



European Union
European Regional
Development Fund

SKILLS+
Interreg Europe



SKILLS+

ACTION PLAN FOR KAINUU

Part I – General information

Project:	SKILLS+
Partner organisation:	Kainuun Etu Oy
Other partner organisations involved (if relevant):	
Country:	Finland
NUTS2:	North East Finland
Region:	Kainuu
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Part II – Policy context

The Action Plan aims to impact:

Investment for Growth and Jobs programme		X
Type 1: Implementation of new projects	X	
Type 2: Change in the management of the policy instrument (improved governance)	X	
Type 3: Change in the strategic focus of the policy instrument (structural change)		
Other improvements not corresponding to types 1-3 (please comment)		
European Territorial Cooperation programme		
Other regional development policy instrument, name of policy instrument here		

Name of the policy instrument addressed: Sustainable growth and jobs 2014 - 2020 - Finland's structural funds programme, Thematic Objective 3 (TO3) Competitiveness of SMEs (ERDF); Investment Priority 3d Supporting the capacity of SMEs to grow in regional, national and international markets, and to engage in innovation processes.

Improvement needs: The overall objective of the policy is to increase the number of growing, innovative and internationalising companies in Finland. In principle, increasing the capacity of SMEs to deliver innovative products and services, by utilising ICT smartly, has been regarded as major source of potential. The policy furthermore aims at promoting the (re)positioning of rural SME in supply chains. To reach this aim, new business operations are necessary.

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Part III – Policy learning

III.1 Overview of the action plan

SKILLS+ PP2, Kainuun Etu Ltd, is a regional development company, with main purpose to support the competitive and sustainable development of the region and its industries & businesses. PP2 joined the SKILLS+ project in order to explore the possibilities of getting familiar and transferring good practices that would increase the competitiveness and innovation capacity of SMEs by improving the intensity and sophistication of ICT uptake by them.

In Kainuu, as in all parts of Finland, there have been numerous ICT projects for businesses since 2000; in parallel, the digitisation level of the public sector is high and improving. Our purpose was to adopt good practices demonstrating the integration of business &/or production processes with ICT solutions, otherwise digitalisation performance is on good level in Kainuu (see DESI index, in [III.3 Background: the Baseline study](#)). We identified two suitable good practices, one from Latvia and one from Saxony. After deeper analysis and local discussions, the Latvian good practice was dropped because the German good practice was more comprehensive and of strategic character. As a result, PP2 decided to “import” one good practice, the ICT Strategy from Saxony – *Anhalt* (Interreg Europe data base <https://www.interregeurope.eu/policylearning/good-practices/item/1900/ict-strategy-of-saxony-anhalt/>), reflecting digitisation linked to regional policies & national policies, namely Industry 4.0, in the promotion of local economic development.

Table 1 Summary of the SKILLS+ Kainuun Etu Oy action plan

Action	Policy instrument impact		Funding sources	
	Implementation of new projects (RIS3)	Governance improvement (RIS3 revision)	Structural Funds	Own budget
Action 1	X		245 000€	45 000€
Action 2		X		85 000*15%=12 750€ ¹

The decision to focus the action plan on Industry 4.0 together was taken together with the regional stakeholders. The action plan concept has been repeatedly discussed with the Structural Funds Intermediate Body (IB) / Regional Council of Kainuu, and most recently also with the ESF coordinating body (ELY Keskus – Centre for Economic Development, Transport and the Environment). During this meeting (26.6.2019), other digitalisation projects were compared with the SKILLS+ action plan and the point of introducing Industry 4.0 to Kainuu SMEs was found both needed and the approach good. It is noted that this is the first I4.0 project

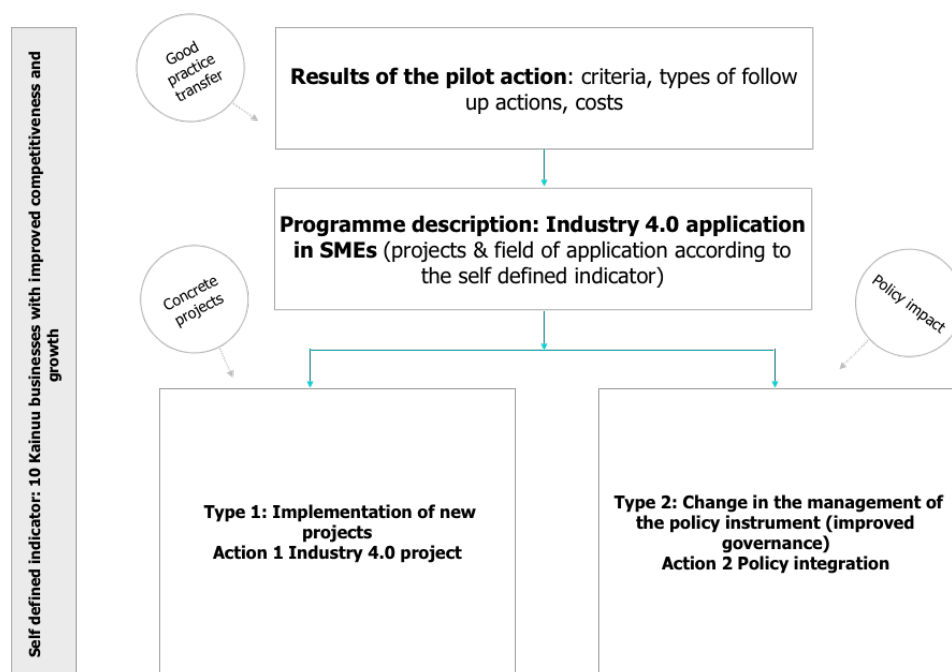
¹ This amount is a gross estimate. As explained under [Action 2 Policy integration](#), the policy integration from SKILLS+ is one of many of RIS3 activities. So, the amount of 15% of the total budget estimate of Action 2 is proposed as an estimate only. If needed, the real resources dedicated to the RIS3 revision and linked to SKILLS+, can be assessed by keeping track during the process.

undertaken for traditional SMEs in Kainuu. The decision to support this approach was made because of at least four reasons: (1) Kainuu added value comes a lot from intermediate industrial goods, i.e. with Industry 4.0. businesses benefit from adjusting faster to the expectations of the forward linkages and have also wider adjustment options for a larger demand, (2) big data solutions and applications are a national priority. Businesses will not benefit from big data, unless they have the basic tools for collecting and applying big data; and, (3) if the region wants to promote its industry, it implies, being members of smart manufacturing (one product, distributed production base), and this will not happen without Industry 4.0.

III.2 Impacting the policy instrument

The action plan foresees two actions: Action 1 Industry 4.0 project and corresponds to type 1 of policy instrument improvement (implementation of new projects), and Action 2 Policy integration, which corresponds to type 2 policy instrument improvement (improvement of the governance of the policy instrument). The policy instrument under which Action 1 will be implemented is still Finland's Investment for Growth and Jobs programme. The policy integration is anticipated to be made through the revised RIS3 (i.e. TO1) of Kainuu, which ensures links to the next funding period. It could be argued that the Action 2 policy impact is more of Type 3 than Type 2. In our opinion, it is Type 2. We are not structurally changing the orientation of the policy instrument, we are concretising and, in this way, reinforcing its effectiveness. So, to our understanding, Action 2 is about Type 2 policy impact. Figure 1 SKILLS+ action plan map summarises the action plan of PP2.

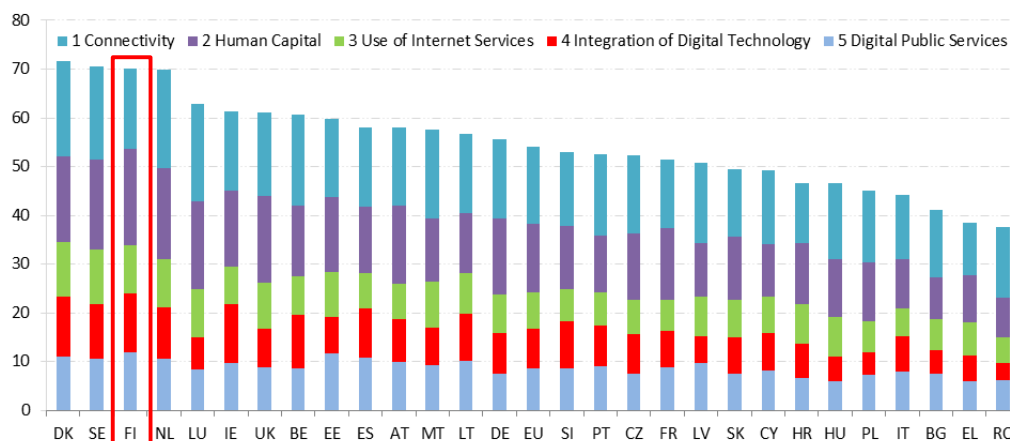
Figure 1 SKILLS+ action plan map



III.3 Background: the Baseline study

Finland is already a highly digitalised environment. As confirmed by the 2018 DESI index² Finland is especially performing in this field, Figure 2. According to the 2018 ranking "Digital skills remain the strongest competitive advantage of the Finnish economy. The share of ICT specialists in its work force increased further, with an additional 4 500 jobs. Overall, Finland managed to increase its score in this dimension faster than the EU average, reversing the catch-up process that had happened during the two previous years".

Figure 2 Digital economy and society index (DESI), 2018 ranking³



Digitisation has been a priority in Finland since the 1990s, and today's performance is especially encouraging as discussed in the preceding §. In December 2017 Finland launched a national artificial intelligence (AI) strategy⁴ aiming at turning Finland into a leading country in the application of artificial intelligence. It is based on the assumption that (i) AI has the potential to double annual economic growth rates in the countries that we analysed in terms of gross value added (a close approximation of GDP), and (ii) Finland has excellent opportunities to be among the winners in artificial intelligence transformation, since Finland was ranked second among 11 developed countries⁵. This could be attributed to Finland's business structure, investment product-driven industry, the public sector's degree of digitalisation, and Finland's high level of education. A comprehensive development programme should be deployed to support AI in Finland, and actions need to be taken on several fronts: investment in the development and application of technology, an improvement in its ability to adapt, strong scientific support, putting possibilities created by artificial intelligence into practice in both the private and public sectors, and legislation supporting the transformation.

² Digital Economy and Society Index 2018, Country Report Finland, <https://ec.europa.eu/digital-single-market/en/desi>; retrieved 25.12.2018.

³ Digital Economy and Society Index 2018, Country Report Finland, <https://ec.europa.eu/digital-single-market/en/desi>; retrieved 25.12.2018.

⁴ TEM (2017). Finland's Age of Artificial Intelligence Turning Finland into a leading country in the application of artificial intelligence, Objective and recommendations for measures.

⁵ Accenture and Frontier Economics, "Why Artificial Intelligence is the Future of Growth", 2017, page 16.

<http://www.interregeurope.eu/skillsplus/>

However, DESI 2018 report notes also that: "... currently, and despite the overall strong position and the policy support for digitisation, there remain significant disparities among businesses. According to the Finnish Innovation Survey, the importance of digitalisation for enterprises' business activity is much more strongly acknowledged in services than in manufacturing firms: 41% of services firms consider one form or another of digitalisation key to the firm operations, compared to 25.4% of manufacturing firms"⁶.

Taking these facts into account, and before proceeding to the actual action plan, it was discussed with the Kainuu stakeholders, the SKILLS+ lead partner and subsequently with the Interreg Europe (IE) Technical Secretariat (TS), the possibility to introduce a small-scale 'Action plan preparation & Stakeholder discussion' for Industry 4.0 in Kainuu, i.e. the maturity assessment of three businesses. The 'Action plan preparation & Stakeholder discussion' was approved by the TS and was implemented during January – February 2019. It involved three businesses representing three key industries of Kainuu: wood processing, metal industries, and ICT.

III.4 Good practice transfer

The objective of the transferred good practice, i.e. *ICT Strategy from Saxony – Anhalt* is the establishment of efficient and safe ICT infrastructure, the improvement of the quality of administration work and the simplification of the communication between citizens, municipalities and companies from 2012 and until 2020. The ICT strategy has been integrated into the Digital Agenda. The Digital Agenda is a strategy to guide and support the digital transformation in Saxony-Anhalt. The Digital Agenda contains more than 150 concrete digitisation-relevant measures of the various ministries and the state chancellery. In addition, the Digital Agenda bundles previous individual strategies of the ministries, such as "Economy and Science 4.0" of the Ministry of Economy, Science and Digitization, the work program "Work 4.0 in Saxony-Anhalt" of the Ministry of Labour, Social Affairs and Integration or the concept. A part of the Digital Agenda is dedicated to Industry 4.0. This includes expertise on Industrial Automation, Digital Planning, 3D Printing, Factory of the Future, Additive Manufacturing, Artificial Intelligence & Predictive Maintenance, and Chemicals 4.0 as well as, in parallel, the set-up of a centre of competence on Industry 4.0⁷. Also, the GP is important to Kainuu because it combines policy issues on industry 4.0, knowledge aspects (such as the centre of competence- CoC), expertise and uptake by small and medium sized businesses⁸ -i.e. it indicates the potential for further forms of exchange and cooperation.

The selection of the I 4.0 good practice demanded considerable expertise which led to reinforced learning requirements for Kainuun Etu. Industry 4.0 (called more often '4th wave of industrialisation' in Finland and in

⁶ DESI ranking 2018, page 9 and OECD Reviews of Innovation Policy, Finland, 2017.

⁷ <https://www.invest-in-saxony-anhalt.com/industry-4-0> .

⁸ Industrie 4.0 in Mechanical and Plant Engineering in Saxony-Anhalt is aimed at small craft businesses and at medium-sized firms with around 250 employees, but also at large companies, and at responsible figures from other industries along the value creation chain and from policies point of view.

<http://www.interregeurope.eu/skillsplus/>

short '4th wave') is a priority for businesses, with applications in the primary, secondary and tertiary⁹ sectors. "Overall, the benefits resulting from Industry 4.0 deployment relate to, overall, more efficient and effective processes in R&D as well as more efficient and effective processes in production"¹⁰. The selection of I4.0 as the focus of the action plan is especially relevant to Finland, since the benefits of this technology appear at the moment, more poignant to high-wage areas. Paul Schönsleben et al (2017)¹¹ indicate that a number of important benefits include: opportunities from the potential for product customisation; additive manufacturing (aka 3D printing, whereby a 3D model is created by CAD software can be used to produce an item by building up successive layers of a material (plastic or metal)); the potential to produce much more complex components than before; fast and cheaply produced new / differentiated product components. Paul Schönsleben et al 2017 note that "the use of 3D printing to make toys in the private sector, underlines 3D printing's potential for personalised production¹²"; personalised medication; collective constructions internet-based building management systems (e.g. light, temperature, humidity) adapted to each individual resident's preferences; and new markets, i.e the platform industry developing fast towards productising components for Industry 4.0 applications)¹³.

These findings are confirmed and summarised by another author¹⁴ in **Table 2 Evaluation of potential benefits of Industry 4.0 for SMEs**, below:

⁹ A good practice outside the SKILLS+ project, comes from a session by the JRC on April 11th 2018, in. Rovaniemi, Finland. There it was demonstrated how a small restaurant was able to benefit from I 4.0 by tailoring it to its product & service production processes.

¹⁰ Ponnikas, J., Vilhu, E., Chaniotou, N., Leinonen, M., Isoranta, O., Kainulainen, A. (2019). Policy instrument assessment report for Kainuu region, Finland. Outputs of the INNO PROVEMENT project 2019, information on the INNO PROVEMENT project: <https://www.interregeurope.eu/innopovement/> and also at: <https://www.kainuunliitto.fi/en/innopovement>.

¹¹ Paul Schönsleben, Filippo Fontana, and Aldo Duchi (2017). What Benefits do Initiatives Such as Industry 4.0 Offer for Production Locations in High-wage Countries? ScienceDirect, Procedia CIRP 63 (2017) 179 – 183. Retrieved 14.7.2019 from https://www.researchgate.net/publication/318353507_What_Benefits_do_Initiatives_Such_as_Industry_40_Offer_for_Production_Locations_in_High-wage_Countries. The article is available also at https://www.research-collection.ethz.ch/bitstream/handle/20.500.11850/186952/Schoenleben_186952.pdf?sequence=3.

¹² Adjusted from Paul Schönsleben et al. 2017, page 3; with reference to Additively Ltd., Access to 3D printing, <https://www.additively.com>.

¹³ On 27.11.2018, the Platform's experts demonstrated how Administration Shells can help companies integrate their assets (e.g. hardware and software components) in production. In so doing, the Platform is helping to complete the basis for digital ecosystems in which all assets interact interoperable. <https://www.plattform-i40.de/I40/Redaktion/EN/PressReleases/2018/2018-11-26-building-the-foundations-for-an-i40-ecosystem.html>

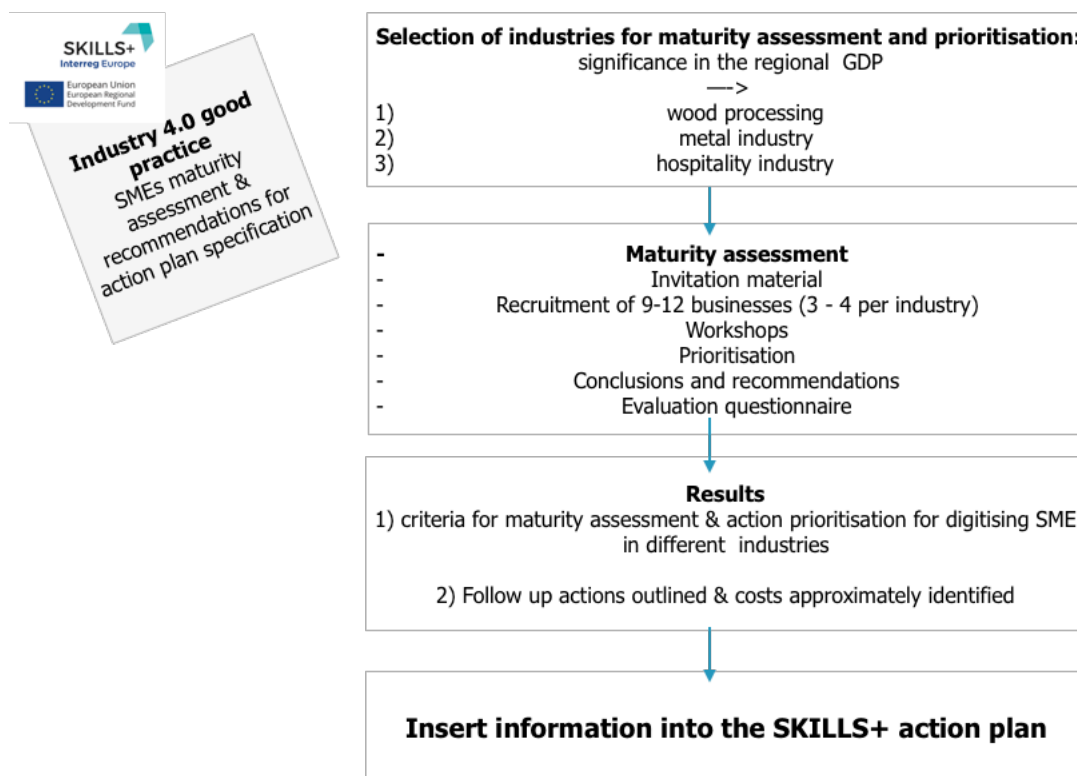
¹⁴ Christian Schröder (2017), page 10 (original source: Condensed presentation after Bauernhansl (2014). [Bauernhansl, T., (2014). Komplexität bewirtschaften: Die Einführung von Industrie 4.0 in Produktionssysteme. mav Innovationsforum. Universität Stuttgart. Retrieved from: http://www.mav-online.de/c/document_library/get_file?uuid=1e6c64af-b5dd-4a74-85fe-e0751fb9250c&groupId=32571331.]).

Table 2 Evaluation of potential benefits of Industry 4.0 for SMEs

Type of cost	Total value
Inventory cost	-30% to - 40%
Manufacturing costs	-10% to -20%
Logistical costs	-10% to -20%
Complexity costs (additive manufacturing, product customisation, ...)	-60% to -70%
Quality costs (product customisation, personalised medicine, ...)	-10% to - 20%
Maintenance costs	-20% to -30%

In conclusion, the good practice transfer and the further policy learning was that proposing an action plan focusing on Industry 4.0 required a deeper understanding of both the I 4.0 methodology and its implications, meaning: I4.0-related maturity assessment, a refreshed interpretation of business processes, and the integration between value chains and I4.0 measures. We knew that a staged approach was needed. Thus, we decided to apply for an additional activity focusing on 'Action plan preparation & Stakeholder discussion' which would introduce the method to traditional SMEs and at the same time would allow us to understand how to approach best this new tool. The 'Action plan preparation & Stakeholder discussion' would focus on the I.4.0 maturity assessment of 3 SMEs that would be willing to participate.

The 'Action plan preparation & Stakeholder discussion', with the help of the Lead Partner (LP), was applied to the Interreg Europe Joint Secretariat (IE JS) at the end of August 2018 and was approved in October 2018. It was implemented during January – February 2019. Figure 3, below, maps the 'Action plan preparation & Stakeholder discussion' and how was planned to feed information to the final action plan.

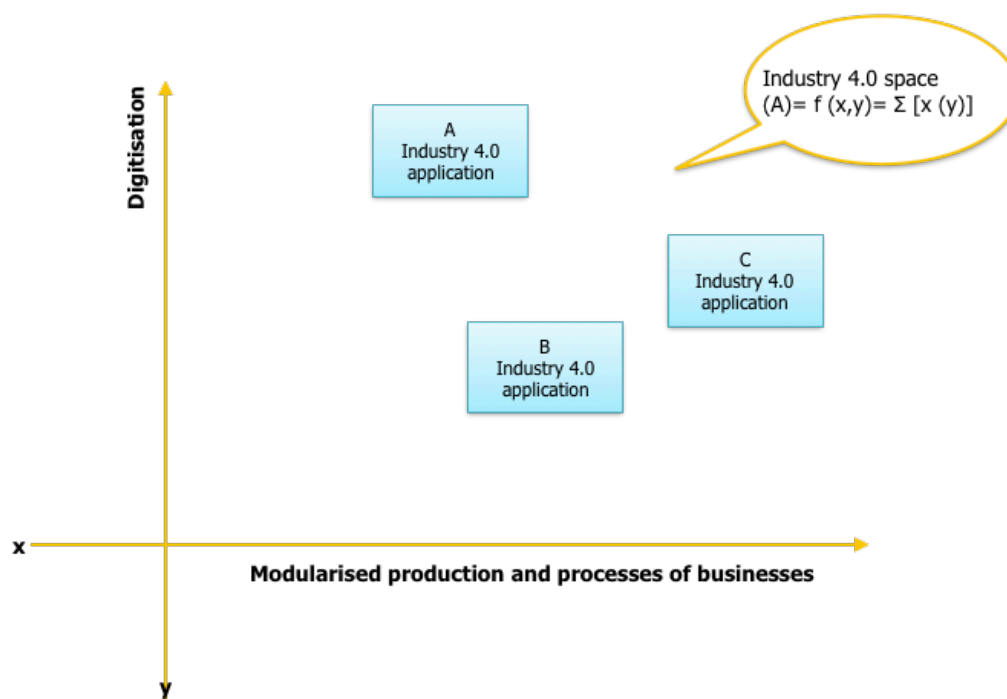
Figure 3 The 'Action plan preparation & Stakeholder discussion' of the Kainuu action plan

III.5 Findings from the 'Action plan preparation & Stakeholder discussion'

The Industry 4.0 maturity assessment consisted of one introductory workshop, two assessment workshops, and a set of detailed recommendations with documented, prioritised suggestions for further actions. In the next steps, we will have follow-up meetings with the three businesses to be able to assess their Industry 4.0 plans for the future and whether we can work future together to support them.

The 'Action plan preparation & Stakeholder discussion' has been very useful as it generated information about the most beneficial and most challenging aspects to I4.0 applications. For example, it has become clear that businesses are not familiar with I4.0 concepts, details and uptake process¹⁵; the three pilot businesses are now ready to continue to next steps and also give inputs to the action plan; finally, they form the regional base for proceeding beyond the I 4.0 maturity assessment.

Figure 4 The concept of I4.0 for beginners



The 'Action plan preparation & Stakeholder discussion' impacted Kainuun Etu's SKILLS+-based action plan in fundamental ways, as follows:

- In depth understanding of the I4.0 "playfields": I 4.0 is not about digitisation only; I 4.0 is not about modularisation of the production and business processes only; I4.0 is about applying digitisation solutions to optimised modularised business and product processes (Figure 4).
- The maturity assessment experience from the 'Action plan preparation & Stakeholder discussion' showed that this can be a very useful process when it combines the modularisation of the digitisation steps with guidance to businesses and interactive sessions. Figure 4 is trying to depict, in a schematic

¹⁵ Or, as I4.0 is often referred to in Finland 'the 4th wave' or 'Industrial internet' or 'Interne tof things' (IoT).

way, how businesses can have a straightforward understanding of what I 4.0 will mean to them: they have to match units (=modules) of business processes to ICT options. Thanks to the 'Action plan preparation & Stakeholder discussion' we understood that three sessions for the maturity assessment suffice, however, individualised guidance and interaction with participating businesses requires reinforced expert resources, about 1 expert per 2 businesses.

- Modularisation of business processes in terms of I 4.0 uptake: businesses' baseline modules are administration and production activities. Businesses that can benefit more, are those that have a more developed division of labour for more complex products & processes.
- Inclusion of targeted actions: the prioritisation of what to digitise and what to connect relates to the level of business activities and to the backwards and forwards linkages of the business. The less complex the business is, the less relevant. Industry 4.0 appears; at the same time, the less complex the business is, the less prepared it is to enter into value chain partnerships.

Part IV – Details of the actions envisaged

IV.1 Actions

Action 1 Industry 4.0 project

'Industry 4.0 project' is the first Industry 4.0 uptake project in the region addressing SMEs adoption of Industry 4.0 s in a comprehensive way, going beyond ad hoc digitisation solutions and beyond the I 4.0 maturity assessment stage. The objective of Action 1 is implementing an Industry 4.0 uptake by traditional industries project, combined with clear business scaling-up improvements.

The focus of Action 1 was decided by referring to two principles: 1) to valorise the policy learning (III.4 Good practice transfer) including the insights that resulted from the 'Action plan preparation and stakeholder discussion' (III.5 Findings from the 'Action plan preparation & Stakeholder discussion'). As already mentioned, the policy learning and insights indicated the need for SMEs to understand the I 4.0 concept, the direct benefits (profits, value chains, ...) and required adjustments and costs for I 4.0 deployment (organisational adjustments, equipment, skills); and 2) to ensure capitalisation potential of the Action 1 implementation in the form of policy instrument improvement (policy integration).

Action 1 is a project applied to the local structural funds of Kainuu and will be selected following the usual competitive selection procedure. The application is written and submitted by Kainuun Etu, as coordinators of the project. However, as this is a competition, it is possible that another consortium, different than the one led by Kainuun Etu will win the bid.

The budget of the project is approximately 250 000€ - 300 000€, and it is co-funded including the participating businesses and Kainuun Etu (or, equivalently, by the coordinating organization that will win the call). The co funding is 15%. Action 1 has a duration of 18 months. One challenge associated with Action 1, is that ERDF funding in Finland is now an issue. It was available still in February 2019. We have addressed the challenge with our IB and seek options through the Rural fund and / or other solutions of regional funding. The action will be funded anyway following the ERDF process and its implementation will be monitored by the IB as the

financing institution. No policy instrument change is envisaged at this stage, as this is the end of the 2014-2020 period.

Action 1 is structured into two Activities, Activity 1.1 Industry 4.0 maturity assessment and uptake for individual businesses and Activity 1.2 Industry 4.0 maturity assessment and uptake for clusters. Outputs of Action 1 are planned as in Table 3 Outputs of Action 1.

Table 3 Outputs of Action 1

Preparatory stage	
-	Recruitment of 10-15 businesses
-	Project application (-s) submitted
-	1 application selected; contracting period and clarifications
Implementation stage	
1.	Classification of businesses, opening meeting: 1 opening meeting, with 10 -15 businesses classified into 3 groups.
Activity 1.1	
2.	Selection of experts for I4.0 maturity assessment and business plan: 1 terms of reference document, 1 tendering procedure, 1 selection procedure, 1 evaluation team (IB & KE, PP2), 1 selection decision explained and communicated to all offerors.
3.	Maturity assessment workshops and reports for 10 -12 businesses.
Activity 1.2	
4.	Tendering the clustering assessment services.
5.	Clustering assessment: 1 clustering report (6-8 SMEs) assessed.
6.	I4.0 maturity assessment for clustering elements across value chain(-s): 6 maturity assessments for cluster-based I 4.0.
7.	4-6 business plans for the I4.0 applications to the cluster-based (horizontal) as well as 1 cluster -based (vertical) business plan.
Closing, dissemination and evaluation of Activities 1.1 and 1.2	
8.	1 list of evaluation criteria for evaluating the pilot action, and monitoring to feed Action 2
9.	1 Evaluation report
10.	1 closing meeting with wide dissemination.

More detailed break down and the time plan for the implementation of Action 1 is in **Table 4** SKILLS+, PP2 Kainuun Etu action plan timetable.

Action 2 Policy integration

Action 2 is about integrating successful aspects of Action 1 and concepts from the GP into the revision of the Kainuu RIS3. The RIS3 revision is done by the Intermediate Body, the Regional Council of Kainuu, and the costs are own (i.e. the Regional Council's) costs. Kainuun Etu is member of the RIS3 revision team. Participation costs are also own costs. An estimate of the IB costs for the RIS3 revision is some 70 000€ (staff,

experts, meetings) for the IB and some 15 000€ (staff costs) for Kainuun Etu as more than one persons are contributing. The process of the RIS3 revision builds on many projects and inputs, which all reflect experiences of the preceding 4 – 5 years. Therefore, the proposed budget is indicative, especially as the process is fully managed by the IB.

Figure 5 Kainuu RIS3¹⁶ concept

Smart Specialisation (RIS3) Choices of Kainuu Region 2018-2021

TECHNOLOGY INDUSTRY INNOVATIONS:	BIO ECONOMY & MINING INNOVATIONS:	HEALTH & WELBEING INNOVATIONS
<ol style="list-style-type: none"> 1. Measurement technology 2. Games & simulators 3. Metal industry 	<ol style="list-style-type: none"> 1. Environment monitoring of industry processes 2. Forest & blue bio economy & food 	<ol style="list-style-type: none"> 1. Activity tourism 2. Health, physical training and sports

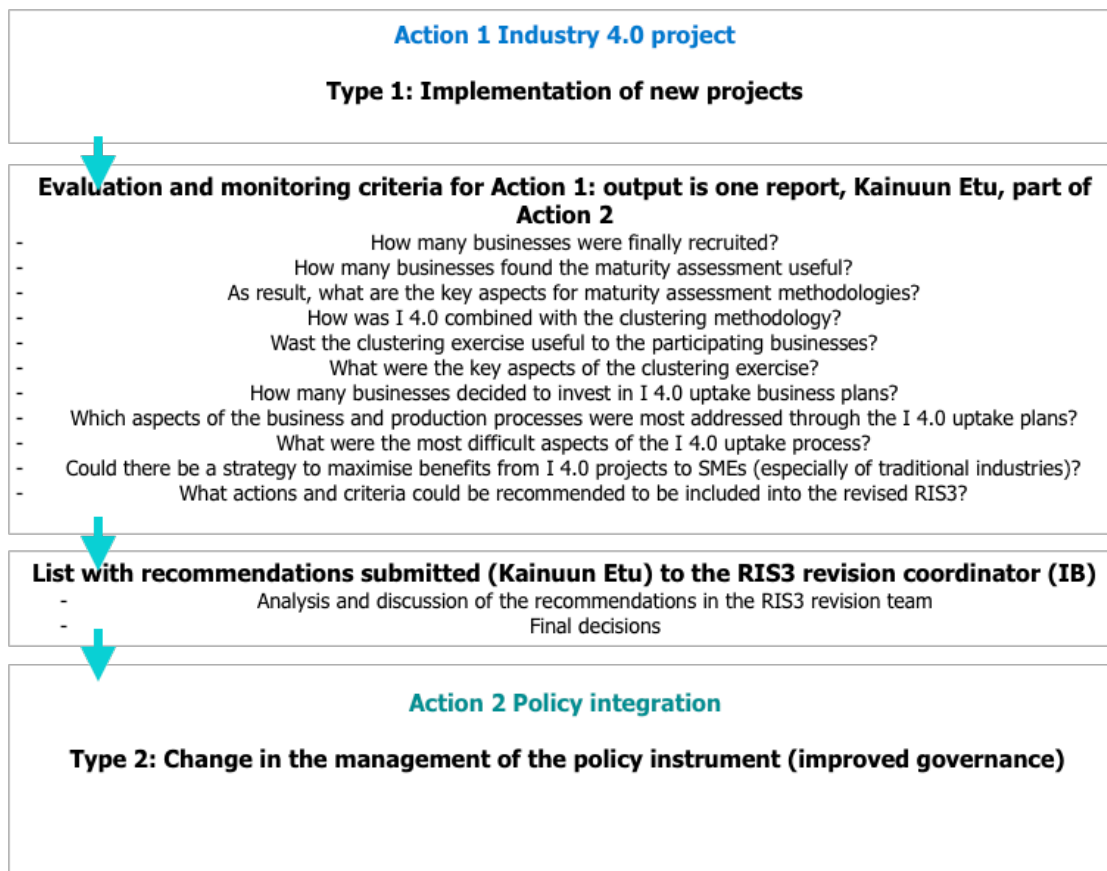
Cross-cutting Themes and Goals on All RIS3 PRIORITIES:

1. Developing Key Enabling Technologies (KETs)
2. Utilisation of robotics, automation, data centres and data analysis
3. New solutions and applications of circular economy
4. Innovations in resource efficiency, decarbonisation and climate change mitigation

INVESTMENTS, NEW ENTERPRISES, KNOW-HOW AND TECHNOLOGY TO THE REGION, INCREASING VOLUME AND VALUE ADDED OF PRODUCTION AND EXPORT

The Kainuu RIS3 is already prioritising ICT and KET applications -the latter is a precondition for RIS3. The SKILLS+ mainstreaming will involve the assessment of the results of Action 1 implementation, leading to a new action line to be included into the revised RIS3 "*Industry 4.0 uptake including the development of I 4.0 competences*" as part of the KET's applications. This will be a breakthrough for Kainuu. The region has I4.0-related software solutions and Finland as a whole has a strong AI (artificial intelligence) profile. However, the uptake of Industry 4.0, as an enabling tool for SMEs and especially SMEs of traditional industries has not been addressed sufficiently yet. **Figure 6** Summary of the SKILLS+ Action 2 policy integration summarises how Action 2, i.e. lessons learnt from Action 1, lead to integration into the RIS3 revision.

¹⁶ Jouni Ponnikas, Regional Development Director, Regional Council of Kainuu, presentation to ecoRIS3 project meeting, 29.11.2017.

Figure 6 Summary of the SKILLS+ Action 2 policy integration

The process of the RIS3 revision happens through the setting up of the RIS3 revision team, thematic regional workshops and supportive studies (if needed), formulation, discussion and final approval by the regional board of the revised RIS3. It is a lengthy procedure. Kainuu is capitalising on the IE projects to mainstream into RIS3 important good practices that proved useful to the region, and which, also, link to projected future potential and trends.

IE action plans implementation is monitored for the results they generate and evaluated. Based on these data, a list of 'lessons learnt' to be mainstreamed at conceptual / strategic / operational levels will be introduced to the RIS3 team. These concepts will be further analysed and gradually transformed into concrete action lines.

The RIS3 revision group was established by the e mail of the IB on 26.4.2019. The introductory meeting was on 27.5.2019. It is expected that the revised RIS3 will be finalised by the end of 2019.

The outputs of Action 2 include the revised Kainuu RIS3 with a specification for 'Industry 4.0 uptake', and projects dedicated to Industry 4.0 readiness & uptake and Industry 4.0 for value chain and platform participation.

The time plan for the implementation of Action 2 is in **Table 4** SKILLS+, PP2 Kainuun Etu action plan timetable.

IV.2 Implementation steps and timetable

Table 4 SKILLS+, PP2 Kainuun Etu action plan timetable

Actions			When
Ensuring framework conditions (finding and approval by the IB)			Spring 2019
Action 1 Industry 4.0 project			Summer 2019- Winter 2020
Preparatory stage <ul style="list-style-type: none">- Recruitment of businesses (as a precondition for formulating the application)- Application submitted for funding- Application selected; contracting period and clarifications			Autumn 2019
Implementation stage			
11. Classification of businesses, opening meeting, Activities 1.1 and 1.2: introduction of the project and confirmation of grouping of businesses. We have 3 groups: (1)SMEs that are willing to continue to I 4.0 uptake investments beyond the maturity assessment (option is open to those that participated in the 'Action plan preparation & Stakeholder discussion'); (2)SMEs that are interested to participate in the clustering potential review; (3) SMEs that are seeking to go through only maturity assessment. Activity 1.1 <ul style="list-style-type: none">12. Selection of experts for I4.0 maturity assessment and business plan: Tendering the I 4.0 services. Selection and contracting of experts13. Maturity assessment: Opening workshop for all groups of businesses14. Business plans for I4.0 adoption Activity 1.2 <ul style="list-style-type: none">15. Tendering the clustering assessment services.16. Clustering assessment17. I4.0 maturity assessment for clustering elements across value chain(-s)18. Business plans for the I 4.0 applications to the cluster-based (horizontal) as well as business-based (vertical) priorities. Closing, dissemination and evaluation of Activities 1.1 and 1.2 <ul style="list-style-type: none">19. Criteria for evaluating the pilot action, and momnitoring to feed Action 220. Evaluation report21. Closing meeting			Winter-Spring – Summer 2020 <

Actions			When
2nd RIS3 revision meeting	Assessment of the reports		Autumn 2019
First draft of the revised RIS3	Policy document draft		
3rd RIS3 revision meeting	Evaluation of the draft, requests for adjustments		
RIS3 draft corrections	Improved RIS3 revised draft		
RIS3 document.	Approved RIS3 revision document	PP2 board	Winter – Spring 2020

IV.3 Players involved

- Regional Council of Kainuu, Intermediate Body: Co-funder and local steering committee
- Kainuun Etu Oy: Main applicant, orchestrator of the regional partnership, coordinator, implementation and management
- Kainuu businesses: Beneficiaries
- Stakeholders

IV.4 Budget

Action 1

- Budget: 250 000€ to 300 000€; Funding sources: ERDF & ESF: 70%; Businesses: 15%; Project coordinator (Kainuun Etu): 15%

Action 2

- An estimate of the IB costs for the RIS3 revision is some 70 000€ (staff, experts, meetings) for the IB and some 15 000€ (staff costs) for Kainuun Etu as more than one persons are contributing.

VI. Endorsements

For Kainuun Etu Oy

Date: _____

Signature: _____

Name and position: Antti Toivanen, Managing Director

Stamp of the organisation (if available): _____



For the Regional Council of Kainuu

Date: _____

Signature: _____

JOUNI PÖNNIKAS, DIRECTOR REGIONAL COUNCIL OF KAINUU

Stamp of the organisation (if available): _____



For the Regional Council of Kainuu

Date: 4.10.2019

Signature: _____

PENTTI MALINEN, REGIONAL MAYOR

Stamp of the organisation (if available): _____



