



InnoHEIs Action Plan for the Tampere Region



PIRKANMAA

InnoHEIs
Interreg Europe



European Union
European Regional
Development Fund

Part I – General information

Project: InnoHEIs

Partner organisation(s) concerned: Pirkanmaan liitto (Council of Tampere Region)

Country: Finland

NUTS2 region: Länsi-Suomi

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Part II – Policy context

The Action Plan aims to impact: Investment for Growth and Jobs programme
 European Territorial Cooperation programme
 Other regional development policy instrument

Name of the policy instrument(s) addressed:

Finland's structural fund programme Innovation and Skills in Finland 2021 - 2027

Further details on the policy context and the way the action plan should contribute to improve the policy instruments:

The Managing Authority (MA) of Finnish ERDF programme is the Ministry of Economic Affairs and Employment, which has channelled funding and delegated tasks to the Intermediate Bodies in the regions like Council of Tampere Region. Regional development targets are defined in the Regional Development Programme including Smart Specialization (S3). The Regional Development Programme covers a four-year period 2021-2024 and it defines the allocation of ERDF funding in the Tampere region.

Council of Tampere Region and Tampere University of Applied Sciences (TAMK) are partners in the InnoHEIs project. The two organisations have designed and developed the Regional Action Plan (RAP) and they will see the implementation and the monitoring of the RAP jointly.

From the Finland's previous structural fund programme Sustainable Growth and Jobs 2014-2020 and from REACT-EU recovery funding channelled through ERDF the council has financed several projects related to the RDI infrastructure development work in the Tampere region. Regional RDI and educational infrastructure owners are actively involved in the big national industrial manufacturing RDI networks like Sustainable Industry X (SIX) and SIX Manufacturing EDIH, which facilitate national and international collaboration and boosts operational excellence, knowledge, and innovation. These networks are directly related to the InnoHEIs thematic. The SIX Manufacturing network gathers and further develops the best manufacturing and digitalisation knowledge, ecosystems and infrastructures. National RRF funding delivered through Business Finland also support this kind of activities now. The goal of the national AI 4.0 programme is for Finnish industry to be clean, efficient, and digital by 2030. These programmes also promote the ability to network internationally.

However, the amount of ERDF funding through Finland's new structural fund programme Innovation and Skills in Finland 2021-2027 to be delivered by the council proved to be very limited. This funding will only allow for small-scale, individual, tailored projects that meet the challenges of the region's specific needs. ERDF priorities to be implemented in the Tampere region in 2021-2022 are 1) Innovative Finland and 2) Carbon neutral Finland. Of all ERDF -measures 35% are aimed at



combatting climate change. Good news is that during the first two years (2021-2022) most of the funding (1,8 M€) will be allocated at improving research and innovation capacity and the uptake of advanced technologies.

While the total amount of ERDF funding distributed through the Council is remaining relatively modest – 3 M€ for the first two years - with this Action Plan we are also working to catch up on new national and European partnerships and future investments in the digital and green transition in our key technologies. Digitalisation and the data economy are the cornerstones of Finland's growth policy. Ongoing digital compass process in the Tampere region has put the needs for the development of digital infrastructure, skills, business and public sector at the centre. We will sharpen the profile of Tampere region and the regional strategy related to the European and national digital targets and funding programmes (including EDIC). The key questions in the following years are: How to find partners to access new financial instruments? What kind of partnerships are being built and on what basis?

Part III – Details of the actions envisaged

ACTION 1:

PLAYBOOK WORK AS A CATALYST FOR NEW PROJECTS

1. Relevance to the project

Data collected on Tampere region level RDI infrastructure with the excel tool provided by InnoHEIs project was visualised (MS Power BI tool) during winter 2020-21 and discussed with regional and some national level stakeholders and InnoHEIs partners. The discussion underlined the weak knowledge of the regional RDI ecosystems among industry and poor use of EU's research and development financial and co-operation opportunities channelled to the European regions. The conclusion was that there are many RDI environments of both research, educational and industrial orientation. But the main questions are: Does anyone outside of the environment know about them? The supply exists but is not easily found. How to make it available? Researchers investigate but are unable to respond to service requests. There is no common logic, and resources are needed to build the whole.

The Katowice partner meeting on 19-20 January 2021 was really a starting point to this action. Katowice shared best practice about virtualised laboratory tour (EMT-systems). Tampere University of Applied Sciences (TAMK) decided to make the same. COVID-19 restrictions facilitated the process. Infra level 360 virtualisation model was piloted (Matterport). Demo videos were made. In the piloted process technologies, devices needs were identified and selected. Implementation process guidance/instructions were done. Capabilities and competences were defined and created. Infrastructure's web page/presentation structure was also harmonised



and connected to national SIX (Sustainable Industry X network) Manufacturing EDIH. Development and mapping of infrastructure's services and value propositions were implemented. Hyper connected infrastructure was defined and piloted. As result of all work done virtual models will be created in the process development from four important manufacturing industry infrastructures: FieldLab (TAMK), FMS Training Center (Fastems Oy company), RoboLab (Tampere University) and HMC Lab (Tampere University). So-called TreDIH project (ERDF funding provided by Council of Tampere region) will join these infrastructures as a networked environment.

We call this RDI and education infrastructure visibility and availability work by the name Playbook work. So far, the playbook work has highlighted the following conclusions about opening and linking infrastructures to a networked environment. In terms of opening up infrastructures, visions are still far from industrial use. Almost all resources now are part-time or project specific. Supply is undefined. The industry knows a little about the opportunities. The science interface is challenging, but the role is discoverable. All infrastructure owners have different opening logics.

Playbook work will continue during Phase 2. Best practices, openings and service models are now worked out through playbook work. This work is composed of on-site analysis of the current situation, of national and international best practices and rules of co-operative model. Guidelines for infrastructure providers from perspectives of marketing, communication and productization of services are compiled. The playbook work continues in such a way that the goals of the playbook work are agreed upon, an action plan for the playbook is compiled. This means collecting information on infrastructure for use in the manufacturing industry and how to generate (4G, 5G) and integrate the resulting information into common information. The playbook work would focus on linking data resources from the networked environment created based on the previous background description. This would result input to the playbook, which markets aggregated infrastructures. The playbook will include model instructions and a consistent depiction of how the infrastructures will be utilised. In the future, companies will be welcomed for virtual tours of the infrastructures. It is easier than ever for companies to come up with ideas on how to take advantage of the infrastructure.

This work has and will be done as part of TAMK's Smart Manufacturing Hub project (1.10.2020-31.10.2022). Playbook work is only one part of the project's work package 3 "Smart manufacturing Hub testbeds: RDI environments to support companies RDI activities" . Smart Manufacturing Hub project is funded by the Council of Tampere Region. The funding comes from Finland's structural fund programme Growth and Job 2014-2020.

All this work lays foundation for projects that will be funded from Finland's structural fund programme Innovation and Skills in Finland 2021-2027. During 2021-2022 the majority of funding will be allocated to improve research and innovation capacity and the uptake of advanced technologies.



2. Nature of the action

During InnoHEIs project TAMK has carried out RDI infrastructure visibility and availability development work with concrete results and conclusions. The goal of this so-called playbook work has been to outline the use of different environments and infrastructures from different perspectives and to create a starting point for further development. The playbook collaboration and related mapping, analysis, conclusions, and proposals for further action provide a collaboration base on which new projects to be funded in the region can be build. Playbook work lay the foundation for wider collaboration and helps to direct funding to further interconnection. During the first two years (2021-2022) most of the funding will be allocated at improving research and innovation capacity and the uptake of advanced technologies.

The first call for applications under Innovation and Skills in Finland 2021-2022 in the Tampere region was launched on 12 May (Phase 1 in InnoHEIs) and will be closed on 15 August 2022 (Phase 2 in InnoHEIs). Applications may be submitted under this funding round to the Council of Tampere region for all five specific objectives of which the following to are the most promising to the InnoHEIs thematic:

- 1.1. Improving research and innovation capacity and the uptake of advanced technologies (total funding 1 800 000 M€)
- 1.2. Reaping the benefits of digitalisation from the perspective of citizens, businesses and the public administration (total funding 318 000 €)

The level of support for development projects will be 60% and for investment projects 50 %. Beneficiaries may include, for examples, research and educational institutions, public development companies, municipalities, organisations owned by municipalities, non-profit associations, and organisations. The results of development projects must be of general use. Although the council cannot directly finance the project of an individual company, general development project may, to a limited extent, include company-specific development measures, which are carried out in the so-called de minimis aid measures.

During Phase 2 of InnoHEIs project the council will evaluate the applications received in the first ERDF call and select the projects to be funded. We will see how many and what kind of projects related to InnoHEIs thematic will be financed.

The further calls will be designed and launched before the end of Phase 2 in InnoHEIs.

3. Stakeholders involved

Council of Tampere region has approved the regional development programme incl. S3, selected the specific objectives and launched the first ERDF call during the Phase 1. In Phase 2 the council evaluates the applications received in the first ERDF and selects the projects to be funded.



Tampere university community (TUNI), Tampere university of Applied Sciences (TAMK) and other owners of RDI and educational infrastructure for use of manufacturing industry, like VTT (State's research centre), professional education institutions, etc. who may participate the funding round organised by the council.

Private companies as owners and users of infrastructures can take part in the funded development projects but only to a limited extent (de minimis measures only).

4. Timeframe

The first ERDF funding call opened on 12 May 2022 and it will be closed on 15 August 2022. It is probable that there can be several applications because the council will deliver the funding of the years 2021 and 2022 in the same time. The delay in launching the first call was due to delay in opening the national structural fund information system EURA. We will however estimate that during Phase 2 (ending at the end of July 2023) of InnoHEIs we will have the results of the first ERDF call.

5. Costs

No additional costs are needed. The total amount of ERDF funds to be allocated to projects funded in the first call will be 3,1 M€.

6. Funding sources

No additional costs are needed. The amount of ERDF funds affected by the calls will be 3,1 M€

ACTION 2

ECOSYSTEM INTERACTION AND DIGITALISATION EMPHASIS IN ERDF FUNDING ROUNDS

1. Relevance to the project

Today, partnerships are increasingly becoming ecosystems where different actors may increase their understanding of a particular theme such as manufacturing and the digital transition. Such trends like digitalization now affect many ecosystems and certainly the cooperation between different ecosystems will be more important in the future. This is why it is important to observe cooperation and interaction possibilities between different digital platforms.

The experts of the Council of Tampere Region recognise the need to increase the interaction and cooperation between different ecosystems in order to support the creation of new innovations. In the Action 1 we explained how Tampere University of Applied Sciences (TAMK) has started to promote opportunities for



cooperation and interaction through playbook work. In the playbook the locations and the possibilities for e.g., rapid production trials by companies in the regional educational and research oriented laboratories and environments are presented.

On 19–20 January 2022 our InnoHEIs partners in Mid-Sweden introduced the same kind of challenges of networked activities related to decentralised location of the RDI facilities. There were the same Swedish and Finnish companies in networked ecosystems in both countries. Developing digital strategies and profiles for our regions might help the collaboration between different regions in Europe.

From the point of view of InnoHEIs thematic, for examples, the National Sustainable Manufacturing X (SIX) ecosystem could substantially benefit from the SoC Hub ecosystem of Tampere University community (TUNI) and of regional companies. This kind of cross-pollination of ecosystems is even more important in the future. As part of the InnoHEIs, it has been important to take a look at the work that EU Commission has done with the European Digital Compass and to see what we can do in the region.

Digital Compass process in the Tampere Region is our tool for working towards the cross-pollination of ecosystems in the Tampere region, nationally and internationally. The RDI infrastructure dimension could be a part of this digital compass process and could benefit from Finland's structural fund programme Innovation and Skills in Finland 2021-2027 and further new European policy instruments later. Like EU commission presented a vision for Europe's digital transformation by 2030 we also in the Tampere Region have started similar kind of digital compass process which will be used as a tool to carry out digital transition in our region. With the help of this process the challenges and weaknesses associated with the digital transformation are identified and addressed. The objectives of the ongoing process are

- Allocate and increase strategic investments in digitalization in the region and increase the synergy of digital policies and investments
- Sharpen the profile of Tampere Region and the regional strategy related to the European and the national digital targets and funding programs (incl. EDIC)
- Attract business, partners, skilled workers and investments
- Improve the verifiability of the impacts of digital policies
- Provide content and influence on the national digital compass

Digital compass process of Tampere region defines an agenda for a decade with measurable strategic goals in four different areas: digital skills, digital infrastructure, use of digital technologies in the companies, and digitalisation of public services. In these four directions we will identify the main goals in the region to be reached by 2030. The process consists of baseline analysis, thematic workgroups, citizen engagement campaign and open workshops and final events. The digital compass will be completed in Q2/2022. The first results of the working groups of the digital compass process will be published in a public event on 23 May 2022. Regional actors and citizens are widely invited to the event and the results will be widely publicised through the council's website and other channels.



The implementation of Tampere region digital compass starts during InnoHEIs Phase 2. Part of the implementation will be the ERDF funding rounds related to the promotion of digitalisation organised by the council.

Digital compass process offers possibilities for cooperation between different ecosystems and on interregional level. It allows us to increase digital investments and cooperation, for which we have a good starting point, e.g., through our financed projects. In coming years, we will be exploring the possibilities to join European partnerships and funding (incl. EDIC). Of interest is for example the European Gaia-X initiative aimed at defining ways to reliably share distributed data. In Finland this work is directed by the national Gaia-X Hub in SITRA whose working groups can be joined by those interested. The national working groups develop data space infrastructure for the needs of common Europeans e.g., in industry development. Another interesting topic is the recently announced EU Chips Act which aims to strengthen the European technological sovereignty and boosts Europe's capacity in the technological race with Asia and the US. EU Chips Act will also contribute to solving the shortage in chip production. Today, top-level technology is created mainly outside of Europe, and typically, European companies use technologies that don't represent the state-of-the art. Finland, on the other hand, has always known how to make use of leading-edge technology. The future of any leading-edge company in Finland requires strengthening the know-how in the field of System-on-Chip (SoC) design. Our competitiveness is tightly linked with having the SoC expertise in our own hands. In Finland, Tampere University has been the leading educator of digital designers for a long time. The growing need for SoC design expertise has been anticipated by deepening the university's SoC training. Tampere has been the crucial R&D centre for Nokia's SoC activities. The SoC Hub Initiative coordinated by Tampere University and Business Tampere, was established in 2020 to develop a national ecosystem for SoC design. It strengthens the expertise and helps currently chip companies to build their competences to the next level. Furthermore, it combines academic research and business activities and aims to enhance the international competitiveness of Finnish companies.

Our Digital Compass team will find out how to monitor the impact of our digitalization policy. The regional compass work will give input to the national level digital compass work in which the national Gaia-X Hub working groups and the role of the regions will be considered. We will be involved in the process and make sure that the data resources and the data they contain are included in the digital compass and its implementation.

In the next steps we try to find out if other European regions/ project partners have, for example, SoC Hub relevant expertise/interests. Putting effort and investing now in this kind of ecosystem interaction and digitalisation we can increase the possibilities to get more international partnerships and investments to the region. In addition, the Soc Hub brings a substantial competitive advantage to businesses across any industry that uses ICs, which is practically all industries.

The aim of this action is to support activities which move towards future investments in digital technologies.



2. Nature of the action

During InnoHEIs Phase 2 we will start implementing the vision and the agenda of Digital Compass in the region. That means that we can also allocate our ERDF funding to the identified focus areas.

First ERDF call was launched on 12 May 2022 and will be closing on 15 August 2022. In this first call especially the specific objectives 1.1. and 1.2. can allocate funding to the projects which support the vision and measures identified in the digital compass process in the region. During the Phase 2 we still have possibilities to format and launch next ERDF calls.

3. Stakeholders involved

Council of Tampere region has launched the first ERDF call during the Phase 1. During Phase 2 the council evaluates the applications received in the first ERDF call and selects the projects to be funded. We will be able see how many and what kind of projects related to the interaction and digitalisation of the ecosystems will be financed. The council also start preparing the next calls.

Tampere university community (TUNI), Tampere university of Applied Sciences (TAMK) and other owners of RDI and educational infrastructure for use of manufacturing industry, like VTT (State's research centre), professional education institutions, etc. who may participate the funding round organised by the council. Private companies as owners and users of infrastructures can take part in the funded development projects but only to a limited extent (de minimis measures only).

During Phase 2 of InnoHEIs the digital compass team of the Council of Tampere Region will continue the implementation of the Digital Compass process as described above. The team will follow the regional actors' participation in Gaia-X working groups. SoC Hub activities will be coordinated by Tampere University and Business Tampere.

4. Timeframe

The digital compass (Vision and agenda) will be completed in Q2/2022. The implementation starts and the first results could be seen during Phase 2 of InnoHEIs. We will have the results of the first ERDF funding round. The preparation and the selection of the specific objectives of the second ERDF call will take place during Phase 2. We will see how the digital compass process in the region will influence the call.

5. Costs



No additional costs are needed. The total amount of ERDF funds to be allocated to projects funded in the first call will be 3,1 M€. The implementation of other Digital compass activities (monitoring etc.) will be covered by the council's yearly budget

6. Funding sources

No additional costs are needed. The amount of funds affected by the call will be 3,1 M€ in the first ERDF call.
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SIGNATURE OF THE ACTION PLAN

I hereby confirm that Council of Tampere Region as a partner of the InnoHEIs project with this Action Plan has defined priority actions target towards the improvement of policy planning and its instruments that are essential for the Tampere Region.

Date

Name of the organisation

Signatures of the relevant organisations