



Annex 1 – Action plan

Part I – General information

Project: **Interreg Digi Best**

Partner organisation: **Trøndelag County Council**

Other partner organisations involved (if relevant): N/A

Country: **Norway**

NUTS2 region: Trøndelag

Contact person: **Eistein Guldseth**

email address: eisgu@trondelagfylke.no

phone number: +47 41 47 48 26

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 addressed: **Smart societies, Industry 4.0 Trøndelag**

Part III – Details of the actions envisaged

ACTION 1: Expanding and updating Policy Instrument Industry 4.0 Trøndelag.

1. **The background** (please describe the lessons learnt from the project that constitute the basis for the development of the present Action Plan)

As the Industry 4.0 Trøndelag project proceeded, it was evident that the PI had to be better anchored in the County Councils main gov. strategic documents. It is imperative that *Digital Transformation* is formally acknowledged as a cross sectional key-area for regional development of small- and micro-businesses, and that main governing regional policy documents reflects this. The main task of the action is to implement a concept *digital transformation* into the *Value creating strategy*. This action had to be executed in 2021, when the Strategy was up for revision, and it was finished in December 2021. As next revision is only due to 2025, it was necessary to act urgently. The term and concepts were not present in any of the drafts at that point. The challenge is that digital transformation is an overarching and rather diffuse concept for most. Still it can be considered as one of the most important parts of a future strategy for the region, digitalisation and new business models being fundamental in a societal development perspective.

It is necessary to frame the term *digital transformation* in the section Technology in the Strategy more broadly, in a larger context like *sustainability*, namely the twin transition. *Twin transition* was brought up at one of our DigiBest Cafe meetings with stakeholders, by an external expert (PhD Mr. Lars Molden, Nord University), who held a presentation addressing, among other things, this topic. That was vital for the thinking further on in the project. It became evident that one cannot speak of digital transformation alone, forgetting one of the most important prerequisites for the future: sustainable new business models. A link should therefore be created between the Technology and the Sustainability section of the strategy.

A solution was to approach *digital transformation* as one of the twins in *Twin Transition*, the other being *sustainability*. *Sustainability* had to be addressed within the Sustainability section, then with digital transformation as the other twin.

The need to update the Industry 4.0 Trøndelag program design is also evident after experiences from the DigiBest project; mainly input from peer review and site visit in Portugal, concretely a good practice Programa Portugal Industria 4.0. During the study visit in Portugal, we saw clearly that actively facilitating eco-systems and value chains was beneficial for small- and micro businesses wanting to digitally develop, and as such would benefit Trøndelags SMEs if implemented. Especially in rural areas. We have the means to manage this through the organized cooperation with business gardens and incubators in Trøndelag region.

2. Action

a) *Strengthening PI by designing, writing, and communicating text proposals for inclusion of Digital Transformation concept into main gov. strategy document for Trøndelag.*

b) *Update Industry 4.0 Trøndelag project design and target groups to reflect twin transition.*

c) *Facilitate creation of digital transformation eco-systems – Help SMEs to create ecosystems through execution of Industry 4.0 Trøndelag project.*

3. Players involved

Action a) This is a task for Trøndelag County Council administration to handle. It is an internal process with input from external organisations. Arguments, formulations, and strategic approaches were largely derived from own experience, literature and 2020-2021 project management of both DigiBest and Industry 4.0 Trøndelag. DigiBest stakeholders (7 regional business gardens and incubators) also participated in discussing this through the DigiBest Café Meetings and other informal channels, and with

their CEOs, who were invited in by the County Council as stakeholders to contribute in the larger, formal process of giving input to the gov. main strategy document¹. The project groups (it primarily was administrative personnel from the County Council) reviewed all proposals. Project manager for DigiBest and Senior Adviser in Digital Transformation for the County Council participated in that County Council group. The finalized main strategy document (for all sectors) was sent out on a regional hearing and got a good, positive response. The strategy document "*Verdiskapingsstrategien, regional strategi for verdiskaping i Trøndelag 2022-2025 – med tilhørende handlingsplan 2022-2023*" was subsequently approved by politicians in December 2021. This is the most important document for the work on regional development for the Trøndelag Region / County Council, and as such for how to work with digital transformation. The result from this action are as follows:

Digital transformation in the Technology section:

Directional goal: "In 2025 the businesses in Trøndelag are in the lead in working to achieve digital transformation."(p 24). One of the priorities in the Technology section is digital skilling: (p24): "Stimulate and contribute actively to digitalisation and digital transformation in businesses and public sector".

Sustainability in the Technology section became a priority, and a point of action: "*Visualize how technology development and use of technology can contribute to the green shift*". (p 24).

Relevant **action points** in Technology section (p 26):

- *Map level of digital maturity and digital skills and create a knowledge base regarding digital transformation in businesses.* (Experienced in Industry 4.0 Trøndelag project, and even earlier, and also through DigiBest survey that traditional DMI mapping didn't give the necessary input in order to understand the small- and microbusinesses' needs and challenges). Because regular DMI's don't seem to map correct level of digital maturity, qualitative interviews with a selection of SME's will have to be conducted by an external research partner and analysed. Partner not chosen yet – either NTNU (Norwegian University for Science and Technology) or Nord University. Tender must be prepared.
- *Execute necessary competence enhancing measures.* That means to develop content and run the Industry 4.0 Trøndelag project step 2 and 3 during the autumn -22. The business gardens and incubators are responsible partners for executing this action.
- *Support a possible application for a European Digital Innovation Hub in Trøndelag.* It could be a high-level supplement to the Industry 4.0 Trøndelag model, and as such function as the upper part of the digital transformation ladder. In the works. NTNU is responsible for this project, Trøndelag County Council will support application and contribute with networking up against Industry 4.0 Trøndelag and business gardens/incubators.
- *Actively facilitate eco-systems and cooperation within a digital transformation context in rural areas of Trøndelag.* After the study visit in Portugal, we saw clearly that eco-systems and value chains was beneficial for small- and micro businesses wanting to digitally develop, and as such would benefit Trøndelag's SMEs if implemented. Especially in rural areas. We have the means to manage this through the organized cooperation with business gardens and incubators in Trøndelag region). Responsible for this work will be both business gardens and incubators in the region with the County Council as facilitator

¹ The Trøndelag County Councils strategy document: "*Verdiskapingsstrategien, regional strategi for verdiskaping i Trøndelag 2022-2025 – med tilhørende handlingsplan 2022-2023*"

In the Sustainability section in the Strategy digital transformation became one of the main priorities: *Stimulate to change through digital transformation and public procurement (p 11).*

«Digital transformation is processes where a business change how it conducts its tasks, offer better services, work more efficient, or create new services, With the basic knowledge of the digital possibilities it will be easier to develop new digital based business models that will increase competitiveness. Low digital maturity and lack of digital infrastructure is a barrier. Better data connected to material- and waste flows and digital solutions that can utilize these, is a prerequisite for the transition into a circular economy» (p 12).

Digital transformation in the section for Skilling/Competence: (p 8)

One of the priorities regarding workplaces is to develop and implement skilling projects based on the needs of businesses. The challenges are foremost in the rural areas.

Sustainability, circularity and digital transformation are vital areas that requires special knowledge and change both in the businesses and the [regional] innovation infrastructure. There's a need for educational offers based on the businesses' demands. (p 8)

Action b) The peer review for Norway, Trøndelag in 2021 confirmed our thoughts about including farmers as a new target group. Implementing agriculture/farming will have impact on how the regional stakeholders view agriculture. And furthermore, how agriculture might achieve a higher status as businesses rather than farms. It could have quite substantial ramifications. In order to achieve this, we need to find an arrangement with farmers' organisations, and a format to cooperate, because they are not eligible for receiving funding from regional funds. This could have impact on future strategies. It also strengthened the focus on sustainability. We will try to implement farmers in the Industry 4.0 Trøndelag project. We have already made contact with Norsk Landbruksrådgiving, an organisation working for implementation of digital technology in farming, and will pursue this further.

To implement sustainability as a part of digital transformation will give necessary depth to establishing new business models. A digital business model also needs to take sustainability into consideration. It will as such make the SMEs more aware of what is needed to manage the increased need for documentation and quality to handle the green shift. Focus on upcoming laws regarding documentation of sustainability, and how to handle it in practice could be helpful, as this will generate a lot of work for already administratively stressed SMEs. This will further strengthen the policy instrument. As for now, we have decided to have 1 workshop on sustainability as mandatory in the Industry 4.0 Trøndelag project. The County Council will be the supplier of the workshop, which will be implemented by all business gardens/incubators running their part of the project.

Action c) An output from running the project with SME's – facilitated ecosystem via training. This will be implemented in the PI as an important part of digital transformation work in the region. To create local ecosystems around the business gardens/incubators for digital transformation will be the final, but important output of Industry 4.0 Trøndelag training courses. In an eco-system more companies could cooperate and develop together. That is important for the SME's. The ecosystems could become platforms for applications for funding of larger development projects for the businesses. How to organize SME's cooperation with learning institutions to create an environment for R, D&I in value chains/clusters was perfectly demonstrated in the site visit to Portugal in 2019. In practical terms, this will create new ways of cooperating with higher education such as Universities, the Regional Secondary Technical schools, which the County Council administrates. And private businesses offering special high-level competence in particular fields of digital transformation. The Business gardens and Incubators will be hubs for such ecosystems. The County Council will facilitate them together with the regional business gardens/incubators after the finish of Step 2 in Industry 4.0 Trøndelag project autumn 2022/winter 23.

4. Timeframe

Time frame for all actions will be during 2022-2024

(The **Action a**) *Strengthening PI by designing, writing, and communicating text proposals for inclusion of Digital Transformation concept into main gov. strategy document for Trøndelag.* is successfully completed in December 2021, and can be found in ["Verdiskapingsstrategien, regional strategi for verdiskaping i Trøndelag 2022-2025 – med tilhørende handlingsplan 2022-2023"](#)

5. **Costs** (if relevant) N/A

6. **Funding sources** (if relevant): N/A

ACTION 2: Expand the County Council's knowledge base about small- and micro businesses to increase precision of the PI.

7. The background

During the project it was more and more clear that the County Councils knowledge base regarding small- and micro businesses is not sufficient to provide enough information about the small businesses. This has been gradually evident as the County Council has worked with the stakeholders (business gardens / incubators) in the DigiBest project and the PI regarding target groups, needs and content creation. It was experienced through prep. and execution of Step 1(of 3) in Industry 4.0 Trøndelag 2020/2021. The lack of information was also evident when working with the DigiBest Regional Study. And this was also recognised by the general group of stakeholders as an action in the process of creating Trøndelag County strategy: *"Verdiskapingsstrategien, regional strategi for verdiskaping i Trøndelag 2022-2025 – med tilhørende handlingsplan 2022-2023"*. The response from the DigiBest online survey in 2020 did not really give us sufficient knowledge to determine the level of digital maturity in the responding SMEs. Also, our previous testing of digital maturity gave really good answers to this. So, they match our overall impression that something is missing. This is not only about digital competence, but also things like context and business area a.s.o. As stated in [OECD's report from 2021: The Digital Transformation of SME's](#) : «Micro-firms go under the radar, i.e. about 90% of the business population in OECD countries are

not covered by international statistics on digital uptake by businesses». But statistics do not tell enough, so there is a need for qualitative research to understand the situation, attitudes, and competence (digital maturity) in the small businesses.

It is important to map out the needs of SMEs and reflect those in the Industry 4.0 Trøndelag program content so that the PI is optimized regarding how to intervene with the SMEs regarding knowledge of their recruitment needs, interests, structural challenges, and possible creation of local/regional ecosystems for development and co-learning, which is a task addressed by the PI. More exact knowledge of the SMEs situation and needs will give a more precise direction of type of support and direction. It will also give valuable input regarding local/regional/national value chains, and how those can be utilised in development of environment/ ecosystems and knowledge structures. More detailed knowledge will benefit for the County Council in general within different areas (mainly twin transition). The new knowledge base will be implemented as a tool in PI when designing/revising content and approach in projects. This is a general impression we have got both through the answers in the DigiBest Survey, and other good practices and peer reviews in the project. It is difficult to name any concrete GP or presentation here.

8. Action

Main steps:

Development of a research design based on topics we need to cover in cooperation with the Department for statistics in the County Council. That will be the fundament for:

A tender for the research job, using students to identify the core issues before the tender is developed and launched.

Implementation of research into a more detailed strategy for Digital Transformation for Trøndelag. (Probably an Annex to a larger work on the knowledgebase

Presentation of research results to County Council and discussions.

Inclusion of the main considerations in the PI related to DT activities, target group (agriculture), needs of SMEs in the region.

9. Players involved

The County Council will develop and implement the action. Business Gardens and Incubators will also be involved as users of this material, they are possible facilitators for research/interviews, and end users of the information. Universities will be the main institutions to be approached regarding the research, that is the tender. This action is described on a general level, because the tender will give the structure when finished.

10. Timeframe: Mid 2022-2024

11. Costs: 50-60 000 EUR (Estimate)

12. Funding sources: Internal, County Council

<p>Date: 18.02.2022</p>

Signature: _____

MSc Eistein Guldseth, *Senior adviser* Digital Transformation
Trøndelag County Council

Stamp of the organisation (if available):