**Annex1 to IO5 The Pilot**

In the current annex, the experiences of the Biological Post-Secondary VET School are summarized giving an example for the other educational intuitions how a grid for repositions can be developed based on the proposed methodology.

Please find the exact output of the below presented Pilot in Annex2 to IO5 The Pilot.

**Elaboration of the Pilot of Sweden**

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| Pilot |
| A: Sweden, Office of Natural Resources, Region Västra Götaland |

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| Geographical limitations |
| In our pilot, region is interpreted as Skaraborg, which is also a sub-regional cooperation of 15 municipalities. The participating school is the Biologiska yrkeshögskolan (Biological Post-Secondary VET School, hereinafter: BYS). It is an agricultural education centre at higher vocational education and training level (EQF level 5-6). BYS is centrally located in Skaraborg. The adult education given by BYS is always designed together with the branch of the trade. |

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| Pilot idea |
| A: *Please describe your pilot idea and include the following aspects:** *Reason as to why this pilot is necessary*
* *History: what has already been done in regards to this pilot*
* *Finish photo: what is realized after the pilot is completed*

ReasonAs it is underlined in the 2011 EU Modernisation Agenda, educational institutions are key actors concerning the establishment of a knowledge-based economy. An authentic learning environment for cross sectoral learning could contribute to competence accumulation. Regional level strategies emphasise the importance of a new perspective related to societal challenges observed in the green industries. The globalising market fosters the smart and innovative specialisation of SMEs that may lead to new regional business models. Therefore, the pilot focuses on creating a better understanding of SME driven local supply chains and networks exploring small-scale food systems. The findings would help the shift from the large industry and retail oriented, static conventional food chain to a dynamic and responsive food chain based on information sharing and networking. It may also contribute to tackle the major challenge that is transport and logistics in Swedish rural areas.HistoryLokalproducerat i Väst (Locally Produced in West) has already performed a mapping of food producer SMEs in Region Västra Götaland. <http://lokalproducerativast.se/producenter/> This map is updated annually and serves as a starting point to the pilot.Finish photoVia student projects, the sectoral products of local food producers (e.g. milk, meet, and chees) will be followed in the food chain from farm to table and beyond, i.e. the re-use of waste. Results will be interpreted in the context of the regional demand of large-scale consumers (e.g. hospitals).The pilot would eventually catalyse discussion about:* handling the challenges of SMEs experienced concerning logistics and up scaling to achieve profitability in sales (fostering a potential model for new cooperative structures);
* smart specialisation strategies based on the regional demand;
* setting up a circular approach to food chain on regional level.
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| Pilot results |
| A: *Please describe the results of the pilot:** *Describe the results (each result separately)*
* *Describe each result smart*
* *Make a connection to the description of each result as is described in the formal application to how this pilot will realize or contribute to this result*

The pilot will highlight the conjured interconnectedness of regional SME food producers. The Swedish pilot will initiate the mapping of food demand of large-scale consumers (e.g. hospitals) and of food chain of regional SME food producers in certain sectoral products (e.g. milk, meet, and chees). It will open up opportunities for cooperation among food actors, municipalities, research and education and NGOs as well.* The pilot will deliver information on specific regional food products and their way along the food chain as mapping up the supply side. Moreover, sectoral information of large-scale consumers will be monitored as mapping up the demand side.
* The gained information would facilitate smart and innovative specialisation of regional SME food producers catalysing ideas about new regional market mechanisms.
* The studied interconnection (or the missing of such linkage) would create a data pool for further research concerning entrepreneurs, intermediaries and policy makers.
* The findings of the pilot would foster discussion about setting up a circular approach to food chain on regional level.
* During the process, an attractive learning environment will be created by the participating students and teachers (together with regional partners) while following the food chain, mapping up regional large-scale consumers, interviewing local SME food producers. Assignments will be linked to the curriculum.
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| Pilot outputs |
| A: *Please describe the outputs of the pilot:** *Describe the output (each output separately)*
* *Describe each output smart*
* *Make a connection to the description of each output as is described in the formal application to how this pilot will realize or contribute to this output*

Study: student projects will explore sectoral regional food demand and supply via food chain mapping* The annual mapping of food producer SMEs in Region Västra Götaland is carried out by Lokalproducerat i Väst (Locally Produced in West): <http://lokalproducerativast.se/producenter/>. Using their data, students will choose sectoral products of local food producers (e.g. milk, meet, and chees) that will be followed in the food chain from farm to table and beyond, i.e. the re-use of waste. Results will be interpreted in the context of the regional demand of large-scale consumers (e.g. hospitals).
* Methodology and instructions will be developed for the student projects.
* Coaching will be provided by the involved teachers.
* Cooperation with the NL pilot would be appreciated in relation to the web-based publishing and visualisation of the findings.
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| Pilot partners |
| A: *Please describe the partners in the pilot:** *Describe the partners (education (staff, teacher, students), entrepreneurs, government) separately*
* *Describe their role, what they will do, what they will gain from the pilot, number of people involved etc*

Coordination team:Maud Albrektsson (programme coordinator, Farming Equipment and Hoof Care Education, BYS), Gunnel Marwén Kastenman (principal, BYS), Jonny Borg (programme coordinator, Bioenergy Technologies, BYS), Zoltán Dóczi (project manager, Office of Natural Resources, Region Västra Götaland).The coordination team will* develop and monitor the pilot
* develop methodology and instructions for the student projects
* teachers of the coordination team provide coaching for the students

School-level activities:* at least 12 BYS students, EQF level 5-6 will participate directly, i.e. via student projects in the mapping
* during one working week all BYS framing equipment students will participate in the pilot
* the pilot is opened for small-scale participation of Natural Resource Schools in Skaraborg (EQF level 4)

Regional coach:Its role is divided. Contact person: Zoltán Dóczi. In case of specific, framing or education related issues, Maud Albrektsson will be involved.* guides the development of the pilot project
* helps to establish the regional and transnational process and progress and create internal capacity building and learning within BYS
* acts as a coach for the triple helix partners within each region
* takes part in the work of the monitoring team

Cooperation with triple helix partners:* University of Skövde will follow and evaluate the learning process of the students during their project work in order to identify the student's understanding concerning the nature of the industry and its skill requirements in the present and in the future. Results of the University of Skövde will canalized in its vocational education teacher education.
* Drivhuset is a meeting place for people who want to develop business ideas and entrepreneurial drive. One of their office is located at the same campus as BYS. Drivhuset will contribute to the pilot with continuing its previous activities about entrepreneurship. Moreover, Drivhuset will be involved in the vocational education teacher education at the University of Skövde via train the trainer entrepreneurship methods in order to give a method to teachers concerning entrepreneurial coaching.
* Employees of SMEs are planned to be involved by student projects as interview objects.
* Other partners may be added during the development of the pilot.
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| Pilot exchange |
| A: *Please describe the exchange within the pilot** *Describe for students, teachers and entrepreneurs the following things:*
* *Who will exchange*
* *What will they do during the exchange*
* *What is the benefit for the one who is exchanging (going) and the country that receives the exchange student/teacher/entrepreneur (receiving)*
* *What is the time plan / period / amount of days/weeks of the exchange*
* *Will you use KA1 or Ka2 (and then either exchange within the pilot or training activities)*

Short-term joint staff training eventsJoint development of methodology and instructions for the student projects to follow the food chain as well as to map up the regional large-scale consumers. Related conceptual ideas, prototypes, samples and learnt experiences can be shared and discussed. Cooperation with the NL pilot would be appreciated in relation to the web-based publishing and visualisation of the findings. It can be organised as master classes. It can already take place in spring2016. Potential participants: the Swedish coordination team.Blended mobility of VET learnersThe mobility of the participating students could stretch the regional context of cross sectoral learning to European context by sharing experiences about good practices and faced challenges. Potential participants: all or some of the least 12 BYS students (EQF level 5-6) whom will participate directly, i.e. via student projects in the mapping.Mobility cooperation among the partners:* with NL: learn from each other about practical issues concerning the mapping; fall 2016 (focus: techniques and food for thoughts concerning the mapping)
* with BE: learn from each other about start-ups in the green industries; spring 2017 or later (focus: how to interpret the outcomes of the mapping)
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| Pilot work plan |
| A: *Please draft a work plan for the pilot. Use an excel planning form** *Describe for each activity the following things*
* *Description of the activity*
* *Who is responsible (name) for the activity*
* *Who will work on the activity*
* *When the activity is planned (time table)*

Every action will be evaluated and results will be documented.*Action 1 Developing methodology*Methodology and instructions for the student projects are to be developed by the coordination team.*Action 2 Identifying the key branches*To understand the current regional food chain, it is of pivotal importance to map up the regional large-scale consumers (e.g. hospitals). Establishing them as key players, their most frequently ordered food products can be used as a reference point for identifying the key branches for observation of the food chain in the region.*Action 3 Follow sectoral food products in the food chain*Getting to know the demand part, student projects will be focused to follow the food chain of the sectoral products of local food producers (e.g. milk, meet, and chees) based on the methodology and instructions developed by the coordination team.*Action 4 Evaluation of the student projects´ results*A synthesis report is to be developed summarising the current status of food chain. It will test the conjured interconnectedness of regional SME food producers.*Action 5 Dissemination of the student projects´ results*It will open up opportunities for cooperation among food actors, municipalities, research and education and NGOs as well. The dissemination is planned in the framework of workshops and on online platforms.

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| **PV+ at BYS** | 2016 | 2017 | 2018 |
| spring | fall | spring | fall | spring |
| Action 1 | **X** |  |  |  |  |
| Short-term joint staff training events | **X** |  |  |  |  |
| Action 2 |  | **X** |  |  |  |
| Blended mobility of VET learners with NL |  | **X** |  |  |  |
| Action 3 |  | **X** | **X** |  |  |
| Blended mobility of VET learners with BE |  |  | **X** |  |  |
| Action 4 |  |  |  | **X** |  |
| Action 5 |  |  |  |  | **X** |

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| Pilot monitoring |
| A: *In the application monitoring (monitoring team) is an important aspect.* * *Describe how you will monitor the pilot*
* *Describe how you will realize transnational learning*
* *Connect your plan to the plan that is written in the official application*

Copy from the NL pilot format:Monitoring team:We will monitor (and evaluate) results and assessment of the effectiveness of the activities in achieving the project aims during partner meetings by a special monitoring team. They will monitor the process and uses that input to develop the outputs. The monitoring team works closely together and meets monthly to evaluate progress. The outputs will be designed and developed in collaboration with all the partners and (if necessary) external experts. The project leader manages this process together with a team of coaches. Each region will have their own coach that helps the regional team (and especially the education institutes) with the living lab pilot. The three coaches work together closely and have monthly evaluations. There will be regular contact between the partner countries, both through face to face meetings and using conference call and social media, in order to ensure that the best practices from all partners are shared and contextualized for maximum effectiveness. The primary participants at these meetings are the partners themselves, along with representatives of their triple helix partners.The creation of a monitoring team is essential to the successful development and implementation of this journey. The monitoring team office has several functions. They will monitor the overall process within each pilot, but will also be responsible for gathering data, documenting results, informing the project leader when deviations are found etc. They are also responsible for the development of a suitable and easy usable monitoring device for the development of the education institute. The monitoring team provides thus an essential contribution |

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| Pilot ambitions |
| A: *Please describe how you would like to participate in the pilot of the other countries?* Frequent information exchange and follow-up would be an important aid during the pilot implementation. Handling the same challenges, similar solutions can be jointly developed.It would be feasible for the students to take part directly in each other´s regional food chain mapping if similar methodology is used. It can be facilitated by a prior short-term joint staff training. The participating students can learn about mapping techniques and start-ups from each other.See also: the section on Pilot exchange |

**Evaluation Regions Västra Götaland, Department of Natural Resources**(the current evaluation the research of the University of Skövde was also used)

**1. Describe shortly what the pilot was about.**

Exercises are carried out focusing on Agro-Technician Programme (EQF level 6, hereinafter: the Programme) at the participating school, i.e. at the Biologiska yrkeshögskolan (Biological Post-Secondary VET School, hereinafter: BYS) in line with Document “Positioning of the school in the region” 20161031 V 0.3.

The kick-off focus group meeting at BYS on 11 October, 2016 showed that branches of trade is primarily interested in the sub regional food chain. IO5 has been developed further using it a test question from the branch of trade. It has been broken down to student projects in line with New Economic Model for Cooperation outlined in IO 3.4. And as a conclusion, a solution will be delivered for the branches of trade **by spring 2018**. The pilot is used to establish and to develop envisioned cooperation platform according to IO 3.4.

The pilot will highlight the conjured interconnectedness of regional SME food producers. The Swedish pilot will initiate the mapping of food demand of large-scale consumers and of food chain of regional SME food producers in certain sectoral products. It will open up opportunities for cooperation among food actors, municipalities, research and education and NGOs as well.

**2. How many students were involved?**

Academic year 2016-2017: 11 students

Academic year 2017-2018: 18 students

**3. How many teachers were involved?**

Academic year 2016-2017: 4 directly, 4 indirectly

Academic year 2017-2018: 3 directly, 5 indirectly

**4. How many entrepreneurs were involved?**

The branches of trade is involved via leading/steering committees. Direct involvement approx. 10 branch organisations that involves several entrepreneurs.

**5. Which other participants were involved?**

The University of Skövde is involved as part of research and development. The project is managed by the Competence Centre at the Department of Region Västra Götaland (hereinafter: Competence Centre) being a politically steered regional pubic body.

**6. What was the general result?** (specific results for every participant please in the schedule)

 The pilot will deliver information on specific regional food products and their way along the food chain as mapping up the supply side. Moreover, sectoral information of large-scale consumers will be monitored as mapping up the demand side.

 The gained information would facilitate smart and innovative specialisation of regional SME food producers catalysing ideas about new regional market mechanisms.

 The studied interconnection (or the missing of such linkage) would create a data pool for further research concerning entrepreneurs, intermediaries and policy makers.

 The findings of the pilot would foster discussion about setting up a circular approach to food chain on regional level.

 During the process, an attractive learning environment has been created by the participating students and teachers (together with regional partners) while following the food chain, mapping up regional large-scale consumers, interviewing local SME food producers. Assignments have been linked to the curriculum

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| **What did the students do** | **What did the teachers do?** | **What did the entrepreneurs do?** | **What did the other participants do?** |
| The students followed chosen raw materials and even products way all along the food chain.  | Coaching and summarising the student projects.  | Mentoring at optional workplace-based learning. Got involved via steering/leading committees. They will be briefed once the pilot summary is ready | Research of the University of Skövde. Reporting to stakeholders by Competence Centre.  |
| **Hours they spent:** introduction and problem-based learning: 1 week  group project work: 2-3 weeks  reporting: 2-5 days  internationalising the pilot: 1 week  optional combination with workplace- | **Hours they spent:** (directly involved)  preparation: 2 weeks  coaching: 2-3 hours per student per week  internationalising the pilot: 1 week  compilation: 1-2 weeks per raw material or product  | **Hours they spent:**  involvement via focus groups: 2-3 hours per semester  mentoring at optional workplace-based learning: 3- 4 hours per student per week  upcoming briefing: 1 day  | **Hours they spent:**  interviews and research: 1-2 weeks per semester  reporting to stakeholders: 3- 5 days per semester  |
| **Specific result students** | **Specific results teachers** | **Specific results entrepreneurs** | **Specific results other participants** |
| Problem and project-based learning in an international context.  | Work placements and project-based learning are integrated so that the education contributes to solving challenges of regional entrepreneurs. New methods in the education.  | Fostering a potential model for new cooperative structures.  | Third-party monitoring. Raised awareness concerning regional food chains. Building up a new triple helix.  |
| **What did students learn?** | **What did teachers learn?** | **What did entrepreneurs learn?** | **What did other participants learn?** |
| Teamwork. Problem-solving.  | Coaching skills were developed.  | A circular approach to food chain on regional level.  | New ways of cooperation among stakeholders, research and the business.  |
| **How satisfied are the students?** | **How satisfied are the teachers?** | **How satisfied are the entrepreneurs?** | **How satisfied are other participants?** |
| A more detailed explanation of the importance and the context of their learning is desired.  | The new methodology can bridge theoretical and practical segments of the education. To reach it, staff trainings are needed.  | The entrepreneurs want to take a more integrated part in project-based education.  | The started work is encouraged to be continued. However, it is supposed to be self-sustainable and quality assured.  |

**8. Will there be a follow-up?**

There is a circular follow-up mechanism inbuilt in the pilot. The University of Skövde as part of the current project implementation interviewed the students, the branches of trade and even the teaching staff so that the learning processes of the students and the embedding connection between education and the branches have been followed up and monitored.

Once the results of the student pilots are summarised, they will be disseminated to stakeholders and to entrepreneurs. Expected **by spring 2018**.