DELIVERABLE DT1.3.2

Upscaling of selected CE+H2020 project content for BSO capacity building

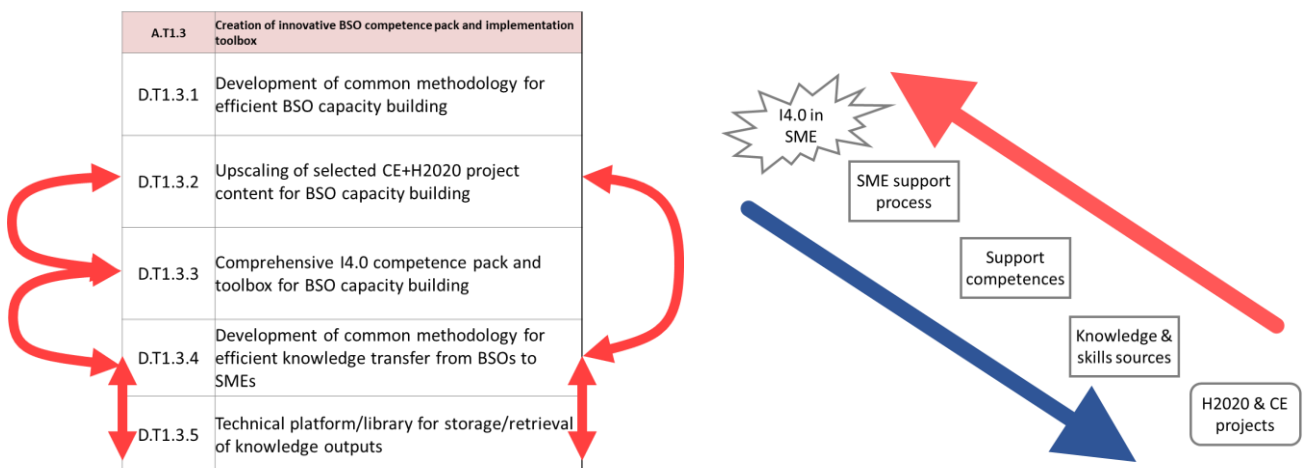| Project information	
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1. Introduction

Boost4BSO application form quotes upscaling as: Adaptation of selected project results and tools (which were originally targeted to SME) to enable the creation of robust, pragmatic and highly usable tools, concepts and trainings that will be building elements for I4.0 BSO competence pack and toolbox.

Deliverable DT1.3.2 Upscaling of selected CE+H2020 project content for BSO capacity building (as deliverable which identifies valuable and useful deliverables and results of previous H2020 and Interreg CE projects) is interrelated and developed in parallel with deliverables DT1.3.3 Comprehensive I4.0 competence pack and toolbox for BSO capacity building (as deliverable which identifies BSOs competences for supporting I4.0 implementations in SMEs) and DT1.3.4 Development of common methodology for efficient knowledge transfer from BSOs to SMEs (as deliverable which defines process of supporting SMEs by BSOs during I4.0 implementation).

Selected Interreg CE & H2020 projects results – deliverables and outputs, although created with different goals are identified and combined within Boost4BSO context, enabling development of interrelated deliverables and outputs. The goal is to defined relevance of the content, as a whole or separate elements, of each selected Interreg CE & H2020 project result, and their role as a building components of I4.0 support competences BSOs should acquire to be able to deliver support services to SMEs while applying I4.0 solutions.

2. Upscaling of CE+H2020 project content – logic and approach

Upscaling – meaning and rationale

Project Boost4BSOs is created as a follow up and capitalisation project with mandate to leverage Interreg CE and H2020 selected projects and their content.

Selected project results, outputs and deliverables (in various forms like methodologies, best practices, tools, lessons learnt, option papers, learning courses and supporting materials etc.) will be used in their original form (as they are) but with new role and as mean to empower BSOs in supporting transformation of CE SMEs towards Industry 4.0.

In that sense, upscaling doesn't mean direct transformation of CE+H2020 selected project results. Upscaling means using CE+H2020 selected project results and deliverables as building elements for BSO competence pack and toolbox.

CE+H2020 selected project results will be included on the knowledge platform (D.T1.3.5) for reference and future use, as they are or adapted accordingly when being integrated into the competence pack (D.T1.3.3). Some materials and tools could be adapted when used as enabling components of the common methodology for SME support and knowledge transfer from PP BSOs to SMEs (D.T1.3.4).

As already mentioned, upscaling of selected CE+H2020 project content for BSO capacity building - in the context of Boost4BSO phrase "upscaled deliverables" - means that deliverables will be used as they are, wherever this is applicable. They will be systematically listed as sources of knowledge, practices, information and tools effectively giving them additional role/meaning within the novel context (similar as citations in the scientific papers). In a nutshell, upscaled deliverable is "existing deliverable with novel role within new context".

Since the decision criteria for choosing which deliverables are to be upscaled are defined by the other two deliverables from A.T1.3 – competence pack (D.T1.3.3) and knowledge transfer (D.T1.3.4) – all three deliverables are created in parallel.

According to the needs of BSO and SMEs (collected in AT1.1), PPs identified results, outputs and deliverables (D.T1.2.4) that are appraised and selected from the upscaling perspective with the description how they contribute to envisioned BSO competences and SME knowledge transfer and support methodology. The following tables contain indications:

- which *competence element for BSOs* is being supported by the particular upscaled project content,

- which *stage of methodology for supporting the SMEs* is being supported by the particular upscaled project content.

3. List of upscaled deliverables

Upscaled CE and H2020 project deliverables are listed and described by five main elements:

- CE and H2020 project deliverables title and code

- short description of its relevance for Boost4BSO competence pack and knowledge transfer methodology

- to which component of the competence pack (Boost4BSO D.T1.3.3) particular CE and H2020 project deliverable relate with,

- where do selected CE and H2020 project deliverable fit into Knowledge transfer methodology – specific phase (Boost4BSO D.T1.3.4)

- links to public website/knowledge exchange and to Boost4BSO internal SharePoint document exchange

Standardized form for upscaled deliverables description is:

Project/Deliverable	Content relevance
Code – project acronym Deliverable original title (deliverable original code)	Make clear WHAT is the take out (content, methodology, reference document, ..) and HOW we will capitalize it
Competence pack (Boost4BSO D.T1.3.3) Competences group – sub group (e.g. I4.0 basic competences > I4.0 business impacts)	**Knowledge transfer phase (Boost4BSO D.T1.3.4)** Phase – sub-phase (e.g. Designing I4.0 change> I4.0 change design)
Link:	

Project/Deliverable	Content relevance
InnoPeer AVM D.T3.2.6 Basic Training concept	Basic courses cover 3 AVM knowledge dimensions: Technology, HR/organizational management & business models. The aim of the basic training is to get a general overview of the 3 topics mentioned above, and practice the gained knowledge by elaborating real use cases. It is emphasized how important it is to consider all 3 knowledge dimensions in a transformation process. Deliverable is valuable for familiarization with I4.0 and its business implications. It could be used as a base for trainings format.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 general knowledge I4.0 business impacts Training and learning resources	**Methodology stage/phase (Boost4BSO D.T1.3.4)** Building I4.0 awareness I4.0 integration concept I4.0 change design I4.0 change management

Link: Public link not available at the moment
SharePoint: https://groupportal.biz-up.at/CN/MC/Projects/Boost4BSO/_layouts/15/guestaccess.aspx?guestaccesstoken=d76QOhXf5RcCvPwxLGNQXFX2H9kwE4WzGkIQgTDXHXM%3d&docid=2_1629299716dee4803806ec095cbe53712&rev=1

Project/Deliverable	Content relevance
InnoPeer AVM D.T3.2.7 Advanced Courses	The advanced training is the second level in the InnoPeer AVM Qualification Programme and has the goal to increase the knowledge in the adv. manufacturing technologies as well as the HRM, organizational management and business models. These trainings summarize the content of the basic trainings and provide more in-depth information. The 5 online courses have duration of approx. 5h each. They consist of educational videos followed by tests, and are available 24/7 on the VHB platform https://open.vhb.org/login/index.php. They are recorded in English. The courses are convenient because of constant availability and have high-quality content. Links to the courses will be provided within the competence pack.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 general knowledge I4.0 business impacts I4.0 support process Training and learning resources	**Methodology stage/phase (Boost4BSO D.T1.3.4)** Building I4.0 awareness I4.0 integration concept I4.0 change design I4.0 change management

Link: https://open.vhb.org/
SharePoint: https://groupportal.biz-up.at/CN/MC/Projects/Boost4BSO/_layouts/15/guestaccess.aspx?guestaccesstoken=R769WzCGOsQldHfo4A%2fhMWLMfe%2fRWv5rAfCHyHls7jY%3d&docid=2_1f90472cdc9be4c41bfbf7eb930cb7865&rev=1

Project/Deliverable	Content relevance
InnoPeer AVM D.T3.2.9 Strategy Camps	The strategy camps focus on 2 macro-topics: 1) the human resources and organizational management 2) the development of new business strategies and models. The main learning goal of the Strategy Camp is teaching how to drive a corporate change for competitiveness by aligning technologies, people and organization. These training activities are primarily directed to all the people who have a coordination/supervision role within a corporate organization and has to contribute to the organizational decisions of their companies.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 business impacts I4.0 support process Key tools and concepts	**Methodology stage/phase (Boost4BSO D.T1.3.4)** I4.0 change design Plan to change & leverage I4.0 change management

Link: https://www.interreg-central.eu/Content.Node/InnoPeerAVM.html
Storyboard 1 – https://www.interreg-central.eu/Content.Node/InnoPeerAVM/InnoPeer-AVM-Strategy-Camp-1-Storyboard-Final.pdf
Storyboard 2 – https://www.interreg-central.eu/Content.Node/InnoPeerAVM/InnoPeer-AVM-Strategy-Camp-2-Storyboard-Final.pdf
Storyboard 3 – https://www.interreg-central.eu/Content.Node/InnoPeerAVM/InnoPeer-AVM-Strategy-Camp-3-Storyboard-Final.pdf
Storyboard 4 – https://www.interreg-central.eu/Content.Node/InnoPeerAVM/InnoPeer-AVM-Strategy-Camp-4-Storyboard-Final.pdf
Storyboard 5 - https://www.interreg-central.eu/Content.Node/InnoPeerAVM/InnoPeer-AVM-Strategy-Camp-5-Storyboard-Final.pdf
SharePoint: https://groupportal.biz-up.at/CN/MC/Projects/Boost4BSO/_layouts/15/guestaccess.aspx?guestaccesstoken=dtpAvkeFxY9iDUiMipJRAvsgOlqIH8OkFBQqQp4sG%2fU%3d&docid=2_163ef0eb4cd6e419eaf007d54b78dafef&rev=1

Project/Deliverable	Content relevance
InnoPeer AVM D.T3.2.2 Living labs	The living labs bring together SME participants from different regions in webinars/online learning sessions. Participants solve teaching case tasks in interaction with a transnational trainer team and define technological test assignments for model factory. The teaching cases of the living labs describe challenges that real companies handled with different level of success – many participants can identify themselves with the teaching case challenges. The solved teaching cases have been included in the advanced courses on VHB.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 business impacts I4.0 support process Training and learning resources	**Methodology stage/phase (Boost4BSO D.T1.3.4)** Building I4.0 awareness I4.0 integration concept I4.0 change design I4.0 change management

Link: Public link not available at the moment
SharePoint: https://groupportal.biz-up.at/CN/MC/Projects/Boost4BSO/_layouts/15/guestaccess.aspx?guestaccesstoken=ECAtcoJsaUyku5VHbIE1Vx3zS1kdcuQvpRjCILTnbt8%3d&docid=2_1e49642bed4354b4585c4c0cc72ccc798&rev=1

Project/Deliverable	Content relevance
InnoPeer AVM Handbook 2020	The document includes insights into InnoPeer AVM project results and outputs and valuable demonstrations of I4.0 integrations/transformations on different case studies.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 general knowledge I4.0 business impacts I4.0 best practice exchange	**Methodology stage/phase (Boost4BSO D.T1.3.4)** Building I4.0 awareness I4.0 integration concept I4.0 change design

Link: https://www.interreg-central.eu/Content.Node/InnoPeerAVM/InnoPeer-AVM---Handbook.pdf
SharePoint: https://groupportal.biz-up.at/CN/MC/Projects/Boost4BSO/_layouts/15/guestaccess.aspx?guestaccesstoken=MpPGCj6mQanZLMw%2bKqMiaVI5PAH8vDgWuz5h%2fQcebVU%3d&docid=2_129ddb6dc9f724936b3fe2aaccfba2cea&rev=1

Project/Deliverable	Content relevance
CE988 - Things+ D.T3.2.4 Digital guidelines on SIM (phases 1-3) Guidelines for internationalization (phases 4-5)	These guidelines describe the ideal process for implementing servitization upgrade in a small manufacturing company by implementing a set of suggested tools and concepts in five phases that last 6 months. The guidelines are split in two documents (phases 1-3 + phases 4-5), but could be merged since they make a comprehensive whole. This methodology is applicable in I4.0 context because it represents a framework for applying standard tools and methods for designing efficient transformation concept towards a PSS business model. Each step of the roadmap is described in details with reference to particular tools from the *Key tools portfolio* (Things+ D.T3.2.5) to be used. Guidelines in English are freely accessible; live explanation and real life experience about using it will be included in the BSOs capacity building.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 support process Key tools and concepts	**Methodology stage/phase (Boost4BSO D.T1.3.4)** I4.0 integration concept I4.0 change design I4.0 leverage support

Link: https://www.interreg-central.eu/Content.Node/Guidelines-for-services-internationalization-support.pdf
SharePoint: https://groupportal.biz-up.at/CN/MC/Projects/Boost4BSO/_layouts/15/guestaccess.aspx?guestaccesstoken=vVpqIgenYAmbZRq2fpLYDdEbHz7eWaKgHaAgd6QtRm8%3d&folderid=2_176280bcfb43940e88977e53e3f5698b0&rev=1

Project/Deliverable	Content relevance
CE988 - Things+ D.T3.2.5 Key tools portfolio	The portfolio – available in English and all central Europe languages - contains a set of standard business innovation tools (boundary objects, methods, concepts, forms) suggested for the implementation of the Service Innovation Methodology within a small industrial company. Almost all of the tools are global standards that are easily transferable to other BSOs as a part of the competence pack. These tools re helpful in supporting I4.0 transformation design and integration concept. The implementation of the tools (cherry pick and adapt) when offering a servitization support program to manufacturing SMEs will be discussed during BSOs capacity building.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 support process Key tools and concepts	**Methodology stage/phase (Boost4BSO D.T1.3.4)** I4.0 integration concept I4.0 change design I4.0 leverage support

Link: https://www.interreg-central.eu/Content.Node/KEY-TOOLS-PORTFOLIO-FOR-SERVITIZATION-Phase1.pdf
https://www.interreg-central.eu/Content.Node/KEY-TOOLS-PORTFOLIO-FOR-SERVITIZATION-Phase2.pdf
https://www.interreg-central.eu/Content.Node/KEY-TOOLS-PORTFOLIO-FOR-SERVITIZATION-Phase3-4-5.pdf
SharePoint: https://groupportal.biz-up.at/CN/MC/Projects/Boost4BSO/_layouts/15/guestaccess.aspx?guestaccesstoken=5x7ZMULBAPVyVTM%2fktsYcrf%2bm61HAdPilTo6e9ujSI8%3d&folderid=2_1a1c66ff001034de6bdf96de5bfbe1cb6&rev=1

Project/Deliverable	Content relevance
IoT4 Industry IoT4Industry IoT4 - Industry webinar	Valuable material for basic knowledge enhancement and understanding I4.0 transformation through cases.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 general knowledge I4.0 tech & expert knowledge I4.0 best practice exchange	**Methodology stage/phase (Boost4BSO D.T1.3.4)** Building I4.0 awareness Enabling I4.0 initiative

Link: https://www.youtube.com/watch?v=IJ_fNycyxT4
SharePoint: N/A

Project/Deliverable	Content relevance
IoT4 Industry D1.4 Identification and analysis of focus sectors for collaboration support	This analysis provided a multilayer synthesis of the I4.0 technology panorama concerning the manufacturing SMEs in relation to IoT technologies, the offering from IoT technology and the European regional strategies that have synergy with the IoT4industry. The deliverable supports competence pack element *I4.0 access to finance,* since it proposes evaluation criteria for funding approval and voucher scheme suggestions.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 general knowledge I4.0 access to finance	**Methodology stage/phase (Boost4BSO D.T1.3.4)** Building I4.0 awareness

Link:
https://www.iot4industry.eu/files/cto_layout/img/IOT4INDUSTRY/Results/D1.4_Identification%20and%20analysis%20of%20focus%20sectors%20for%20collaboration%20support.pdf
SharePoint: https://groupportal.biz-up.at/CN/MC/Projects/Boost4BSO/_layouts/15/guestaccess.aspx?guestaccesstoken=p3a7VohIXKX6lRSP45d%2f4siSf5x6qSxsF7Pp5Ar9N9w%3d&docid=2_1f9f9d3748fa34302be06840ceaaeecc0&rev=1

Project/Deliverable	Content relevance
IoT4 Industry Anonymized use cases	Real implementation cases are of high value for companies and BSO experts, to see, what other companies implemented on their way to I4.0 (with more or less mistakes) and what their benefit was.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 general knowledge I4.0 tech & expert knowledge I4.0 best practice exchange	**Methodology stage/phase (Boost4BSO D.T1.3.4)** Building I4.0 awareness Enabling I4.0 initiative

Link: N/A

SharePoint: to be amended

Project/Deliverable	Content relevance
Mittelstand 4.0 2020_Fragebogen_ Potenzialanalyse_v1	The questionnaire contains elements for structured SME assessment which are very convenient for initial steps of the support program. The questionnaire will be translated and adapted for the Boost4BSO context.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 business impact I4.0 support process	**Methodology stage/phase (Boost4BSO D.T1.3.4)** Understanding I4.0 opportunity

Link: https://kompetenzzentrum-augsburg-digital.de/projekte/
https://kompetenzzentrum-augsburg-digital.de/wp-content/uploads/2020/03/2020_Fragebogen_Potenzialanalyse_v1.pdf
SharePoint: N/A

Project/Deliverable	Content relevance
EACN for joint Industrial Modernisation Investments D2.1 – Drivers and Motivators for Industrial Modernization	Results that are concluded in point "4.3 Conditions, challenges and success factors for action" are based on automotive industry, but are applicable to other industries, in terms of trends and motivators for change.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 general knowledge I4.0 business impacts	**Methodology stage/phase (Boost4BSO D.T1.3.4)** Building I4.0 awareness I4.0 integration concept

Link: https://www.eacn-initiative.eu/media/deliverables
SharePoint: https://groupportal.biz-up.at/CN/MC/Projects/Boost4BSO/_layouts/15/guestaccess.aspx?guestaccesstoken=UMMrAzopKupeQx%2bS612TyGN37cdER0dTBfqkHhpsCXI%3d&docid=2_1aacb970b23354745a0cbc5cbb09c7b88&rev=1

Project/Deliverable	Content relevance
EACN for joint Industrial Modernisation Investments D2.2 – EACN Strategy	This document includes common "European" strategic vision and objectives for the envisaged cluster collaboration and value chain linkages related to the four topics of EACN project. It builds on the competencies and potentials of the clusters' members, focus on synergies and point out opportunities for joint projects. Point 6 of Strategy gives insight into the strategic focus of EACN, and presents 4 areas in which development of I4.0 technologies could benefit SMEs.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 general knowledge	**Methodology stage/phase (Boost4BSO D.T1.3.4)** Building I4.0 awareness

Project/Deliverable	Content relevance
EACN for joint Industrial Modernisation Investments Joint project 1-3	The project descriptions represent valuable case examples that include project requirements, company capabilities assessment, implementation steps and risk analysis. The cases present a structured overview of I4.0 integration with identified challenges that need to be tackled during the support program.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 support process	**Methodology stage/phase (Boost4BSO D.T1.3.4)** I4.0 integration concept

Project/Deliverable	Content relevance
BMWi Digital business models for I4.0	Valuable analysis of the building blocks and mechanisms of digital business models in the manufacturing industry, with Identified opportunities and challenges of digital business models and dynamic value networks. Includes relevant cases of I4.0 business model transformation.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 business impact I4.0 support process	**Methodology stage/phase (Boost4BSO D.T1.3.4)** Building I4.0 awareness I4.0 integration concept I4.0 change design I4.0 implementation support I4.0 change management

Project/Deliverable	Content relevance
Things+ D.T3.1.3 E-catalogue of new services & products developed by CE manufacturing SMEs during the pilot action 1 D.T3.3.3 E-catalogue of new services & products developed by CE manufacturing SMEs during the pilot action 2	The e-catalogue includes an anthology of business cases from 9 Central European countries, describing the servitization projects of 100 small and medium sized companies. Their success stories can serve as inspiration and motivation for business transformation towards I4.0.
Competence pack and toolbox components (Boost4BSO D.T1.3.3) I4.0 general knowledge	Methodology stage/phase (Boost4BSO D.T1.3.4) Building I4.0 awareness

Link: https://www.interreg-central.eu/Content.Node/Things-katalog-cohort1.pdf

SharePoint: https://groupportal.biz-up.at/CN/MC/Projects/Boost4BSO/_layouts/15/guestaccess.aspx?guestaccesstoken=M8APW94U85EDBUCxLudz%2bANq66oKGEOkAY8EASO3xOQ%3d&docid=2_1f133317e41ea430aa8b9432d883784b2&rev=1