

40ReadyACTION PLAN

HELSINKI-UUSIMAA REGIONAL COUNCIL



General Information

Project	40Ready
Partner organisation	Helsinki-Uusimaa Regional Council
Other partner organisations involved (if relevant)	
Country	Finland
NUTS2 region	Helsinki-Uusimaa FI1B
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Policy Context

Name of the Policy Instrument(s) addressed:
Renewable and competent Finland 2021-2027 - national structural funds programme, in line with the Helsinki-Uusimaa Regional Smart Specialisation Strategy 2021-2025

Type of policy instrument	
Investment for Growth and Jobs programme	YES
European Territorial Cooperation programme	NO
Other regional development policy instrument	YES

Details on the regional context

Helsinki-Uusimaa Region is situated on the south coast of Finland, and is home to around 1.7 million inhabitants, which is more than a quarter of the country's total population. The region includes the only metropolitan area of the nation. In other parts of the region, however, there are still small towns, villages, sparsely settled rural areas and islands. Helsinki-Uusimaa Regional Council is a joint regional authority for the region Helsinki-Uusimaa. The tasks of the Regional Council include regional and land use planning and the promotion of local and regional interests in general.

Industry 4.0 uptake by the manufacturing sector in Finland

Finland has ranked as one of the leading countries in several digital transformation related assessments. For example, Digital Economy and Society Index (DESI) statistics¹ from year 2021 ranks Finland 1st and show that digitalization has advanced well in many areas of the society and that industry, especially, has improved its competitive edge in recent years. However, the improvements are strongly dependent on the company size².

The level of digitalisation refers to companies' ability to exploit digitalisation means in manufacturing processes or supporting activities such as logistics. In Finland, manufacturing SMEs are heterogenic and on different levels of digitalisation. Generally, Finns have strong digitalisation skills, but the overall exploitation throughout the manufacturing processes could be improved to a significant degree. There are highly digitalised companies but there are also manufacturing SMEs lacking digitalisation skills, means and tools. The effective use of digital solutions would raise SMEs' competitiveness. Seamless information exchange and communication are the prerequisites for modern business processes by bringing effectiveness and reliability.



The digitalization of manufacturing industry has generally progressed at an average pace with other sectors of the economy. Finland exports heavy machines (engines, elevators, escalators, cargo handling equipment, plant components/subsystems, mining machines, ships, harvesters, tractors etc.) and designs and builds factories worldwide (pulp & paper, energy, chemical). In these rather niche sectors, the Finnish vendors are global market leaders that are already driving digital transformation, so that the value of digital services and aftersales business count up to about 50% of the revenues³. However, the pace has been slower in SMEs (stat.fi, 2018), and the Finnish manufacturing industry is undergoing polarization of digitalization, with pioneers at one end and SMEs at the other (VTT,2020).

¹ <https://digital-strategy.ec.europa.eu/en/policies/countries-digitisation-performance>

² VTT, 2020, 4. A review of digitalisation in the Finnish manufacturing SME companies

³ Digital Finland Framework, p6

Manufacturing industry SME companies have started to digitalise their operations, but at a slower pace than would be desirable (VTT, 2021). The basic systems are in use, but the companies are yet to take the actual digital leap (VTT, 2021).

SME Industry 4.0: Main barriers

Digital transformation provides new business possibilities, but also sets challenges for manufacturing companies. Besides manufacturing skills, they also need to learn new capabilities. Now manufacturing SMEs are struggling with resource constraints and knowledge gaps that slow down their digitalisation efforts. Moreover, it is difficult to relate digital transformation to either cost reduction or revenue increase for small businesses. The main challenges and barriers to overcome are **limited understanding of the measurable benefits as well as organisational and capital investment requirements implied by Industry 4.0 uptake, insufficient resources and gaps in bringing digitalisation into practice (see figure 1).**



Figure 1. Main barriers of Finnish manufacturing SMEs to overcome in digital transformation (VTT, 2020)

The Finnish manufacturing industry is willing to proceed towards Industry 4.0 and even beyond (VTT, 2020). According to a study made in late 2020 (VTT, 2021) digitalisation of manufacturing industry SME's is developing from manual data management of single companies towards intelligent data processing and analytics in partner networks enriched by the capabilities of artificial intelligence. While interest and motivation towards digital transformation exists and is relatively high, the SMEs in the manufacturing industry seem to be lacking resources and expertise needed for long term strategic planning of digitalization⁴.

Finnish manufacturing SMEs are still finding a path that balances improving current operations with the opportunities afforded by Industry 4.0 technologies for innovation and business model transformations. Key questions include "What to transform?", "Where to invest?" and "Which technologies can be a best-fit for their strategic needs?"

⁴ VTT, 2021, p

Competitiveness and growth is heavily dependent on networks and collaboration of larger and smaller companies, interacting closely with the research sector. The national innovation funding organization has a dedicated funding instrument⁵ for business driven ecosystem creation and facilitation. A regional approach, outlined in this Action Plan, would make this funding source more feasible.

Existing ecosystems & projects supporting digital transformation

Several ecosystems and projects directly related to supporting digital transformation of manufacturing companies exist in Finland. These include Ecosystems supporting digital transformation of manufacturing industry, and thus considered to be among the long term benefactor of the sought policy improvements:

- The **DIMECC Intelligent Industry**⁶ ecosystem focuses on refining digital data into functional physical products and services. The ecosystem acts as a digital innovation hub, helping SMEs with their digital transformations. Key services include, e.g., Finnish Industrial Internet Forum (FIIF)⁷, DIMECC Demobooster, Demola and Machine Learning Academy.
- **LIMOWA**⁸ Logistics Cluster is a Finnish network association to develop and support intelligent logistics solutions and boost the competitiveness of Finnish companies.

Most relevant projects, that have already sparked ecosystem development on I4 and continue to do so:

- **TUDI 4.0 – Digitising Industry project, funded by ERDF**, ended formally in 2020 but has still continuous impact in the Mid-Uusimaa manufacturing sector. The project activated a wide range of companies to develop and streamline internal logistics processes by Industry 4.0 solutions. The method of reviewing material operations and guidelines developed in the project remain freely available.
- **WIMMA - We Master the IoT** is an ongoing project funded by the ERDF, ending in March 2022. The main goal of the project is to encourage SMEs to adopt digital solutions in different areas of their business and to improve their digital capabilities.

The broader enabling context

Policy wise, Business Finland, an active 40Ready local stakeholder, has been the agency providing long term investment in digital and manufacturing technologies, lately though decreased budget allocations, especially in the early phases of the innovation cycle. In 2019, Business Finland launched a new program called Sustainable Manufacturing Finland⁹, which aims to strengthen innovation and production of manufacturing companies in a sustainable way. The program supports the business development and growth of these SMEs. Business Finland channels national innovation funding while, at the same time, also guides businesses and research organisations as to how to access very competitive EU funding. Recently however, budget allocations were decreased, especially funding dedicated to the

⁵ <https://www.businessfinland.fi/en/for-finnish-customers/services/ecosystems>

⁶ <https://intelligentindustry.dimecc.com/>

⁷ <https://fiif.fi/>

⁸ <https://www.limowa.fi/in-english/>

⁹ <https://www.businessfinland.fi/en/for-finnish-customers/services/programs/sustainable-manufacturing-finland>

early phases of the innovation cycle. In the case of 40Ready project, Business Finland is member of the regional steering group, providing inputs as well as mentoring and thus guiding possible future projects. Moreover, Business Finland funds innovation beyond the basic level and with its extended funding options, it is as well a good instrument for follow up funding and ensuring continuity of efforts with scaled up effect.

Building on such policy context, thanks to the cooperation with 40Ready regional stakeholders and to the policy learning, PP2 action plan was developed to addresses two gaps identified: the gap to early stage innovation funding for digital transformation; it also dedicates funding for the process of adopting digital transformation solutions by SMEs and not only for the development of technologies.

Further details on the policy context

POLICY INSTRUMENT ADDRESSED: Renewable and competent Finland 2021-2027 - national structural funds programme, in line with the Helsinki-Uusimaa Regional Smart Specialisation Strategy 2021-2025

Smart Specialisation in the Helsinki-Uusimaa Region -Research and Innovation Strategy for Regional Development 2014-2020 is the RIS3 strategy for the Uusimaa region¹⁰. The RIS3 strategy is connected to the Europe 2020 strategy and the EU growth and employment pact and the policies and financial instruments supporting them.

Helsinki-Uusimaa Region constantly renews its RIS3 strategy, the latest update has been published in May 2021. The strategy is a flexible guidance for HURC's own development actions. Operative work and task to implement the RIS3 framework, and to reach its goals, can and will be influenced by policy suggestions.

The smart specialisation strategy is mainly financed by national funding via the Helsinki-Uusimaa Regional Council (HURC), as well as structural funds, mainly ERDF. In this funding, HURC emphasizes the smart use of resources from both economic, environmental, and social perspectives. The financed projects are divided thematically into projects that support a climate neutral society and circular economy, projects that support the citizens' city theme and projects that support industrial modernisation. Using and developing competences is an important part of the smart specialisation strategy. Diverse competences and strong educational institutions are specific strengths of Helsinki-Uusimaa region. HURC also want to support these competences and making use of them as part of the strategy's implementation. The smart specialisation strategy utilises a wide variety of financial instruments in its implementation. In implementing the strategy, the Helsinki-Uusimaa Regional Council uses national funding for the sustainable growth and vitality of the region.

The 2021-2027 national program for EU regional and structural policy has been accepted. The program is called **Innovation and Skills in Finland 2021-2027**.

¹⁰https://www.uudenmaanliitto.fi/files/16166/Smart_Specialisation_in_Helsinki-Uusimaa_Region_-_Research_and_Innovation_Strategy_for_Regional_Development_2014-2020_B_51_-_2015.pdf

The **Act on Regional Development and Implementation of the European Union's Regional and Structural Policy (756/2021)** lays down provisions on the regional development planning system and its operators as well as on the duties and powers of the authorities. The act also contains national provisions on the implementation of the EU's Interregional cooperation programmes. The Act came into effect on 1 September 2021.

The **Act on the Funding of Regional Development and the European Union's Regional and Structural Policy Projects (757/2021, funding act)** specifies and complements the national application of the regulations on the funds in the programming period 2021–2027. The act also applies to the granting and payment of national funds for regional development and the national counterpart funding for the Interreg programmes and Interreg external border cooperation programmes. The Act came into effect on 1 September 2021.

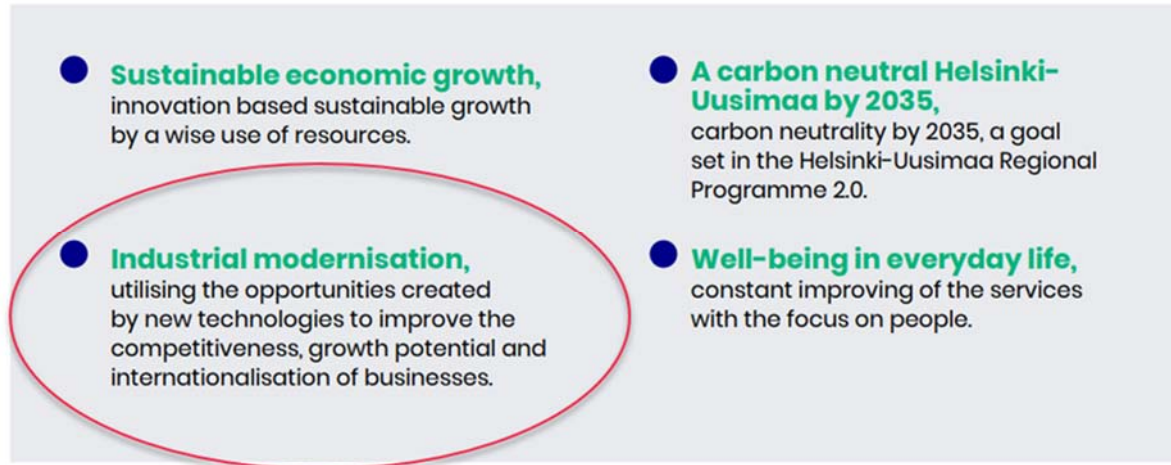
In terms of funding calls, the new programming period on ERDF (and ESF) commences in April 2022, in Uusimaa. The contents emphasize **digitalization**, carbon neutrality and a **changing working life** as cross-cutting themes. The final Finnish regional and structural policy program will have three funds. The Just Transition Fund (JTF) support is practically negligent in the Uusimaa Region. The main themes of the ERDF are green economy and digitalisation. Thirty percent of ERDF funding is proposed for a greener European policy goal.

A new goal in support of digitalisation is to be introduced, aimed at exploiting business opportunities related to digitalisation, the data economy, and technological revolutions. The development of digitalisation is also perceived as key to overcoming the corona crisis. The implementation of the strategy involves financing projects and development facilities implementing the strategy, **supporting regional innovation ecosystems and networks**, promoting cooperation across regional borders to build stronger entities for wider impact, participating and encouraging actors to participate in international networks and platforms, and strengthening the Helsinki Smart Region brand and improving its visibility abroad.

Research-based innovation environments have formed around the region's research facilities and institutions of higher education. They also include various pilot facilities that make it possible to develop innovations further towards commercial readiness. The participation of businesses and cities is crucial to the functionality of these ecosystems. Different platforms and pilot environments are supported in the implementation of the strategy.

The goals of the Helsinki-Uusimaa RIS3 include industrial modernization and innovative services:

Figure 1 The Helsinki-Uusimaa RIS3 priorities



Helsinki-Uusimaa Region constantly renews its RIS3 strategy, the latest update has been published in May 2021. RIS3 is significant in two ways in Helsinki-Uusimaa: it is a Structural Funds Policy Objective 1 (PO1 / TO1 in Finnish) instrument, and, at the same time, it also guides Helsinki-Uusimaa region's own development actions beyond the SF. The RIS3 is an evolutionary document, and it goes through evaluations and recommendations by the Helsinki-Uusimaa Regional Board, i.e. the initial RIS3 document is adjusted accordingly. The financed projects are divided thematically into projects that support a climate neutral society and circular economy, projects that support the citizens' city theme and projects that support industrial modernisation. Industry 4.0 uptake is an essential part of industrial modernisation. The policy instrument change will be reflected into the RIS3 text.

Using and developing competences is an important part of the smart specialisation strategy. Diverse competences and strong educational institutions are specific strengths of Helsinki-Uusimaa region. Helsinki-Uusimaa regional Council prioritises supporting these competences and making them part of the strategy's implementation.

Funding resources, so far as the SF 2021-2027 are under PO1 / Specific Objective 1.1 Taking into use new, advanced technologies. This means deployment of new technologies, such as Industry 4.0 and development of new technologies that could be applied further under Industry 4.0 solutions for example. Deployment of advanced technologies is always linked to the business model, and especially upstream and downstream linkages.

Justification for addressing the 2021-2027 Programming Period in addition to the Smart Specialisation Strategy for Helsinki-Uusimaa

The ROP 2014 - 2020 has been fully committed since April 2021, apart from one REACT EU – call, on which policy and contents were decided on the Ministry level, due to urgency. Therefore, as no improvement or impact was possible, the newly shaped ROP 2021 – 2027, as described above, offers several opportunities for improvements.

The policy improvement will impact the criteria and development of new call(s) under the Renewable and competent Finland 2021-2027 - national structural funds programme, TO1 Smart Specialisation, in line with the Helsinki-Uusimaa Smart Specialisation Strategy.

Policy Need	Typology of Policy Improvement expected
<p>Activity 1.1 Implementation feasibility Policy instrument improvement to ensure implementation feasibility for Activities 1.2 and 1.3</p> <p>Activity 1.2 Digital transformation of SMEs Need for targeted support for SME that have been slow in digitalisation adaption</p> <p>Activity 1.3 Improving services in the regional innovation system Need for increased capacity on Industry 4.0 ecosystem formation</p>	<p>Type 1 new projects</p>

ACTION 1 Speeding up effective digital transformation in SMEs, through new funding call and ecosystem support

The PP2 Helsinki-Uusimaa Action Plan proposes one Action, transferring in depth the MADE DIFFERENT good practice (Wallonia) and inspired by the ITINERARIOS 4.0 good practice (Navarra). The aim is to reinforce the ERDF methodological options and strategic approaches towards effective digital transformation of SMEs. The action plan is aligned with the Helsinki-Uusimaa Region 2021-2025 RIS3. The action plan of PP2 is proposed in response to the self-defined indicator cited in the approved 40 Ready AF: Number of companies that benefit from support services to industry 4.0.

The purpose of Action 1 is to address the gaps summarised in the above session, namely the gap to early stage innovation funding for digital transformation; it also dedicates funding for the process of adopting digital transformation solutions by SMEs and not only for the development of technologies. It is structured into three (3) Activities:

- **Activity 1.1** *Implementation feasibility*
- **Activity 1.2** *Digital transformation of SMEs*
- **Activity 1.3** *Improvement of services provided by the regional innovation system*



Description of the proposed action

Action 1 aims at strengthening regional support system to improve the support of manufacturing industry SME entrepreneurs and managers engaging in Industry 4.0 transformation processes.

The Action aims are twofold: first of all the AP aims at speeding up the digital transformation of manufacturing SMEs and secondly it aims at strengthening regional support system to improve the support of manufacturing industry SME entrepreneurs and managers engaging in Industry 4.0 transformation processes.

More specifically the 40Ready action plan developed for the Helsinki-Uusimaa Region, will address ROP 2021-2027 ERDF Objective 1.2; Utilizing digitalization benefits for citizen´s, companies and the public sector.

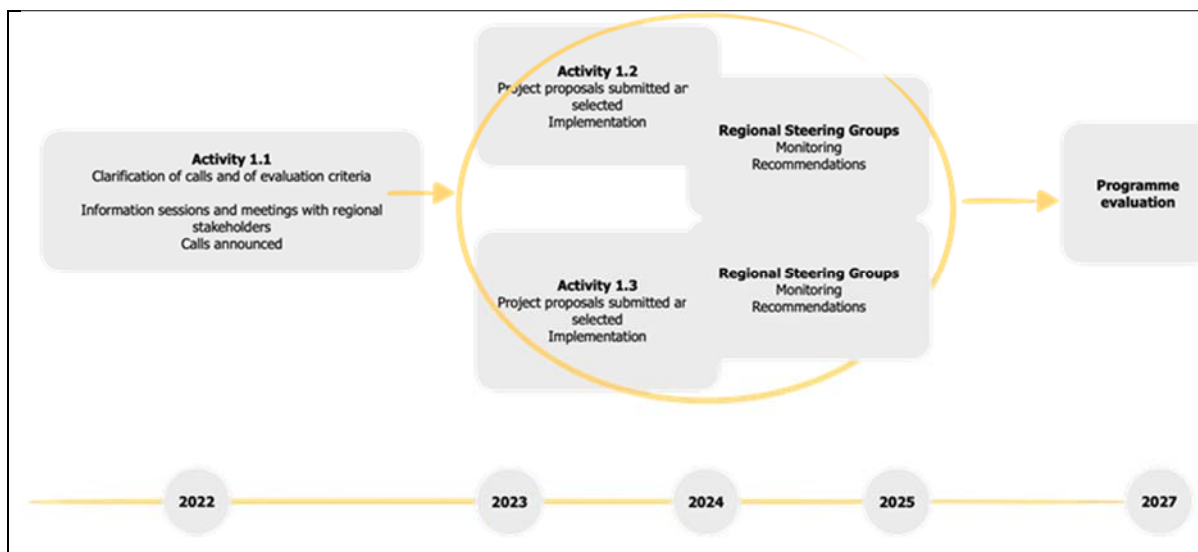
Manufacturing SMEs have been slow to exploit digital tools and infrastructures in general, or to fully digitalize their production and logistical cycles. SMEs have difficulties to find a way to proceed and find suitable (simple and cost efficient enough) tools to implement digital transformation in practice. Furthermore, companies have difficulties to choose a good solution provider. Intervention models should be established and tested.

At different locations in Helsinki-Uusimaa region, different innovation hubs or 'dighubs' have emerged in the field of digital technologies, that successfully support companies to perform digital maturity tests, to develop Digital Transformation Roadmaps and to identify partners and experts at local level. Although these hubs usually work efficiently, they are not always known/found by the manufacturing industry SMEs. Furthermore, our ERDF has not necessarily adequately reflected the specific needs of manufacturing industry SMEs (as opposed to other SMEs). In Phase2, this action will concentrate on local ecosystems and the above shortcomings.

The existing Hubs play an important role as a catalyst in implementing a regional ecosystem in the field of manufacturing industry 4.0 as well as building links to national ecosystem. *A successful ecosystem requires an efficient networking between all stakeholders involved.* To this end, this Action aims to strengthen hubs that are capable in bridging existing support gaps in the field of Industry 4.0 with a primary focus on developing I4.0 Digital Transformation Plans and providing company-specific management support. This is achieved by addressing directly the improvement of the hubs' functionalities, quality of services and interactions, the coherence / complementarity of such improvements between Activity 1.2 and 1.3, and the operationalisation of the approach by the evaluation criteria that are included into the funding calls, see Table 1 in this document.

Concrete Phase -2 activities also comprise efforts towards locally adapted policy changes.

Figure 2 Helsinki-Uusimaa Region, Action 1 implementation timetable



Activity 1.1 Implementation feasibility

Activity 1.1 Implementation feasibility, ensures the funding options for the implementation of the action plan activities. There are two dimensions to this: the legal framework and the actual funding sources. The legal framework is the HUR Structural Funds (SF)/TO1 Competent and Renewable Finland 2021-2027.

The legal framework is ensured by the Helsinki-Uusimaa RIS3 priority on Industrial Modernisation (Figure 1). The RIS3 strategy does not need to change to include I4.0 as it has anticipated it under the Industrial Modernisation priority. The policy improvement comes from R&D calls, published under the Industrial Modernisation theme. The calls integrate thematic criteria grading the added value of submitted proposals including proposals implementing Activities 1.2 and 1.3.

The calls are planned for October 2022. Four indicative criteria are listed below, and they relate Activities 1.2 and 1.3. The criteria under Activities 1.2 and 1.3 correspond to the needs discussed under each one of the activities, Table 1 below.

Table 1 Activity 1.2 and Activity 1.3 evaluation criteria

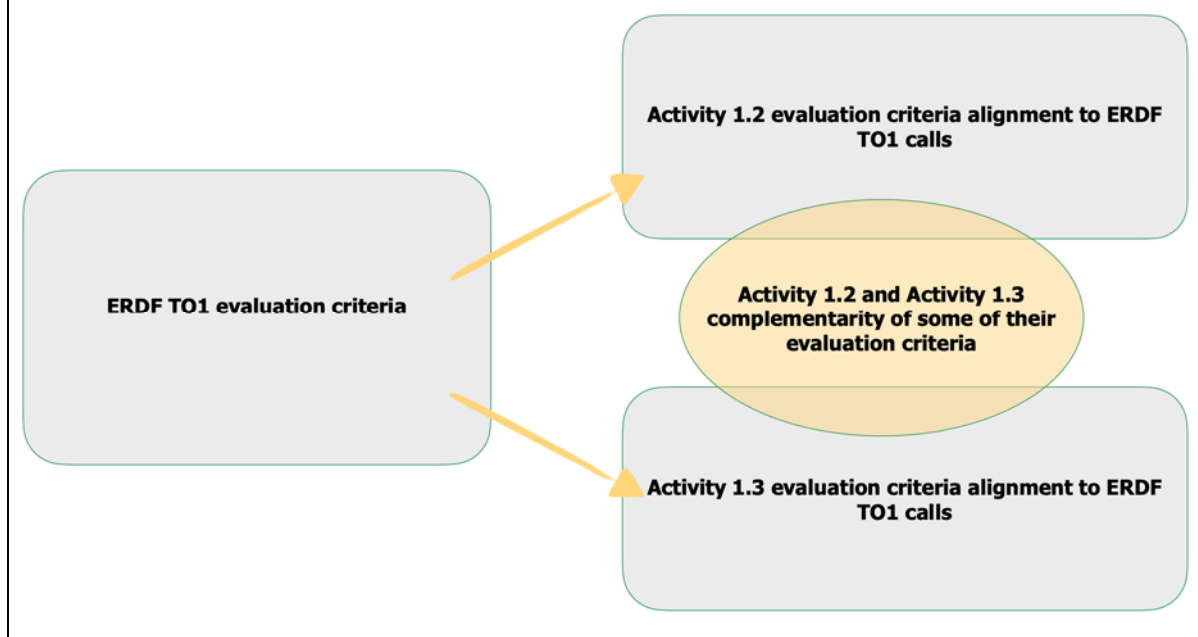
Criteria for RIS3 implementation projects (thematic added value, grading points)	40READY action plan and added value criteria
<p>1. The project has a strong regional dimension and impact</p>	<p>Activity 1.2 Digital transformation of SMEs</p> <ul style="list-style-type: none"> • Ac 1.2-1 The project focuses on different sectorial concentrations and /or clusters located in the Helsinki-Uusimaa area, including eastern and western Uusimaa. • Ac 1.2-2 The project promotes digital transformation of SMEs and especially medium- and lower- tech businesses. • Ac 1.2-3 The project explicitly builds on previously funded relevant initiatives (on their results and lessons learnt). <p>Activity 1.3 Improvement of services provided by the regional innovation system</p> <ul style="list-style-type: none"> • Ac 1.3-1 The project is producing a coordination roadmap for streamlined and improved services based on Industry

	<p>4.0 skills combinations and consolidating interactions among the currently separately operating regional digital hubs.</p> <ul style="list-style-type: none"> Ac 1.3-2 The project provides for organisational adjustment of cluster management units and regional development companies.
<p>2. The project promotes the achievement of Uusimaa's 80% employment target and / or the availability of international experts</p>	<p>Activity 1.2 Digital transformation of SMEs</p> <ul style="list-style-type: none"> Ac 1.2-4 The project includes qualified experts with competence in composite maturity assessment and tailored I4.0 deployment in SMEs. They can be from Finland as well as any other EU member state, provided their qualifications are clear and validated. <p>Activity 1.3 Improvement of services provided by the regional innovation system</p> <ul style="list-style-type: none"> Ac 1.3-3 The project establishes systematic exchanges with EDIHs at regional, national and EU levels addressing the EDIH functions (test before invest, networking and training, finding funding, training and transfer of knowledge function). Ac 1.3-4 The project builds up sectoral eco-system approaches on Industry 4.0 capabilities in the manufacturing and logistics sectors. Ac 1.3-5 The project organises interactions and exchanges with regional and EU research centres relating to I 4.0 solutions, models and technologies.
<p>3. The project will test or promote new types of operating models through innovative experiments</p>	<p>Activity 1.2 Digital transformation of SMEs</p> <ul style="list-style-type: none"> Ac 1.2-5 The project includes: methodological development & testing modelling processes for adopting digital transformation solutions by SMEs and / or development of I 4.0 technologies <p>Activity 1.3 Improvement of services provided by the regional innovation system</p> <ul style="list-style-type: none"> Ac 1.3-6 The project is developing a roadmap for linking all required and relevant I 4.0 actors in the region.
<p>4. The project creates a basis for permanent activities or larger projects with other funding</p>	<p>Activity 1.2 Digital transformation of SMEs</p> <p>Ac 1.2-6 I4.0 uptake is combined with value chain integration.</p> <p>Activity 1.3 Improvement of services provided by the regional innovation system</p> <ul style="list-style-type: none"> Ac 1.3-7 The organisational scaling up and learning proposed by the project are formally integrated into the articles of association and business plans of the regional development companies and the cluster management units. Ac 1.3-8 The organisational scaling up and functional interconnections with EDIHs leads to joint initiatives between and among existing Helsinki – Uusimaa networks. Ac 1.3-9 The project can lead / leads to a project in the BSR. Ac. 1.3 -10 Through existing S3 partnerships, the project leads to I3 (interregional innovation investments) Strand 2a calls.

Activities 1.2 and 1.3 are deliberately conceived to serve coherent and complementary outputs and results. Coherence and complementarity between Activities 1.2 and 1.3 is evidenced by the fact that the former addresses digital transformation issues within companies and the latter ensures that digital transformation in SMEs is further supported and developed through improved services by qualified intermediaries; and that also, there are guiding tools to reference improvements in the future (coordination roadmap). Complementarities are evidenced by a joint objective or complementary nature in the evaluation criteria, see for example, in Table 1 below: Ac1.2-1/Ac 1.3-1, Ac 1.3-2; Ac 1.2-4/ Ac 1.3-3; Ac 1.2-5/ Ac 1.3-6; Ac 1.2-6/Ac 1.3-8, Ac 1.3-9, Ac 1.3-10.

In this way, by explicitly liaising umbrella project calls with Interreg Europe project action plans through evaluation criteria alignment and integration, we achieve a more effective and comprehensive result for the region, Figure 3.

Figure 3 Activity 1.2 and Activity 1.3 synergistic approach



Activity number	Activity Description	Timing
	Activity 1.1 Implementation feasibility	January 2022 – December 2022
	Objective: The objective of Activity 1.1 is to ensure the implementation feasibility of Activities 1.2 and 1.3 and, through that, the Type 1 policy instrument improvement. This Activity has been organised within the Regional Council of Helsinki – Uusimaa, and three teams have come together: the 40Ready project team, the overall Structural Funds team, and the RIS3 team – since the	Announcement of the 1st call October 2022

Activity number	Activity Description	Timing
	Activity 1.1 Implementation feasibility	January 2022 – December 2022
	<p>4.0Ready project is impacting the RIS3 operational programme.</p> <p>Exchanges started in April 2022 to discuss the policy instrument impact. These exchanges led to the preliminary understanding, that the criteria for evaluating proposals of the 4.0Ready action plan (Table 1) would be considered to the evaluation criteria of the forthcoming ERDF call TO1, in the late autumn 2022.</p>	

Activity 1.2 Digital transformation of SMEs

Activity 1.2 Digital transformation of SMEs, draws from the 40Ready Good Practices exchange of the GPs Itinerarios 4.0 (the multidisciplinary approach) and Made Different (Transformations 1, 3 and 7). Manufacturing companies develop their products and services taking into account and linking to the entire value chain they operate in. This means that their digitalisation considers all processes, like production, sales, technical maintenance and recycling. A crucial aspect in this approach is the implementation of virtual models and simulations. This activity adds value throughout the value chain and can result in more robust and faster processes whilst maintaining high quality. More flexible manufacturing batches will be possible. The networked factory concept, especially supporting SMEs towards more solid and reliable supply-chain positions, where the different digitalisation elements can be shared and further developed. Digital twins of tools and processes could be one example of this. Manufacturing SMEs are reluctant to spend on digitisation without a proof-of-concept or simulation possibilities – these will be developed.

Activity 1.2 addresses challenges such as: The gap to early-stage innovation funding for digital transformation; methodological development & testing modelling processes for adopting digital transformation solutions by SMEs and not only for the development of technologies; promoting digital transformation to SMEs and especially medium- and lower-tech businesses; the opportunity to build on previously funded relevant initiatives (on their results and lessons learnt) while at the same time, proposing comprehensive solutions (for example through the ITINERARIOS GP).

Activity number	Activity 1.2 Digital transformation of SMEs
Timetable	January 2023 – June 2023
Activity description	<ul style="list-style-type: none"> Objective: This activity adds value throughout the value chain and can result in more robust and faster processes whilst maintaining high quality. For example, more flexible manufacturing batches will be possible. Stakeholders involved: In the project implementation, the steering group consists of (i) designated representatives of the funder, (ii) project manager of the approved project; (iii) representatives of institutions relevant to the project. This may include innovation intermediaries, universities and businesses. For example, a steering group might include: Helsinki-Uusimaa Regional Council; Techvilla Ltd; Business Finland; Universities of Applied Sciences; other development companies. The steering group is defined once the project is approved.
Implementation steps	<p>[1]. Announcement of the ERDF TO1 call October 2022 and information sessions regarding expectations to regional potential applicants</p> <p>[2]. Selection of applied projects</p> <p>[3]. Implementation of the projects by the selected applicants</p> <p>[4]. Evaluation and lessons learnt, internal assessment in each one of the projects.</p> <p>[5]. Closing of the projects</p>
Milestones	<ol style="list-style-type: none"> Selection of the 40Ready – AP related project applications. Achievement steps: <ol style="list-style-type: none"> Assessment of maturity of SMEs & findings per project Digital transformation plans per SME Implementation of digital transformation plans Monitoring & improvements Steering group meetings (1 every 3 months) Presentation of results to the regional board
Monitoring provisions	<p>[1]. Project-associated Steering Groups; selection based on expertise, usually bi-or triannual meetings</p> <p>[2]. Regional Board of Helsinki-Uusimaa Region; meetings 6-8 times per year</p>
Estimated budget per project	Approximately 300 000€; 3 projects are anticipated for Activities 1.2 and 1.3.

Activity 1.3 *Improvement of services provided by the regional innovation system*

Activity 1.3 *Improvement of services provided by the regional innovation system supporting the digital transformation of the economy including SMEs.* **Activity 1.3** is based on thinking displayed by the good practice Made Different, especially transformations on novel production devices, integrated engineering, and flexible batching or smart manufacturing. All aspects have ecosystem wide implications, allowing sector wise and supply chain specific improvements within a given ecosystem. Ecosystems play a key role in the economy because ecosystem actors spur each other on, complementing each other's expertise and capabilities. They can also provide their customers with added value that would not otherwise be available. Here we refer to this widely accepted definition for an ecosystem:

Ecosystems are built on interaction between companies, entrepreneurs, research, public administration and third-sector actors. An ecosystem is both a structure and an interactive process, in which actors complementing each other join forces to create value. Ecosystems have a large number of parallel network structures sharing the same vision and same objectives and incorporating an operating model steering the process of implementing the objectives (strategic roadmap).

Activity 1.3 addresses challenges such as: organisational scaling up of business intermediaries (regional development companies, cluster management units, etc...) to better support I4.0 deployment by SMEs, especially those of mid- and lower- tech industries; constructing a coordination roadmap for streamlined and improved services based on Industry 4.0 skills combinations and consolidating interactions among the currently separately operating regional digital hubs; building up sectoral eco-system approaches on Industry 4.0 capabilities in the manufacturing and logistics sectors; organised interactions and exchanges with regional and EU research centres relating to I 4.0 solutions, models and technologies; establishing systematic exchanges with EDIHs at regional, national and EU levels; establishing networks with similar intermediaries and seeking expansion of activities as well as of regular updating and improvement of own skills.

Activity number	Activity 1.3 Improvement of services provided by the regional innovation system supporting the digital transformation of the economy including SMEs.
Timetable	January 2023 – June 2023
Activity description	Objective: To address organisational scaling up of business intermediaries (regional development companies, cluster management units, etc...) to better support I4.0 deployment by SMEs, especially those of mid- and lower- tech industries. To include, as part of this scaling up, organised interactions and exchanges with regional and EU research centres relating to I 4.0 solutions, models and technologies; establishing systematic exchanges with EDIHs at regional, national and EU levels; establishing networks with similar

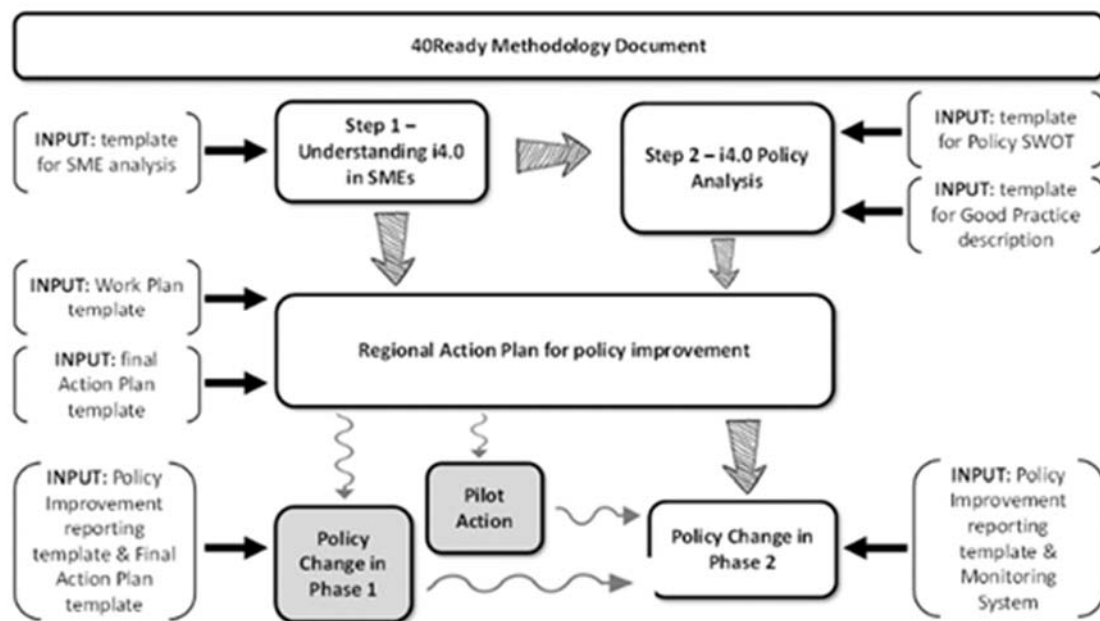
Activity number	Activity 1.3 Improvement of services provided by the regional innovation system supporting the digital transformation of the economy including SMEs.
	intermediaries and seeking expansion of activities as well as of regular updating and improvement of own skills Stakeholders involve: Helsinki-Uusimaa Regional Council; Techvilla Ltd; Business Finland; Laurea University of Applied Sciences
Implementation steps	[1]. Announcement of targeted calls and information sessions regarding expectations to regional potential applicants [2]. Selection of applied projects and implementation [3]. Evaluation and lessons learnt; regional stakeholder group meetings [4]. Monitoring & improvements [5]. Closing of the projects
Milestones	1. Selection of the 40Ready – AP related project applications. 2. Achievement steps <ul style="list-style-type: none"> a. Constructing a coordination roadmap for streamlined and improved services based on the Industry 4.0 skills combinations within the now separately operating regional digital hubs b. Establishing an Industry 4.0 regional support network targeting small size manufacturing SMEs. c. Building up sectoral ecosystem approaches on Industry 4.0 capabilities in manufacturing and logistics sectors. Three sectoral scaling-up events will be arranged. 3. Steering group meetings (1 every 3 months) 4. Presentation of results to the regional board
Monitoring provisions	[1]. Project-associated Steering Groups; selection based on expertise, usually bi-or triannual meetings [2]. Regional Board of Helsinki-Uusimaa Region; meetings 6-8 times per year
Estimated budget per project	Very tentative approximation: 3 projects, each around 300 000 euros are anticipated for Activities 1.2 and 1.3.

Contribution of the regional stakeholders	
<p>Regional / National input, including input from Stakeholder Groups</p>	<p>Wider national efforts on the twin transition, digital and green, in place, but 40Ready brings added value and regional insight in targeting especially the Industry 4.0 elements in Uusimaa Region´s manufacturing SMEs. This has national significance as the Region creates almost half of the Finnish GDP. The Agency has a unique view also in Uusimaa´s industrial landscape and has brought to the discussion knowledge of more specific needs that have not yet been fully attended.</p> <p>Business Finland, as a national operator, has been a valuable LGS member and has also contributed in validating our activities.</p> <p>The other local stakeholders, especially the Universities of Applied Sciences (with a very broad SME connection) and the Regional Development Centres (with a holistic insight in the Uusimaa sub-regions and supply chains) have also been very helpful and creative. The Local Steering Group has met on every 40Ready semester as reported. The policy needs were identified during the first two semesters. The common needs were discussed further during the Interregional Workshops.</p> <p>Finally, a valuable contribution was received from Techvilla Ltd, a Mid-Uusimaa regional development centre that has successfully led the ground-laying ERDF projects TUDI 4.0 and WIMMA, both very good examples of what can be achieved in the Industry 4.0 promotion.</p>
<p>Transfer of Good Practices (interregional input)</p>	<p>The exchanges with both local partners of PP2 in Uusimaa and the partners of the 40Ready project both highlighted a relatively high degree of commonality in challenges for Industry 4.0 development policies. From the learnings gained during the 40Ready project study visits and the good practices identified in the project, the Local Steering Group has adapted elements into this Action Plan from the Wallonian GP "Made Different" and the "Itinerarios 4.0" GP of Navarra. These good practices demonstrated successful digital transformation being achieved through a clear and detailed program with the aim to reach Factory of the Future.</p> <p>The Wallonian GP "Made Different" has been of particular interest in offering insight into overcoming the SMEs difficulties to find way to proceed through offering tailor-made support for reaching a level of excellence. "Made Different", besides being an awareness program, also offers a methodology to assist manufacturing industry into an authentic Factory of the Future. The "Made Different" is designed to help manufacturing industry SMEs which faces challenges like new markets, new technologies,</p>

	<p>new social requirements and new competitors. The GP was initially shared by the 40Ready partner Public Service of Wallonia through the Methodology Document, during the policy context analysis activities carried out in Semester 2. It was further deepened on occasion of the peer review held on 16/09/2021.</p> <p>The "Itinerarios 4.0" of Navarra is a funding measure shared by the partner Regional Government of Navarra that aims to help industrial SMEs in the elaboration of their Digital Transformation Plans (DTP) using company specific coaching. The Local Steering Group in Helsinki discussed this GP in the 2nd Semester meeting. By contracting specialized external advice, a diagnosis of the company's degree of digital maturity are made and an individual STP will be drawn up for the company. These elements have inspired our writing of Actions, with modifications, of course. The DTP allows the company to adapt its business model, processes, and products to the new business environment, making use of digital enabling technologies. The GP was presented and exchanged on several occasions: on 10/12/2020 and 29/01/2021 on occasion of 2 bilateral group exchanges, as well as during several peer reviews involving multiple 40Ready partners on 03 and 18/06/2021 and on 16/09/2021.</p> <p>The experience of Finnish stakeholders, exchange with partners and participation in the 40Ready Policy Learning activities has emphasized the importance of a clear process supporting SMEs in developing Digital Transformation Roadmaps-</p>
<p>Other input from the project (interregional input)</p>	

Work plan within Phase 1 – ELABORATION of the Action

Starting from Semester 1 of 40Ready, the Phase-1 Work Plan was launched in cooperation with regional stakeholders by analysis measures to gain a reliable view on the current I4 in the region; past experiences, mood/motivation among SMEs; inhibitors to adopt, supply chain demands etc.



Together with the regional stakeholder group, we also worked to understand in depth the evolving terminology on I4; in order to be able to differentiate between general hype and those parameters having value. Public partnerships for I4 promotion were identified. Past and present nation-level programmes addressing I4 in general and transformation in SME's in particular were analysed in order to avoid overlap and to recognize weaknesses.

Especially the annual Digibarometer that has been produced since 2014 has been useful. It conveys the digital position of the nation (and it's leading regions), the changes in capabilities and the relation towards some other nations. The barometer measures mainly the utilization of the digital opportunities and offerings on three levels; requirements, usage and impact and on three main societal sectors; private companies, public sector and the citizens.

SME's come in many forms, sizes and resources – so it is critical to understand the needs in depth. Footwork and dialogue was performed among SMEs and their supporting actors in the region. The elaboration initially addressed SME's with fully digital business models and general upskilling and vocational training aspects.

Risk and Contingency Plans		
Description of Risk	Level of probability (High, Medium, Low)	Description of Contingency Plan
Final funding availability	Low	Identifying other and complementary funding
Coverage of targeting the SMEs in the region	Medium	An open pre-market approach, coordination of efforts, strict monitoring

Costs and funding sources	
Costs	Funding Sources
500k€ – 1M€	ERDF Action line 1.1 (targeted)

Monitoring		
Self-defined Performance Indicators		
Indicator	Target	Means of Verification
Confirming the original indicators		
Output Indicators		
Indicator	Target	Means of Verification
Number of SMEs participating in the call for funding	50	Event and participatory data
Number of SMEs benefitting	30	Post-activity survey
Call submissions	10	
Call success rates for SMEs	4	Participatory data

Date	[see e-signature stamp]
Name of the organisation	Helsinki-Uusimaa Regional Council

Signatures of the relevant organisation

[e-signed]

Ossi Savolainen
Regional Mayor

SIGNATURES**ALLEKIRJOITUKSET****UNDERSKRIFTER****SIGNATURER****UNDERSKRIFTER**

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