



EU4Digital

EU4Digital: supporting digital economy
and society in the Eastern Partnership

Digitising industry (digital transformation of SMEs in traditional sectors): action plan for policy recommendations: Belarus

June 2020



Background

The EU4Digital Facility was launched by the European Commission in January 2019. It aims to extend the benefits of the European Union's Digital Single Market to the Eastern partner countries: Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine. The EU4Digital Facility works in six digital thematic areas, including ICT innovation stream.

In 2019-early 2020, the ICT Innovation stream is focusing on the identification and sharing of best policies and practices of policy implementation at the national and regional level in ICT innovation field. Each Eastern partner country selected one policy area for the EU4Digital Facility to focus on.

Five policy areas have been selected by partner countries:

1. Intellectual property rights management for digital innovations (Armenia);
2. New organisational forms in support of ICT Innovation (Azerbaijan);
3. Digital innovation SMEs' access to finance (Georgia, Ukraine);
4. ICT innovation ecosystems for start-ups and scale-ups (Moldova);
5. **Digitising industry (digital transformation of SMEs in traditional sectors) (Belarus).**

List of abbreviations used in the document:

AIMA – Advanced Instrument Manufactures Association

EPAM – EPAM Systems

AoDRT – Association of Distributed Registry Technologies

FACT – Festo Authorised and Certified Training Center in Industry 4.0 technologies and mechatronics

APA – Academy of Public Administration under the President of the Republic of Belarus

IBA – IBA Group

ICSAPA – Institute of Civil Service of Academy of Public Administration under the President of the Republic of Belarus

Iskra – the programme of the China-Belarus industrial park 'Great Stone'

BCoCI – Belarusian Chamber of Commerce and Industry

For each of these areas, the Facility studied the best EU practices, undertook the gap analysis in each country and developed recommendations that identify specific EU tools, platforms, practices that can be mastered by the Eastern partner country stakeholders. The gap analysis and recommendations were validated with the EU4Digital ICT innovation Expert Network of Belarus in May 2020.

This document provides the action plan for addressing the gaps related to policy area '**Digitising industry (digital transformation of SMEs in traditional sectors)**' in Belarus with focus on manufacturing industries. It defines five key recommendations with action steps and considerations for implementation or intervention.

The proposed action plan can be used as a basis for further activities and possible independent joint projects of stakeholders. Some of activities proposed in this action plan can be covered within the current mandate of the EU4Digital Facility (trainings, study visits, networking events, promotion activities, etc.).

This document was provided for national stakeholder consultation. The EU4Digital Facility asked the stakeholders to read and share their position, comments and suggestions during the consultation.

MoCI – The Ministry of Communications and Informatisation of the Republic of Belarus

BelAPP – Republican Association of Industrial Enterprises

MoE – The Ministry of Economy of the Republic of Belarus

BELISA – Belarusian Institute of System Analysis and Information Support for Scientific and Technical Sphere

MoEd – The Ministry of Education of the Republic of Belarus

BFFSE – Belarusian Fund for Financial Support to Entrepreneurs

MoI – The Ministry of Industry of the Republic of Belarus

BHTP – Belarus High-Tech Park

OPU – Other public universities

BIF – Belarusian Innovation Fund

PTC – Private training centres



BNTU – Belarusian National Technical University
RAIA – Robotics & AI Association
Bridgio – Bridgio Tech Accelerator
RIPO – Republican Institute for Vocational Education
BSEU – Belarusian State Economic University
SCST – State Committee on Science and Technology of the Republic of Belarus
BSU – Belarusian State University
TCSI – Technology Center ‘Smart Industry’
BSUIR – Belarusian State University of Informatics and Radioelectronics
UIIP – United Institute of Informatics Problems
CCDToCIB – Competence Center for Digital Transformation of the Construction Industry in Belarus

AIP – Association INFOPARK
CBICoCSTA – China-Belarus Innovation Center of Commercialization of Science & Technology Achievements
IDC – Scientific & Engineering Republican Unitary Enterprise ‘Interbranches Research & Development Centre for Identification Systems and e-Business Operations’ – IR&D ‘ID Centre’.
CoDB – Confederation of Digital Business
MTT – ‘Modern trading technology’ LLC
DBoRB – Development Bank of the Republic of Belarus
SC – SoftClub
EMAECsRE – Educational-methodical association for education in the field of computer science and radio electronics
GSU – Grodno State University n.a. Y. Kupala



This policy area addresses the needs of existing small and medium-sized enterprises in traditional industries ('traditional SMEs') (with focus on manufacturing industries in Belarus) on their path of mastering digital technologies and digital innovations to increase the efficiency of their operations and make their business model more competitive.

Digital transformation is understood as “a fusion of advanced technologies and the integration of physical and digital systems, the predominance of innovative business models and new processes, and the creation of smart products and services” [EC].

Objective of the **policy on digitising industry** is to ensure that businesses of all sectors and locations can draw the full benefits from digital innovation.

The **small and medium-sized enterprises** are a specific target group of this policy, because they usually lack the financial and human resources to be dedicated to a comprehensive approach to digital transformation; at the same time, SMEs are more dynamic in adoption of innovations, and act as multipliers of innovation effects across the economy.

Strategic and systemic approach is needed to build the toolbox of industrial and innovation policy targeting digital innovations in a pragmatic way – not only endorsing the digital opportunities, but also seeing the country-specific restrictions, priorities, peculiarities of implementation mechanism.

The need to provide specific technological infrastructure, develop digital skills of many stakeholder groups and take into account the specifics of particular industries as well as the rarity of deep technological knowledge explains the need for a **special organisational setting and toolkit** of a policy on digitising industry, including collaborative mechanisms among multiple regulators but also among public and private sector.

Digital platforms uniting stakeholders facilitate the coordination among diverse stakeholder on the country and international level and serve as a one stop shop or gateway for SMEs to find necessary clarifications of the legal framework, expertise, and support.

For a traditional enterprise, it might be difficult to understand, which technologies, information systems and solutions are relevant to their challenges, how to formulate the request for digital solutions (technical specification), how to modify the model of operation of the enterprise using the opportunities of digital technologies, and how to select the reliable suppliers. '**SMEs 4.0 competence centres**' are a most relevant tool helping SMEs, as they accumulate specific expertise required for implementation of the digital transformation, linking the deep tech knowledge, the knowledge of specifics of production and business processes in different industries, and the knowledge of innovation management and business transformation.

A marketplace of technological solutions for Industry 4.0 linked to international marketplaces does not only allow SMEs to better familiarise themselves with the “available menu” of digital transformation shelf solutions, but also allows the solutions' providers to easily identify the demand and the market niches as well as fosters the competition among them.

The funding to support SMEs in the complex endeavour of digital transformation should account for specifics of the related expenditures. Digital transformation differs from automatization and informatization due to the systemic nature of changes required, including the change of business process, business model, and economic relations within and around the enterprise; it requires intensive knowledge transfer and trainings. If a solid digital transformation requires the revision of a business model, funding of such modernisation becomes too risky for traditional banking loans, and hence new instruments, like loan guarantees, apply. The funding of cross-industry national and international-level initiatives, like adoption of common standards and digital skills for digitising industry, is to be foreseen as well.



Overview of the Action Plan

Key recommendations	Reference to Policy recommendations
<p>1. Develop a strategy for digital transformation of SMEs in manufacturing industries as well as its implementation plan and governance model to ensure successful transformation</p> <p>Final goal: <i>strategy, action plan and governance and implementation model are elaborated to amplify the digital transformation processes of SMEs. Goals, priorities, tools of SMEs support are identified; budgets for implementation are assigned; roles and coordination mechanisms of public and private sector organisations are clearly defined.</i></p>	<p>R.1.1. - R.1.4.; R.2.1. - R.2.6.; R.3.5.; R.3.7.; R.8.2.</p>
<p>2. Establish an organisational and technological platform to facilitate the digitising SMEs activities (initiatives) in the country</p> <p>Final goal: <i>one stop shop for private and government stakeholders of digitising industry and expert communities is established, which provides collaboration opportunity and serves as a marketplace to provide and receive access to the shelf solutions for digitising SMEs. The platform provides different tools to support the decision making of digitising SMEs, links to competence centres, other EU tools and platforms.</i></p>	<p>R.3.1. - R.3.7.; R.7.1. - R.7.4.; R.8.1. - R.8.3.</p>
<p>3. Determine more accessible and inclusive funding opportunities for successful digital transformation of traditional SMEs</p> <p>Final goal: <i>both public and private financial opportunities for digital transformation of SMEs in non-IT sectors of economy are identified and published on a one stop shop resource to help the traditional enterprises to perform digital transformation. Financial support mechanisms to address the gaps in funding digitalisation of traditional SMEs are established.</i></p>	<p>R.4.1. - R.4.4.; R.4.6. - R.4.9.</p>
<p>4. Transform the existing competence centres into SMEs 4.0 centres to support digitisation of traditional SMEs</p> <p>Final goal: <i>SMEs get quicker specialised support services from competence centres on digital transformation; capacity of existing competence centres to support SMEs in digital transformation is strengthened; they are networked and promoted among SMEs.</i></p>	<p>R.5.1. - R.5.6.; R.6.1.</p>
<p>5. Strengthen the competences of policy makers and SMEs to implement digital transformation</p> <p>Final goal: <i>policy makers and SMEs get actual practical competencies required for implementation of digital transformation activities. Practical skills are developed, and international qualification frameworks introduced to increase the suitability of graduates on the international market.</i></p>	<p>R.2.5.; R.6.1. - R.6.5.</p>



Detailed Action Plan

Recommendation / Action	Possible activity owners / Leads	Other participants (optional)	Indicative timeline		Status	Specification	Link to Policy REC	Comments and suggestions
			2020-2021	2022-2025				
1. Develop a strategy for digital transformation of SMEs in manufacturing industries as well as its implementation plan and governance model to ensure successful transformation Final goal: <i>strategy, action plan and governance and implementation model are elaborated to amplify the digital transformation processes of SMEs. Goals, priorities, tools of SMEs support are identified; budgets for implementation are assigned; roles and coordination mechanisms of public and private sector organisations are clearly defined.</i>								
1.1. Develop a Strategy of digitising SMEs in manufacturing industries in Belarus	MoE	MoCI; Mol; SCST; BELISA; UIIP; IDC	X		Not started	<i>Notes:</i> <ul style="list-style-type: none"> to be linked with the Concept of digital transformation of industrial cooperation in EAEU and digital transformation of industry in the members of the Union; a prerequisite to consider – the development of overarching <i>Digital transformation strategy</i> of the country. 	R.1.1.	
1.2. Develop an action plan of the strategy implementation	MoE	MoCI; Mol; SCST; BELISA; UIIP; IDC	X		Not started	<i>Suggested guiding principles:</i> <ul style="list-style-type: none"> priorities include infrastructure; technologies; development of skills; support both technologies development (R&D) and deployment; deep consultations with stakeholders from industry and research to define policy priorities in line with actual needs; bottom-up approach to initiatives' design and implementation; working groups on specific technologies or cross-cutting issues; foresee the diverse funding options for industry digitisation initiatives; include a methodology of measuring the economic effects of the funding programme. 	R.1.2.; R.8.2.	
1.3. Determine the governance and implementation model (organisational and coordination mechanism) for	MoE	MoCI; Mol; MoEd; SCST; UIIP; IDC	X		In progress	<i>Possible Steps:</i> <ol style="list-style-type: none"> determine the leading organisations, their contribution, a coordinating body and coordination mechanism, a monitoring institution, algorithm of interaction among state bodies and other stakeholders; 	R.1.4.; R.2.1.- R.2.6; R.3.5; R.3.7.	



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			2020-2021	2022-2025				
implementation of the Strategy of digitising SMEs						2. ensure <i>prerequisites</i> for the implementation: sufficient financial and human resources; collaboration among relevant public and private sector organisations, etc.		
1.4. Consider developing a wider range of targeted sectorial digital transformation strategies of specific industries	MoE; MoCI; Mol; SCST; BELISA; UIIP; IDC	AIMA		X	Not started	Notes: <ul style="list-style-type: none"> can be considered as a long run objective; define the priority sectors (e.g. machine- and device building; pharmaceutical; oil processing, etc). 	R.1.3.; R.3.5.; R.3.7.	
<p>2. Establish an organisational and technological platform to facilitate the digitising SMEs activities in the country</p> <p>Final goal: <i>one stop shop for private and government stakeholders of digitising industry and expert communities is established, which provides collaboration opportunity and serves as a marketplace to provide and receive access to the shelf solutions for digitising SMEs. The platform provides different tools to support the decision making of digitising SMEs, links to competence centres, other EU tools and platforms.</i></p>								
2.1. Develop a conceptual model of organisational and technological platform “Smart industry of Belarus” incl. technical, organisational and legal set-up	MoE; MoCI; Mol	RAIA; BelAPP; BCoCI; UIIP; CoDB; AoDRT; ICD and other	X		In progress	<p><i>Possible (next) steps:</i></p> <ol style="list-style-type: none"> determine the scope of the digital platform with account of the EU best practice in setting platforms for Industry 4.0 (see European Platform of National Initiatives on Digitising Industry); determine the funding sources, operator and the functions of operator; prepare technical and organisational specification of the digital platform, with account of legal framework. <p><i>Notes:</i></p> <ul style="list-style-type: none"> consider establishment of a separate legal entity to maintain the online platform or delegating the mandate of the platform operator to an existing legal entity that can fulfil the selected functions (please refer to the recommendations); 	R.3.1.- R.3.2.; R.3.4.	



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			2020-2021	2022-2025				
						<ul style="list-style-type: none"> the development of an organisational setup was initiated by Ministry of Economy in 2019; invitations shared with stakeholders; potential operators: RUE Information Center of the Ministry of Economy; FinStore. 		
2.2. Develop the organisational setup for the platform	MoE; MoCI; Mol	RAIA; BelAPP; BCoCI; UIIP; CoDB; AoDRT; IDC	X		Not started	<p><i>Possible steps:</i></p> <ol style="list-style-type: none"> analyse the EU experience in the mechanism of identification, engagement and coordination of relevant stakeholders on the national Industry 4.0 platforms (examples: Industrie 4.0 Landkarte - Plattform Industrie 4.0; Industrie 4.0 Oesterreich; Manufacturing Academy of Denmark (MADE); Alliance pour l'Industrie du Futur; IPAR4.0 National Technology Platform); localise and apply on the developed platform. 	R.3.1.- R.3.2.; R.3.4.- R.3.5.	
2.3. Develop the digital platform for collaboration and service provision in the area of digitising SMEs	MoE; MoCI; Mol	RAIA; BelAPP; BCoCI; UIIP; CoDB; AoDRT; BHTP; AIP; BFFSE; IDC; Softclub; MTT; SoftClub; MTT	X		Not started	<p><i>Possible scope and functionalities:</i></p> <ul style="list-style-type: none"> possibility of interaction among the members inside the platform; electronic marketplace for manufacturing of products, provision of consulting and engineering services; services of Bank of electronic passports of goods and SMEs working in the framework of single standards and rules; unified transborder services of electronic data and documents interchange (EDI) among SMEs, including the linkages with the economic infrastructure organisations of the countries (banks, taxation, customs and other state bodies, insurance companies); fast settlement services with minimal fees between SMEs in cross-border settlements; tools/functionalities to map and promote the outcomes and effects of digital transformation (on enterprise level); successful cases of digital transformation of enterprises; 	R.3.4.- R.3.7.; R.7.2.- R.7.4.; R.8.1.- R.8.3.	<ul style="list-style-type: none"> <i>BFFSE is appointed as a national operator of the platform for industrial cooperation in EAEU.</i> <i>INFOPARK Association member organisations have significant competence and pilot solutions for the platform in terms of cross-border information exchange,</i>



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			2020-2021	2022-2025				
						<ul style="list-style-type: none"> methodology of measuring the economic effects of digitising on the level of enterprise and online calculator of potential effects; mapping of competence centres and training opportunities across the country (see Action 4.1); marketplace of technological solutions (applications) equipped with an SMEs-friendly search mechanism (examples: IOTA Industry Marketplace (RAMI-based) for industrial IoT solutions; GetApp Marketplace - CRM, ERP, BI, etc.); voluntary accreditation/certification scheme, including the issues of IT security and data protection (Trusted Cloud certification scheme as possible organisational mechanism). 		security, electronic document management and description of goods and services based on common international standards.
2.4. Promote and maintain the platform	MoE; MoCI; Mol	RAIA; BelAPP; BCoCI; UIIP; CoDB; AoDRT; BFFSE; IDC	X	X	Not started	<i>Note:</i> Information dissemination among stakeholders regarding coordination and cooperation opportunities, functionalities and tools.	R.3.1.; R.3.3.-R.3.7	
2.5. Transfer relevant EU tools of existing Industry 4.0 initiatives and platforms	RAIA	AIP; DBC		X	Not started	<i>Examples:</i> Reference Architectural Model Industry 4.0 ; High Performance Computing & the Digital Skills Bridge Toolbox	R.3.3.; R.3.6.	
2.6. Link the platform with the relevant EU/international platforms facilitating	CoDB; RAIA; BHTP; BFFSE	AIP; DBC	X	X	Not started	<i>Examples for processing industries:</i> SAP Leonardo IoT ; Oracle IoT Cloud ; PTC ThingWorx ; PI System ; RootCloud ; Software AG Cumulocity IoT ; Siemens MindSphere ; Azure IoT ; NetFoundry ; <i>Possible steps:</i>	R.7.1.; R.7.3.	



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			2020-2021	2022-2025				
digital transformation of SMEs						<ol style="list-style-type: none"> 1. identify the list of relevant platforms; 2. develop their SME-oriented description; 3. publish the registry with descriptive comparison of the platforms (target sectors; vendors; services; usage conditions, etc.) and promote it; 4. consider dynamic (open API) linking of the national marketplace with international (as GetApp) and national marketplaces for Industry 4.0 of other countries. 		
<p>3. Determine more accessible and inclusive funding opportunities for successful digital transformation of traditional SMEs</p> <p>Final goal: both public and private financial opportunities for digital transformation of SMEs in non-IT sectors of economy are identified and published on a one stop shop resource to help the traditional enterprises to perform digital transformation. Financial support mechanisms to address the gaps in funding digitalisation of traditional SMEs are established.</p>								
3.1. Map the sources of funding available to SMEs , covering various types of digital transformation activities	MoE; SCST; BIF;	DBoRB; Iskra; BFFST	X		Not started	<p><i>Possible steps:</i></p> <ol style="list-style-type: none"> 1. inventorise the sources of funding from state, financial international financial organisations etc. that are available to SMEs, covering various types of digital transformation activities; 2. apply the classification of digital transformation processes and loan allocation rules of COSME Loan Guarantee Facility; 3. publish this map at the organisational and technological platform 'Smart Industry of Belarus' for SMEs. <p><i>Note:</i> Basic mapping of funding available within the country was done by the EU4Digital Facility.</p>	R.4.1.	
3.2. Consider introducing the financial support mechanisms to address the gaps in funding digitalisation of traditional SMEs	MoE; MoCI; SCST; BIF	DBoRB; Iskra; BFFST		X	Not started	<p><i>Possible steps:</i></p> <ol style="list-style-type: none"> 1. identify the gaps not covered by existing funding sources for SMEs; 2. develop the financial support framework for covering the gaps; 3. negotiate the instruments of support from international (financial) organisations and private financial sector; 	R.4.1.- R.4.9.	



Recommendation / Action	Possible activity owners / Leads	Other participants (optional)	Indicative timeline		Status	Specification	Link to Policy REC	Comments and suggestions
			2020-2021	2022-2025				
						4. fill the gaps by introducing of public support mechanisms (grants, extension of innovation vouchers, special loan conditions and state loan guarantees, tax incentives); 5. consider establishing a special fund for piloting innovative solutions for digital transformation; 6. consider establishing an online one stop shop or online channel for SMEs with functionalities to apply for expertise when applying for funds and automatic application to multiple sources.		
3.3. Establish co-piloting and co-financing schemes for digital transformation	MoE; MoCI; SCST; CBICoCSTA	Concerns (Bellesbumprom; Bellegprom, etc.)		X	Not started	<i>Possible steps:</i> 1. establish a specialised fund, its governance and operating model; 2. negotiate partnership with international limited partners; 3. develop the investment policy (one of criteria: pilots should be able to be implemented in different jurisdictions (the EU and the EaP countries) and by different instruments (minority equity investments, up to 30%; seed and early growth stage start-ups); 4. enhance the fund governance with experts in different industries/sectors; 5. support enterprises by co-funding, matchmaking, legal advice, etc.; 6. establish a promotion programme for the EU companies to co-pilot the digital transformation solutions. <i>Notes:</i> <ul style="list-style-type: none"> the idea is validated in Ukraine at Digital Innovation Hub and with Polish partners (PFR; HardTech; Polish-Ukrainian Startup Bridge); possible partners in the EU – EIF and EIF co-managed fund-of funds Polish Growth Fund of Funds (PGFF) targeting at growth-focused enterprises in Eastern Europe. 	R.4.6.	
4. Transform the existing competence centres into SMEs 4.0 centres to support digitisation of traditional SMEs								



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			2020-2021	2022-2025				
Final goal: SMEs get quicker specialised support services from competence centres on digital transformation; capacity of existing competence centres to support SMEs in digital transformation is strengthened; they are networked and promoted among SMEs.								
4.1. Map the existing competence centres with specialised competencies relevant to Industry 4.0 and make them visible to SMEs	UIIP; TCSMI; EMAECsRE; IDC	MoE; CCDTtoCIB; Bridgio; EPAM; IBA; EnCata; FACT; BELISA; RIPO; AIMA	X		Not started	<i>Notes:</i> <ul style="list-style-type: none"> the existing R&D laboratories of research organisations and universities; R&D centres of companies; design and construction centres; testing facilities; innovative production with deep tech knowledge; the map of existing competence centres can be published at the organisational and technological platform 'Smart Industry' (see <i>Actions 2.1-2.6</i>); database criteria (technological specialisation, potential industry application area, type of problem etc) should allow SMEs to find the competence centres relevant to their challenge with the minimal time waste. 	R.5.1.	On the base of RIPO branch, the first certified training centre Festo (FACT) on the technologies "Industry 4.0" and mechatronics in Belarus was created
4.2. Establish a programme to transform the existing competence centres into SMEs 4.0 centres	MoE; MoCI; Mol; SCST; Concerns (Bellesbumprom; Bellegprom, etc)	BIF; Iskra; BFFSE; Business and professional associations; technoparks		X	Not started	<i>Possible steps:</i> <ol style="list-style-type: none"> check the set of regulations on management of infrastructure of R&D organisations and universities that was (co-)funded by public funds and change it (if necessary) to make it accessible for wider users in the country (consider applying innovation vouchers); develop the list of services for SMEs related to digitising (for example, Mittelstand 4.0) and inventorise the possibility of their provision; identify the contact persons with specific expertise to directly interact with SMEs; bridge them via networking events and a united communication gateway to facilitate cross-organisational consultations and bridging with them of SMEs seeking for specific advice; for competence areas and services that are poorly covered by the existing competence centres, develop an international training programme with advanced international competence centres; negotiate the transfer of the existing knowledge 	R.5.1.- R.5.5.; R.6.1.	



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			2020-2021	2022-2025				
						bases and toolkits (as ‘Reference Architectural Model Industry 4.0’ (RAMI 4.0) and tools based on it) from the EU; 6. publish and promote the services of SMEs 4.0 centres among SMEs.		
4.3.Launch demonstration and testing facilities on the Industry 4.0 with specialisation in certain technological areas or certain industries, addressing the specifics of their business processes.	MoE; MoCI; Mol; SCST; BIF; Iskra; BFFSE; RAIA; Concerns (Bellesbumprom; Bellegprom, etc.)	AIMA		X	Not started	<i>Possible areas:</i> <ul style="list-style-type: none"> energy saving; logistics; e-health; IoT and goods traceability, etc. <i>Possible schemes of equipping:</i> <ul style="list-style-type: none"> negotiate with leading corporations about possible equipping of demonstration and testing facilities; allocate public funds or seek donors support for the other equipment; mode of operation: <ul style="list-style-type: none"> organise regular excursions for interested visitors (SMEs, universities, students, public authorities) to increase awareness; use for testing the digitising solutions for SMEs. 	R.4.5.; R.5.6.	
5. Strengthen the competences of policy makers and SMEs to implement digital transformation Final goal: <i>policy makers and SMEs get actual practical competencies required for support and implementation of digital transformation activities. Practical skills are developed, and international qualification frameworks introduced to increase the suitability of graduates on the international market.</i>								
5.1.Introduce a competence building programme for the civil servants and policy makers on digitising industry, including study visits and internships	MoE	MoCI; Mol; ICSAPA; BSU; BSEU; BSUIR; BNTU; OPU	X		Not started	<i>Notes:</i> <ul style="list-style-type: none"> prepare and implement a continuing education programme for civil servants and state bodies, as well as prepare and implement training materials on industrial digitalisation in training programmes for civil servants, OSU, managers and specialists of industry organisations on managing digitalisation of industries, taking into account similar EU programmes in the local language (Example: GDS Academy - GOV.UK); consider wider usage of MOST for short visits and internships (negotiate potential shortening of review cycle for priority areas); 	NA	



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			2020-2021	2022-2025				
						<ul style="list-style-type: none"> • TAIEX and TWINNING are EU technical assistance tools that could be supportive in transfer of particular EU policy practices in Belarus by the similar EU organisation mentorship; • a list of training opportunities identified by the EU4Digital Facility; • preparation of a training programme for the organisers of the smart industry and the formation of a target training group from representatives of government agencies, the business community and business associations, and educational institutions (the prototype is a training programme for cluster organisations of the World Bank). 		
5.2. Develop and introduce the continuing education (requalification) programmes for managers and specialists of organisations of SMEs' as well as pedagogues engaged in continuing education and retraining focusing on digital transformation	MoEd; RIPO	MoCI; Mol; BSU; BSEU; BSUIR; BNTU; PTC; ICSAPA; AIMA	X		Not started	<p>Notes:</p> <ul style="list-style-type: none"> • prepare and implement educational materials on digitising industry in curricula for retraining and continuing education of adults in the area of digital transformation of SMEs; • consider focusing on retraining the senior engineering workers who already have professional experience and are employed in the relevant areas of production; • model of transfer and delivery is to be negotiated. <p>Examples: EIT Digital; SITRAIN - Digital Industry Academy; Industry Academy; Digital Transformation; IARIA; ITU Academy.</p>	R.6.1.	
5.3. Update and/or develop programmes of training, retraining and additional adult education in the	MoEd; RIPO	MoCI; Mol; BSU; BSEU; BSUIR; BNTU; ICSAPA;	X	X	Not started	<p>Target levels of education: programmes of secondary specialised, higher, postgraduate education, as well as retraining programmes and other educational programmes of additional adult education.</p> <p>Possible practical components include internships, dual education, receiving equipment from interested</p>	R.6.2.-R.6.4.	



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			2020-2021	2022-2025				
area of digital transformation of industry, by incorporating practical components and applying international standards		APA; GSU; EMAECsRE; PTC; AIMA				companies, joint master's programme with foreign institutions, etc. <i>Note:</i> The list of relevant training programmes is identified by EU4Digital.		
5.4. Consider using the existing international digital competence frameworks / standards for development of professional and educational standards needed for implementation of digital transformation	MoE; EMAECsRE; RIPO	MoCI; Mol; All educational establishments and enterprises	X		Not started	<i>Possible steps:</i> <ul style="list-style-type: none"> study of the existing international frameworks/standards of digital competencies; determining and formulation of specific competencies that are related to digital production and its management; their consolidation in newly developed professional standards. <i>Examples:</i> European Entrepreneurship Competence Framework; European e-Competence framework; SFIA; DigiComp, etc.	R.6.5.	