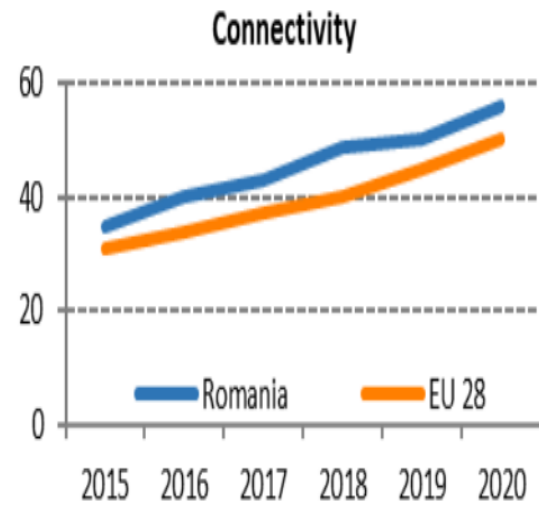


	Romania		EU
	rank	score	score
DESI 2020	26	40.0	52.6
DESI 2019	26	36.5	49.4
DESI 2018	26	35.1	46.5



The Connectivity dimension: rank 11th, above EU average (DESI 2020)

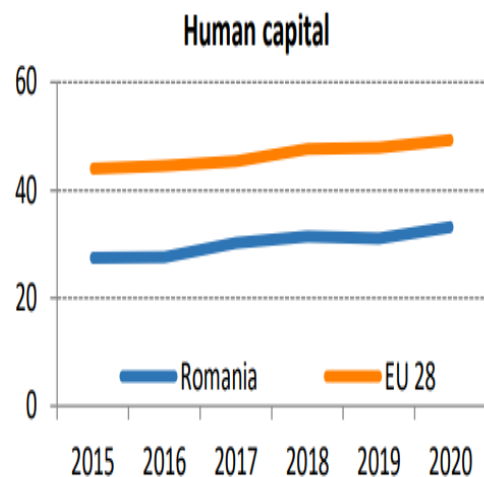
1 Connectivity	Romania		EU
	rank	score	score
DESI 2020	11	56.2	50.1
DESI 2019	8	50.0	44.7
DESI 2018	6	48.8	39.9



	DESI 2018	Romania		EU
	value	DESI 2019	DESI 2020	DESI 2020
	value	value	value	value
1a1 Overall fixed broadband take-up	67%	66%	66%	78%
% households	2017	2018	2019	2019
1a2 At least 100 Mbps fixed broadband take-up	44%	45%	49%	26%
% households	2017	2018	2019	2019
1b1 Fast broadband (NGA) coverage	74%	76%	82%	86%
% households	2017	2018	2019	2019
1b2 Fixed Very High Capacity Network (VHCN) coverage	61%	63%	68%	44%
% households	2017	2018	2019	2019
1c1 4G coverage	72%	77%	85%	96%
% households (average of operators)	2017	2018	2019	2019
1c2 Mobile broadband take-up	82	86	86	100
Subscriptions per 100 people	2017	2018	2019	2019
1c3 5G readiness	NA	0%	21%	21%
Assigned spectrum as a % of total harmonised 5G spectrum		2019	2020	2020
1d1 Broadband price index	NA	NA	92	64
Score (0 to 100)			2019	2019

The Human Capital dimension: rank 27th, but catching up (DESI 2020)

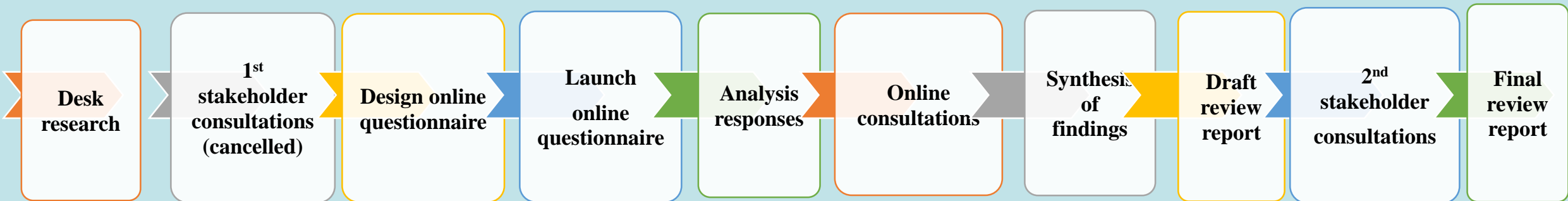
2 Human capital	Romania		EU
	Rank	Score	Score
DESI 2020	27	33.2	49.3
DESI 2019	27	31.1	47.9
DESI 2018	28	31.5	47.6



	Romania			EU
	DESI 2018	DESI 2019	DESI 2020	DESI 2020
	value	value	value	value
2a1 At least basic digital skills	29%	29%	31%	58%
% individuals	2017	2017	2019	2019
2a2 Above basic digital skills	10%	10%	10%	33%
% individuals	2017	2017	2019	2019
2a3 At least basic software skills	32%	32%	35%	61%
% individuals	2017	2017	2019	2019
2b1 ICT specialists	2.0%	2.1%	2.2%	3.9%
% total employment	2016	2017	2018	2018
2b2 Female ICT specialists	1.2%	1.3%	1.2%	1.4%
% female employment	2016	2017	2018	2018
2b3 ICT graduates	5.4%	4.9%	5.6%	3.6%
% graduates	2015	2016	2017	2017

The review process

- Initial review period: January-June 2020, later extended to December 2020
- Contracting of JRC external experts (3 experts in Jan-Mar, 1 expert in Sept, 3 experts in Oct 2020)
- Actual review (April – December 2020) - end of supporting budget on 30 Dec 2020



Design of the online questionnaire

Target themes

Digitalization + Agri-food, Health, Urban development (Smart City)

Key stakeholders in target areas

Government institutions (ministries)

Companies and clusters

Universities and Public Research Institutes

NGOs (Regional Development Agencies and professional associations)

Information type

General questions (profile, SWOT relative to digitalization, digitalization as a priority)

Specific questions by institution type:

- Financial & human resources;
- Cooperation;
- Markets and value chains;
- Technologies and skills, including digitalization

Approach

Closed-end questions

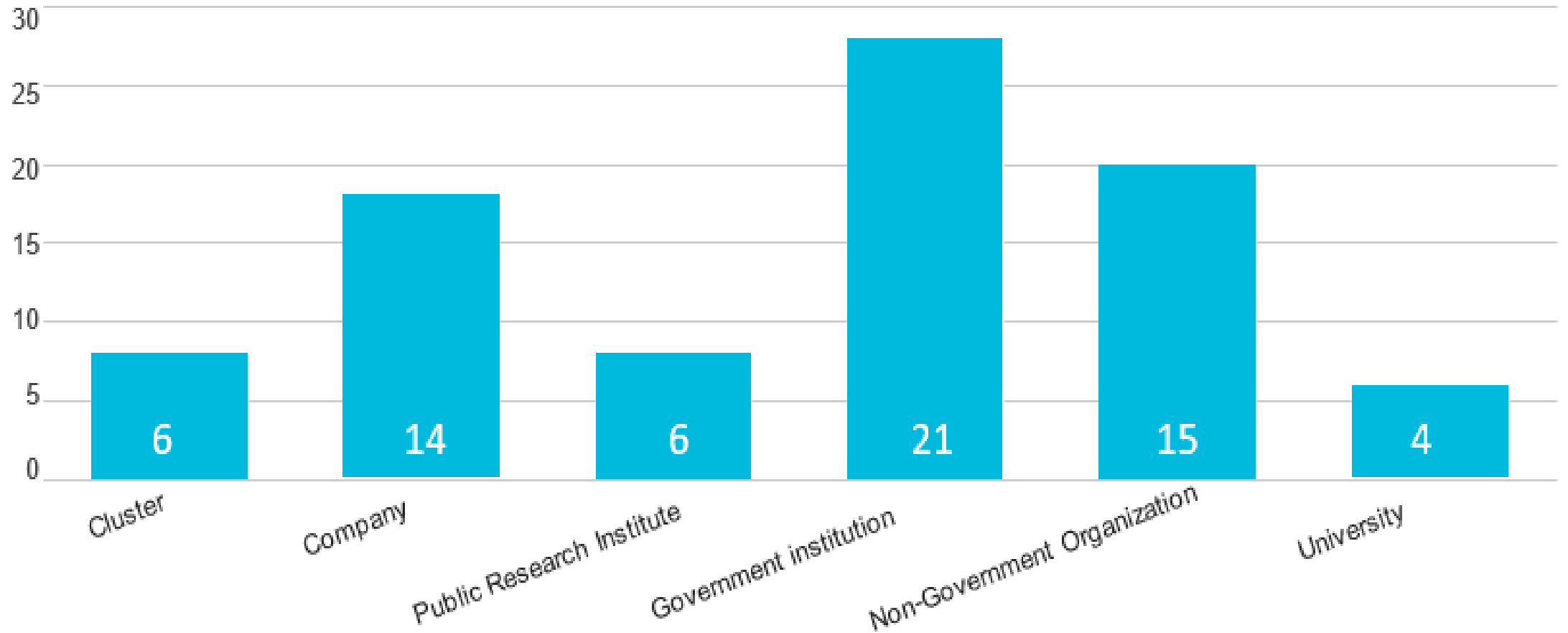
Open-end questions (to encourage bottom-up information gathering)

Response rate

Invitations sent: **155**, Answers received: **66**

Response rate: **42.5%**

Key stakeholders' response by institutional type

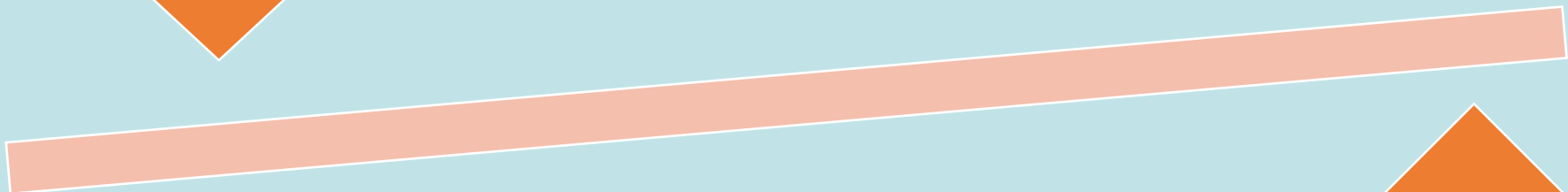


Preliminary conclusions (questionnaire, online meetings)



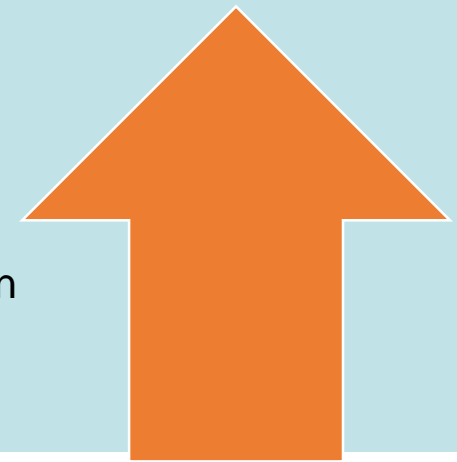
Very high need for digitalisation

driven by COVID 19 crisis, EU policies, globalisation, transition to digital economy



Large unpreparedness to meet digitalisation challenges

- * No clarity about what digitalisation means, how is it going to happen?
- * No clarity regarding national leadership, horizontal coordination in strategy implementation
- * Weak capacity for territorial diffusion: central-regional links between ministries and RDAs
- * Weak links between universities, research institutes, companies
- * Lack of/poor digitalisation skills in all institutional types
- * Few institutional assessments of the digital skills needs
- * No clarity over how the digital training needs can be met
- * Low capacity to prepare good quality projects to attract EU money



Potential impact of the review

“ We have everything we need in Romania, to completely digitalise all services. Problems are: who will get to do that, with what solutions, and how transparently?”

*“Digitalisation in Romania will be strongly decentralised in the next seven years, both due to the way of allocating EU resources and to our approach. Each institution each regional, each local authority must manage its own digitalisation process, under the umbrella of a national strategy. **Our objective is to make Romania the country with the fastest digital growth in Europe**”.*

Sabin Sarvas, President of the Romanian Agency for Digitalisation



- Create awareness, stimulate discussion and cooperation among key stakeholders related to digitalisation key challenges in Romania
- Help clarify ‘division of labour’ and coordination among national agencies and with RDAs
- Clarify the “desired state” of the transition and how to get there
- Highlight interconnections between economic sectors, employment impacts
- Increase visibility on digital training needs
- Inspire future studies on digitalisation challenges and impact in Romania

THANK YOU!

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