INDUSTRIAL TRANSITION REVIEW OF ROMANIA

Working Group Understanding and Managing Industrial Transitions: Findings of Reviews of Industrial Transition & Launch of Support Coalitions

14-15 July 2020

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Outline

- Context and purpose of the review
- Selection of the review theme
- Review process
- Preliminary findings
1. Context and purpose of the review

- Romania participates in the JRC projects "Targeted Support to RIS3 in Romania" and "Targeted Support to RIS3 in Lagging Regions" (2016-2020) - 8 regions and national level
- Romania joined the Working Group on Understanding and Managing Industrial Transitions and expressed interest for an Industrial Transition Review performed by JRC (November 2019)
- Review participation driven primarily by the need to fulfil Criterion 6 - "Actions to manage industrial transition" of PO1 - "A smarter Europe - an innovative and smart economic transformation" rather than by national economic and policy prioritisation
- Increased interest for the review determined by the COVID-19 crisis (state of emergency in Romania 16 March-14 May, state of alert 15 May-present)
2. Selection of the review theme

- Review theme proposed by the Romanian authorities "Digitalisation (especially integrated solutions) for: agri-food areas (smart agriculture and food traceability), urban development (smart energy efficiency) and health (high quality services)".

- Ministry of Economy as national coordinator of economic competitiveness policies (SIPOCA project “Increasing the administrative capacity of the Ministry of Economy in view of monitoring, evaluation and coordination of public related to economic competitiveness”)

- Theme selection through consultation between Ministry of Economy and Regional Development Agencies (RDAs) based on the match between:
  - RIS3 priorities identified in each of the eight regional RIS3 strategies
  - Regional concentration of innovation and technology transfer entities (EITT)
  - Regional concentration of clusters in the regional RIS3 priority areas
## Correlation between regional RIS3 priority areas, number of innovation and tech transfer units and clusters

<table>
<thead>
<tr>
<th>Priority Area</th>
<th>Bucharest-Ifov</th>
<th>Centre</th>
<th>North East</th>
<th>North West</th>
<th>South East</th>
<th>South</th>
<th>South West</th>
<th>West</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICT</td>
<td>4 EITT</td>
<td>3 EITT</td>
<td>3 EITT, 2 clusters</td>
<td>6 EITT, 2 clusters</td>
<td>1 EITT, 1 cluster</td>
<td>2 EITT, 1 cluster</td>
<td>2 EITT, 1 cluster</td>
<td>21 EITT, 14 clusters</td>
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<tr>
<td>Creative industries</td>
<td>1 EITT, 1 cluster</td>
<td>1 EITT</td>
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<tr>
<td>Electronics, Mechatronics</td>
<td>2 clusters</td>
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<tr>
<td>Textile, Confections</td>
<td>1 EITT, 1 cluster</td>
<td>2 EITT</td>
<td>1 EITT, 1 cluster</td>
<td>1 EITT, 1 cluster</td>
<td>1 cluster</td>
<td>2 EITT, 1 cluster</td>
<td>6 EITT, 8 clusters</td>
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<tr>
<td>Agro-food (New foods and food safety)</td>
<td>2 EITT, 2 clusters</td>
<td>1 cluster</td>
<td>1 EITT, 1 cluster</td>
<td>1 EITT, 1 cluster</td>
<td>1 cluster</td>
<td>1 cluster</td>
<td>2 EITT, 1 cluster</td>
<td>6 EITT, 8 clusters</td>
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<tr>
<td>Forestry &amp; wood industry</td>
<td>1 EITT, 2 clusters</td>
<td>1 cluster</td>
<td>2 EITT, 1 cluster</td>
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<td>Industry 4.0</td>
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<tr>
<td>Health (wellness, pharma, cosmetics)</td>
<td></td>
<td>2 clusters</td>
<td>1 cluster</td>
<td>1 EITT</td>
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<tr>
<td>Energy (Environment and climate change)</td>
<td>2 EITT</td>
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<td>2 EITT</td>
<td>3 EITT</td>
<td>1 cluster</td>
<td>7 EITT</td>
<td>1 cluster</td>
</tr>
<tr>
<td>Biotechnologies</td>
<td>3 EITT, 1 cluster</td>
<td>3 EITT</td>
<td>2 EITT, 1 cluster</td>
<td>1 cluster</td>
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<tr>
<td>Tourism</td>
<td>1 cluster</td>
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<td></td>
<td></td>
<td>1 EITT</td>
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<tr>
<td>Nanotechnologies and Advanced Materials</td>
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<tr>
<td>Transportation</td>
<td>1 cluster</td>
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<tr>
<td>Constructions, construction materials</td>
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<td>Smart City</td>
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<td>Metal processing</td>
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</tbody>
</table>
Distribution of RIS3 priority areas by region
3. Review process

- Initial review period: January-June 2020, later extended to December 2020
- Identification and contracting of three JRC external experts (January-March 2020)
- Actual review (April - December 2020)
Key desk research findings

1. Future value chains and impact of digitalisation on job profiles

- By 2022, 59% of employers expect significantly modified production and distribution by changing the composition of their value chain.

- Companies prioritize availability of skilled local talent (74%) over labour costs (64%).

- Other factors: flexibility of labour market legal framework, proximity to raw materials, ‘ecosystem’ effect of business concentration in a geographic area.

![Table showing future value chain impacts](source: Future of Jobs Survey 2018, World Economic Forum.)
2. Digitalisation introduces disruption and great opportunities in future job markets

Digitalisation and changing job profiles

| User and entity big data analytics | 85% |
| App- and web-enabled markets | 75% |
| Internet of things | 75% |
| Machine learning | 73% |
| Cloud computing | 72% |
| Digital trade | 50% |
| Augmented and virtual reality | 58% |
| Encryption | 54% |
| New materials | 52% |
| Wearable electronics | 48% |
| Distributed ledger (blockchain) | 45% |
| 3D printing | 41% |
| Autonomous transport | 40% |
| Stationary robots | 37% |
| Quantum computing | 36% |
| Non-humanoid land robots | 33% |
| Biotechnology | 28% |
| Humanoid robots | 23% |
| Aerial and underwater robots | 19% |

<table>
<thead>
<tr>
<th>Stable Roles</th>
<th>New Roles</th>
<th>Redundant Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing Directors and Chief Executives</td>
<td>Data Analysts and Scientists*</td>
<td>Data Entry Clerks</td>
</tr>
<tr>
<td>General and Operations Managers*</td>
<td>AI and Machine Learning Specialists</td>
<td>Accounting, Bookkeeping and Payroll Clerks</td>
</tr>
<tr>
<td>Software and Applications Developers and Analysts*</td>
<td>General and Operations Managers*</td>
<td>Administrative and Executive Secretaries</td>
</tr>
<tr>
<td>Data Analysts and Scientists*</td>
<td>Big Data Specialists</td>
<td>Assembly and Factory Workers</td>
</tr>
<tr>
<td>Sales and Marketing Professionals*</td>
<td>Digital Transformation Specialists</td>
<td>Client Information and Customer Service Workers*</td>
</tr>
<tr>
<td>Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products</td>
<td>Sales and Marketing Professionals*</td>
<td>Business Services and Administration Managers</td>
</tr>
<tr>
<td>Human Resources Specialists</td>
<td>New Technology Specialists</td>
<td>Accountants and Auditors</td>
</tr>
<tr>
<td>Financial and Investment Advisers</td>
<td>Organizational Development Specialists*</td>
<td>Material Recording and Stock-Keeping Clerks</td>
</tr>
<tr>
<td>Database and Network Professionals</td>
<td>Software and Applications Developers and Analysts*</td>
<td>General and Operations Managers*</td>
</tr>
<tr>
<td>Supply Chain and Logistics Specialists</td>
<td>Information Technology Services</td>
<td>Postal Service Clerks</td>
</tr>
<tr>
<td>Risk Management Specialists</td>
<td>Process Automation Specialists</td>
<td>Financial Analysts</td>
</tr>
<tr>
<td>Information Security Analysts*</td>
<td>Innovation Professionals</td>
<td>Cashiers and Ticket Clerks</td>
</tr>
<tr>
<td>Management and Organization Analysts</td>
<td>Information Security Analysts*</td>
<td>Mechanics and Machinery Repairers</td>
</tr>
<tr>
<td>Electrotechnology Engineers</td>
<td>Ecommerce and Social Media Specialists</td>
<td>Telemarketers</td>
</tr>
<tr>
<td>Organizational Development Specialists*</td>
<td>User Experience and Human-Machine Interaction Designers</td>
<td>Electronic and Telecommunications Installers and Repairers</td>
</tr>
<tr>
<td>Chemical Processing Plant Operators</td>
<td>Training and Development Specialists</td>
<td>Bank Tellers and Related Clerks</td>
</tr>
<tr>
<td>University and Higher Education Teachers</td>
<td>Robotics Specialists and Engineers</td>
<td>Car, Van and Motorcycle Drivers</td>
</tr>
<tr>
<td>Compliance Officers</td>
<td>People and Culture Specialists</td>
<td>Sales and Purchasing Agents and Brokers</td>
</tr>
<tr>
<td>Energy and Petroleum Engineers</td>
<td>Client Information and Customer Service Workers*</td>
<td>Door-To-Door Sales Workers, News and Street Vendors, and Related Workers</td>
</tr>
<tr>
<td>Robotics Specialists and Engineers</td>
<td>Service and Solutions Designers</td>
<td>Statistical, Finance and Insurance Clerks</td>
</tr>
<tr>
<td>Petroleum and Natural Gas Refining Plant Operators</td>
<td>Digital Marketing and Strategy Specialists</td>
<td>Lawyers</td>
</tr>
</tbody>
</table>

3. Romania scores very high on Connectivity and Very High Capacity Networks - Digital Economy and Society Index (DESI): ROMANIA -
3. Digital skills adoption in Romania is lagging: Challenge and Opportunity!

- Digital Economy and Society Index (DESI): ROMANIA -

<table>
<thead>
<tr>
<th></th>
<th>Human capital</th>
<th>Romania</th>
<th>EU</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rank</td>
<td>Score</td>
<td>Score</td>
</tr>
<tr>
<td>DESI 2020</td>
<td>27</td>
<td>33.2</td>
<td>49.3</td>
</tr>
<tr>
<td>DESI 2019</td>
<td>27</td>
<td>31.1</td>
<td>47.9</td>
</tr>
<tr>
<td>DESI 2018</td>
<td>28</td>
<td>31.5</td>
<td>47.6</td>
</tr>
</tbody>
</table>

**Table 1: Human Capital Development in Romania and EU (2015-2020)**

- **2a1 At least basic digital skills**
  - % individuals:
    - EU: 58% (2019)

- **2a2 Above basic digital skills**
  - % individuals:
    - DESI 2018: 10% (2017), 10% (2019)
    - EU: 33% (2019)

- **2a3 At least basic software skills**
  - % individuals:
    - EU: 61% (2019)

- **2b1 ICT specialists**
  - % total employment:
    - DESI 2018: 2.0% (2016), 2.2% (2019)
    - EU: 3.9% (2019)

- **2b2 Female ICT specialists**
  - % female employment:
    - DESI 2018: 1.2% (2016), 1.2% (2018)
    - EU: 1.4% (2018)

- **2b3 ICT graduates**
  - % graduates:
    - DESI 2018: 5.4% (2015), 5.6% (2017)
    - EU: 3.6% (2017)
System definition, boundaries, and prospects

Observations based on analysis of Gross Value Added (GVA), enterprises, and employment figures in economic activities related to the priority themes:

Agri-food
- Some growth in 2010-2014, more in 2014-2018
- Gradual slight decline in GVA contribution
- Wages and salaries declined in 2010-2014, but rebounded sharply in 2014-2018
- Signs that manufacturing in some agri-food production activities offers much higher added value outputs compared to primary production

Urban development
- Early boost from infrastructure projects and remarkable increase in ICT
- Growth associated with accommodation and food service activities

Healthcare
- Sector-associated activities produced some of the highest added value outcomes in recent years
System definition, boundaries and prospects

Innovation opportunities driven by digital technologies in the priority sectors: agri-food, health, urban development (international sources)

<table>
<thead>
<tr>
<th>Business Subprocess</th>
<th>Technology</th>
<th>Description</th>
<th>Benefit / Value area</th>
<th>Limitations - Pre-requisites - Risks</th>
<th>Synergies</th>
</tr>
</thead>
</table>
| Public health monitoring | Big Data AI Machine Learning | Data analytics by analysing large amount of unstructured, heterogeneous, non-standard and incomplete healthcare data  
Data obtained by tracking patient’s status with IoT devices or introduced in the system by medical personnel | Enables disease surveillance  
Enables early-stage illness detection, Easier to deal with, more effectively and successfully  
Efficient  
Affordable | Electronic medical records or IoT generated data  
Computing power.  
Multi-centre clinical data networks | Clinicians  
Integrators  
Regulatory bodies  
Clinical care institutions  
Software-producers  
Cyber security and data privacy experts  
Cloud computing providers  
Government public health control institutions  
Health-related insurance companies |
Design of online questionnaire

**Target themes**
- Agri-food
- Urban development
- Health

**Key stakeholders from target areas by institutional profile**
- Government institutions (ministries)
- Companies
- Universities
- Public Research Institutes
- Clusters
- NGOs (Regional Development Agencies and professional associations)

**Information type**
- General questions for all institutions (profile, SWOT relative to digitalization, digitalization as 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

- Cluster: 6
- Company: 14
- Public Research Institute: 6
- Government Institution: 21
- Non-Government Organization: 15
- University: 4
Government institutions (ministries)

- **Position/role:** Manager (8%), Counsellor (92%)
- **General aspects:** Professional experience (average 24 yrs); large institutions (250-700 employees)
- Digitalisation is important for the institution after the COVID 19 experience: Strongly agree (78%); Somewhat agree (22%)
- Digitalisation is a priority for industrial transition due to: COVID-19 crisis (29%), increasing need for digital skills (29%), transition to digital and data economy (21%), new ICT (21%), education system not ready for online education services (21%), globalisation, telework
- Experience of more advanced countries considered in developing strategies, policies and funding instruments (100%)
- Existing strategies, policies and funding instruments do not meet the current needs related to digitalization (92%)
- Assessment of employees' digital skills and training needs: Yes (50%), No (50%)

<table>
<thead>
<tr>
<th>STRENGTHS</th>
<th>WEAKNESSES</th>
</tr>
</thead>
</table>
| • High internet speed  
  • Staff experience  
  • Intra- and inter-ministerial communication | • Lack of digital skills (58%)  
  • High bureaucracy,  
  • Very frequent legislative changes  
  • Migration of IT specialists from public to private sector  
  • Lack of coordination between public institutions on digital public services |

<table>
<thead>
<tr>
<th>OPPORTUNITIES</th>
<th>THREATS</th>
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</table>
| • Higher efficiency of activities  
  • Better intra- and inter-institutional communication  
  • High digitization potential  
  • Document management applications  
  • Online submission of documents  
  • Lower activity costs,  
  • Shorter communication times | • Unemployment  
  • Increasing the complexity of work |
Companies

- **Position/role:** Owner (92%), Manager (8%)
- **Sector:** Services (56%), ICT (33%)
- **General aspects:** Professional experience (average 24 yrs); Small (88% less than 5 employees); Time since inception (average 8 yrs)
- Digitalisation is important for the institution after COVID 19 experience: Strongly agree (66.7%); Somewhat agree (22.2%), Neutral (11.1%)
- Digitalisation is a priority for industrial transition due to: COVID-19 crisis (50%), teleworking (30%), globalization (20%)
- Wide spread of competences in digitalisation-related fields
- Moderate innovation performance
  - New or improved products 22.7%;
  - New or improved services 31.8%;
  - New or improved management strategies 22.7%;
  - New or improved marketing strategies 22.7%
- Value chain position:
  - Primary activities: marketing (50%); service (33.3%), inbound logistics (8.3%), outbound logistics (8.3%)
  - Support activities: Procurement (20%), Infrastructure (40%), Human resources management (30%), Technological development (10%)

<table>
<thead>
<tr>
<th>STRENGTHS</th>
<th>WEAKNESSES</th>
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<tbody>
<tr>
<td>• Employee professionalism</td>
<td>• Lack of qualified staff on the labour market</td>
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<tr>
<td>• Keeping expenses under control</td>
<td>• Lack of cash flow</td>
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<td></td>
<td>• Lack of high-performance equipment and technology</td>
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<table>
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<tr>
<th>OPPORTUNITIES</th>
<th>THREATS</th>
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<tbody>
<tr>
<td>• New projects/contracts for ICT firms</td>
<td>• COVID-19 crisis (75%)</td>
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<tr>
<td>• Increased visibility through digitization</td>
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<tr>
<td>• Better online presence</td>
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</table>
**Universities**

- **Position/role:** University professor (100%)
- **General aspects:** Professional experience (average 34 yrs); Number of employees (more than 200 employees)
- Digitalisation is important for the institution after COVID 19 experience: Strongly agree (100%)
- Digitalisation is a priority for industrial transition due to: COVID-19 crisis, globalization, need for digital skills, spread of new ICT

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<thead>
<tr>
<th>STRENGTHS</th>
<th>WEAKNESSES</th>
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</table>
| - Large computers network  
- e-learning platform  
- Many computer scientists | - Lack of digitization in administration  
- Inconsistencies in data collection systems  
- No integration of student records  
- Teachers’ inability to implement and use available resources  
- Teachers’ lack of time and training opportunities  
- Teachers’ inability to use digital textbooks because of lack of knowledge of available technologies and their use for supporting curriculum delivery |

<table>
<thead>
<tr>
<th>OPPORTUNITIES</th>
<th>THREATS</th>
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</table>
| - Creation of teachers’ own materials and instant distribution to colleagues and students  
- New student assessment methods on digital platforms  
- Building teachers’ own content by adapting digital textbooks  
- Reuse and customization of textbooks  
- Speed of data collection  
- Online completion of academic records  
- Building comprehensive databases that allows statistical analysis and other appropriate measures | - Collection and processing of personal data  
- Teachers’ digital skills below those of “digital native” students  
- Lack of online teaching materials  
- Lack of necessary digital skills in some students  
- Students do not have access to digital tools  
- No implementation of digital textbooks in schools  
- Lack of adequate equipment in some seminar rooms  
- Resistance to change in the system |
Universities

What educational activities related to the digital technologies selected above are currently provided by your university?

- Examination, book fund study, database query (33.3%)
- Courses (50%)
- Practical lab works (16.7%)

What type of research activities are currently performed in your university related to the digital technologies selected above?

- Doctoral research (33.3%)
- Contract research for companies (22.2%)
- Research projects with European and other international funding (22.2%)
- Research projects with national funding (22.2%)

Do you collaborate with public research institutes in the thematic domains of the study?

No 100%
Public RDI Institutes

- **Position/role:** Scientist (50%), Manager (8%)
- **Sector:** Law, Agriculture, Informatics, Engineering
- **General aspects:** Professional experience (average 24 yrs); Medium size (80-350 employees);
- **Digitalisation is important for the institution after COVID 19 experience:** Strongly agree (75%); Somewhat agree (25%)
- **Digitalisation is a priority for industrial transition due to:** COVID-19 crisis, increasing use of computer systems, citizens’ high expectations for online information, need for market niches adequate to the institute’s current expertise and infrastructure, need for market niches that meet the needs of domestic companies

<table>
<thead>
<tr>
<th>STRENGTHS</th>
<th>WEAKNESSES</th>
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<tbody>
<tr>
<td>• Digital skills (75%)</td>
<td>• Few enterprises introducing innovation</td>
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<table>
<thead>
<tr>
<th>OPPORTUNITIES</th>
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</tr>
</thead>
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<tr>
<td>• Digitization</td>
<td>• Lack of competitiveness if digitization is not accelerated</td>
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<td>• Value-added technologies</td>
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<tr>
<td>• Activity Streamlining</td>
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<tr>
<td>• Access to information resources</td>
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RDI Institutes

Research and entrepreneurial activities of the institute:
In which of the digital technologies listed below does your institute conduct research activities?

- Big data management: 14.3%
- Data Analytics: 7.1%
- System integration: 14.3%
- Internet of Things: 7.1%
- Cloud-based platforms: 14.3%
- Additive manufacturing/3D printing: 7.1%
- Networking and telecommunications: 14.3%
- Security/Cyber-Security: 7.1%
- Simulation: 14.3%
- Machine Learning/Cognitive computing/ Artificial Intelligence: 7.1%
- Smart Materials: 14.3%

Do you collaborate with universities in the area of digital technologies?
75% Yes
25% No

Professional training needs:
What needs for professional training and competence development related to digital technologies are there in your institute?

- Public procurement for innovation: 23.1%
- Development of digital skills in the workplace: 15.4%
- Training on technology futures analysis: 15.4%
- Digital skills training: 15.4%
- Participatory methods in innovation governance (citizen panels, stakeholder consultation, EDP in S3, etc.): 7.7%
- Training on innovation and technology management - Intellectual property rights: 7.7%
RDI Institutes

How do you ensure an effective link between your research activities and the needs of the labour market/private sector?

- Example 'yes' answer: there is a Centre for Technology Transfer in Advanced Materials
- 'No' answer in other responses

What kind of technology transfer and research commercialisation activities are performed in your institute related to digital technologies?

- Other: 12.5%
- Patents: 12.5%
- Consulting for companies: 25%
- Spin-offs: 37.5%
- Innovation support services: 37.5%

What could be done to stimulate the entrepreneurial activities of the institute?

- Hiring additional staff with qualifications in innovation and technology transfer: 37.5%
- Better institutional recognition of the importance of entrepreneurial activities within the institute: 37.5%
- Improving staff training in innovation and technology transfer: 25%
Position/role: Manager (75%), Counsellor (25%)
Sectors: ICT (50%), Health (25%), Agriculture (25%)
General aspects: Professional experience (average 19 yrs); small (less than 15 in 75%)
Digitalisation is important for the institution after the COVID 19 experience: Strongly agree (100%)
Digitalisation is a priority for industrial transition due to: COVID-19 crisis, increasing need for digital skills, transition to digital and data economy, new ICT, telework, new ICTs, competitive production costs
Relatively balanced spread of competences in digitalisation-related areas
Assessment of employees’ digital skills and training needs: Yes (50%), No (50%)

<table>
<thead>
<tr>
<th>STRENGTHS</th>
<th>WEAKNESSES</th>
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</thead>
</table>
| • Employee professionalism  
• Openness to digitization | • Lack of digital skills  
• Poor funding  
• No use of or capacity to develop high-tech methods |

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<tr>
<th>OPPORTUNITIES</th>
<th>THREATS</th>
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| • Tele-medicine  
• Higher production  
• Increased innovation capacity  
• Possibility to provide a package of services to non-digitized industries to support the digital transformation of SMEs | • Unemployment  
• Resistance to change in the system |
Non-governmental organisations (RDAs, professional associations)

- **Position/role:** Manager (70%), Counsellor (30%)
- **Sectors:** RDA (50%), Services (50%)

**General aspects:**
- Professional experience (average 19 yrs); >100 employees (RDA), less than 10 (the rest)
- Digitalisation is important for the institution after the COVID-19 experience: Strongly agree (90%), Somewhat agree (10%)
- Digitalisation is a priority for industrial transition due to: need to ensure competitive production costs, COVID-19 crisis, globalisation, shortening value chains, increasing labour cost in Romania, de-bureaucratisation of administration
- Relatively balanced spread of competences in digitalisation-related areas
- Assessment of employees’ digital skills and training needs: Yes (40%), No (60%)
- Measures taken further to this assessment: Training courses (40%); Investments in digital infrastructure (30%); Workshops (30%).

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<th>STRENGTHS</th>
<th>WEAKNESSES</th>
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| • Social media presence and visibility  
• Digital infrastructure  
• Large number of employees using the computer | • Weak government support  
• Low visibility of the entrepreneurial environment  
• Insufficient institutional capacity to realise available opportunities  
• Insufficient awareness of innovation in Romanian business environment |

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| • Expanding national and international cooperation  
• Supporting Industry 4.0 processes  
• Training courses for the development of digital skills | • Cyber security and data protection (50%)  
• Limited budget (20%)  
• Resistance to change in the system |
Conclusions

- Very high need for digitalization overall
- Main reasons for digitalization: COVID 19 crisis, globalisation, increasing need for digital skills, transition to digital and data economy
- Digitalization needs differ by institutional type
- Lack of/poor digitalisation skills in all institutional types
- Relative strength in very high capacity networks
- General need for training, especially training for public procurement for innovation
- General need for more financing, more personnel or better trained staff
INDUSTRIAL TRANSITION REVIEW OF ROMANIA

Working Group Understanding and Managing Industrial Transitions: Findings of Reviews of Industrial Transition & Launch of Support Coalitions

14-15 July 2020

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