CLUSTERIX 2.0
Interreg Europe

European Union
European Regional
Development Fund

ecoplus. The Business
Agency of Lower Austria

ACTION PLAN

CLUSTERIX 2.0 NEW MODELS OF INNOVATION FOR STRATEGIC CLUSTER PARTNERSHIPS

LOWER AUSTRIA

ECOPLUS. THE BUSINESS AGENCY OF LOWER AUSTRIA

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Part I – General information

Project:	**CLUSTERIX 2.0 - New Models of Innovation for Strategic Cluster Partnerships**
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Part II – Policy context

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

Policy instrument initially addressed (according to the CLUSTERIX 2.0 application form):

ERDF Programme Investment in Growth and Jobs Austria 2014-2020, Operational Programme for ERDF, Priority axis A.1, Investment priority 1.b, measure M6_FTI_IP1b_MN4: Clusters / Networks, Location Management

The ERDF Investment in Growth and Jobs Austria 2014-2020 OP Investment priority 1.b, measure M6_FTI_IP1b_MN4 finances – among others - the **Cluster Program Lower Austria 2015-2020**.
Based on the Economic Strategy Lower Austria 2020 (Lower Austria's RIS3), this programme provides support for the management of Lower Austrian cluster initiatives.
The implementing body of the program is the Lower Austrian Business Agency ecoplus, a 100% subsidiary of the regional government of Lower Austria. Based on comprehensive cluster potential analyses and the decision of the regional government to support a cluster initiative, ecoplus manages the Lower Austrian cluster initiatives as an "umbrella" cluster organisation.
Currently, there are four cluster initiatives: green building, food, plastics and mechatronics. The four cluster management teams within ecoplus raise awareness for new trends and challenges, identify common topics and most importantly initiate collaborative RDI or qualification projects.

Influence of CLUSTERIX 2.0:

The Lower Austrian Cluster Programme does not include funding for projects of businesses or researchers. Projects are financed by other regional, national or European sources.

That means, interregional learning can only contribute to the **improvement of the policy instrument addressed by improving governance.** For example through the introduction of new innovation management tools such as Strategic Use of Design for the cluster managers how to initiate projects (see action 1), or better coordination and more interaction with the regional policy maker and other stakeholders in the region in order to develop PPI projects (see action 2). As the policy instrument addressed does not finance projects, the budget influenced will refer to other additional policy instruments.

Additional Policy instrument addressed:

Lower Austrian Fund for Economy and Tourism:

This regional fund supports projects in line with the strategies of the Province of Lower Austria for the development of the business location, primarily the Economic Strategy Lower Austria 2020.

The regional fund supports several schemes, amongst others:

a) **Cooperation Scheme** ("Kooperationsförderung") supporting collaborative innovation and qualification projects of minimum 3 partners, out of which one has to be a SME, fostering qualification of employees, an increase of productivity and resource efficiency and the

development of new products and services. Projects are supported up to 50% (maximum 20,000.00€ per partner).
As already mentioned above, the main objective of the cluster managers is to initiate collaborative RDI or qualification projects of companies. The majority of these projects get support from this regional collaboration scheme.

Influence of CLUSTERIX 2.0:

The rules and guidelines for the collaboration scheme remained unchanged.

However, the exchange of experience in CLUSTERIX 2.0 inspired the cluster managers in Lower Austria to initiate better, tailor-made collaborative digitalization projects of companies, i.e. had an influence on the governance (see action 1) which will result in more and better project proposals for this scheme.

We will therefore monitor and report on the number of companies collaborating with R&D institutions (self-defined indicator) in these collaborative projects addressing digital transformation. In addition, we will monitor and report the total volume of funding granted to these projects as amount of funding influenced by the project.

b) **Research and Development Scheme "Feasibility Studies" (F&E Förderung "Durchführbarkeitsstudien") supporting research, development and innovation projects of companies in the field of experimental development with high potential for market implementation. Costs for feasibility studies can be supported with up to 50%.**

Influence of CLUSTERIX 2.0:

Thanks to the learnings from the project, the scheme was enlarged with a new support scheme for an "Additive Manufacturing Voucher" ("3D Druck Bonus") with new guidelines based on rules for the Research and Development Scheme "Feasibility Studies". The "Additive Manufacturing Voucher" will be piloted in 05-10/2019 and prolonged in case of success (see action 3).

We will therefore monitor and report on the number of companies collaborating with R&D institutions (self-defined indicator) using this newly created support scheme. In addition, we will monitor and report the total volume of funding granted as amount of funding influenced by the project

Challenge / Starting point in the project:

The ecoplus Cluster Department and the Regional Government Department for Economy in charge of the Cluster Programme together monitor and steer the clusters' performance in a continuous improvement process. The development in the last years showed an increasing number of cross-cutting innovation topics (e.g. digital transformation including 3D Printing, virtual/augmented reality, etc.) and the need for cooperation across clusters. For the cluster management organisation ecoplus, this means that it has to adapt its services for companies, but also to communicate the needs of the companies to the Regional Government as cluster policy maker and to contribute to the development/ improvement of policy instruments.
The Cluster Policy Benchmarking carried out within CLUSTERIX 2.0 came to the very positive results regarding strategic cooperation of ecoplus and the regional government to foster smart specialization:

- *Lower Austria has the capacity of the cluster management, the number of members as well as the maturity of the cluster initiative is given and clusters are comparably experienced in initiating cross-sectoral cooperation*.
- *The Lower Austrian Monitoring system (Balanced Scorecard Model) can be understood as tool for continuous improvement, a tailor-made system adapted to the economic strategy.*
- *It became evident that Lower Austria is one of the European frontrunners when it comes to the implementation of S3 through clusters. Lower Austria is following a very systematic approach, starting with a strong involvement of clusters during the developing phase of S3 over implementation until evaluation.*

However, the benchmarking report also states that *long-term and strategic approaches how to best support cross clustering and motivate cluster managers to strive for cross-sectoral innovation are not fully implemented*. The report recommends *setting up mechanisms and incentive systems to enable cross clustering in a structured and strategic way*.

We address this recommendation with the CLUSTERIX 2.0 Action Plan.
In addition, we refer to the Lower Austrian Action Plans developed in two other INTERREG Europe projects, which correspond to the recommendation: Within the InnoBridge project, the Department for Economy will launch an open innovation platform pilot bringing clusters, but also new players together in a structured and strategic way. The action "House of Digitalization" in the INKREASE project is also setting up mechanisms for open innovation.

The Lower Austrian (lead) partners of the three INTERREG Europe projects CLUSTERIX 2.0, InnoBridge and INKREASE joined forces and gathered all regional innovation support intermediaries in joint stakeholder meetings (10-20 people) two times per year. Organizations involved:

- Office of Regional Government of Lower Austria, Dep. for Economy, Tourism & Technology, Dep. International & European Affairs, Dep. Environmental and Energy Economy
- ecoplus Department Clusters and Technopol Programme
- TIP Technology and Innovation Partner Lower Austria
- tecnet equity ltd., Department technology transfer
- Accent - start up service ltd.
- Additional representatives from universities of applied science when relevant.

Such a structured, interactive exchange of these players on interregional topics did not exist before. The participants decided to continue the exchange also in phase 2 of the project.

With the actions described in Part III of this CLUSTERIX 2.0 Action Plan the Lower Austrian stakeholders strive for fostering innovation across borders of sectors or disciplines based on the interregional and regional learnings from the project in three fields:

- **Collaborative learning and innovation for digital transformation,**
- **Fostering innovation and new business models with 3D Printing/additive manufacturing,**
- **Improving Public Private Innovation**.

The Lower Austrian Government Department Economy, as intermediate body for ERDF OP in Lower Austria, policy maker in charge of the Lower Austrian Cluster Programme and managing authority for

the regional economic support instruments, was intensively involved in the interregional learning process as well as in the regional interaction with the stakeholder group.

The Department Economy endorses the CLUSTERIX 2.0 action plan developed by ecoplus.

More specifically the Department Economy:

- Encourages the Lower Austrian Clusters to develop new concepts and initiate new collaborative projects on innovation for digital transformation (action 1),
- Supports and actively participates in an enhanced communication and coordination of innovation intermediaries and public procurers and intends to financially support demonstration projects of innovative companies and public test users (action 2),
- Launches a new innovation voucher for developing and testing Additive Manufacturing ("3D-Druck Bonus") in April 2019 (action 3).

Part III – Details of the actions envisaged

SUPPORT FOR DIGITAL TRANSFORMATION

ACTION 1: Initiate collaborative projects for digital transformation

1.1 The background

Challenges:

Standing on the brink of a new industrial revolution, driven by new-generation information technologies such as the Internet of Things (IoT), cloud computing, big data and data analytics, robotics and 3D printing European industries face big opportunities but also challenges. Digitalization is more than just a new technology companied need to implement. It changes business models, innovation models, etc.

Policy makers need to learn about such new models to keep the pace and be able to provide fast and flexible support for emerging industries in order to make/keep a region competitive at global scale. Administrative procedures are affected, more open, flexible cross-department collaboration are necessary.

Baseline: A regional SWOT analysis of the digital transformation in Lower Austria carried out in 2016 showed that about 1/3 of the companies in the region do not deal with digital transformation at all. It also showed that there is lower awareness for the topic and a lower participation in national funding programmes for R&D on digitalization than in other Austrian regions. However, the analysis also showed a high interest of companies to collaborate with other companies and research and education institutions in order to exchange experience, learn from best practice and already successful business cases, develop tailor made technological solutions and specific education and training programmes.

The Lower Austrian Digitalization Strategy (launched in January 2018) addresses digital transformation in a holistic approach, following the vision "*Use the digital transformation. For country and people*".

The Lower Austrian cluster initiatives (financed by the policy instrument addressed) are required to contribute to the strategy's action field "Research and innovation" by initiating collaborative projects of companies in relevant thematic fields including Internet of Things, Big Data, or artificial intelligence. In addition, cluster projects shall build on and further develop the existing skill sets in Lower Austria relating to cybersecurity, augmented and virtual reality, smart materials and 3D printing.

Relevance of CLUSTERIX 2.0 / Lessons learned:

1. Inspiration from Region Southern Denmark's Good practice example "Strategic Use of Design":

The in-depth workshop in September 2017 in Billund on Strategic Use of Design organized by the Region of Southern Denmark and facilitated by the Design2Innovate Cluster very much inspired the Lower Austrian participants, namely representatives of the LP ecoplus, the Regional Government Department for Economy and the New Design University St. Pölten. Results:

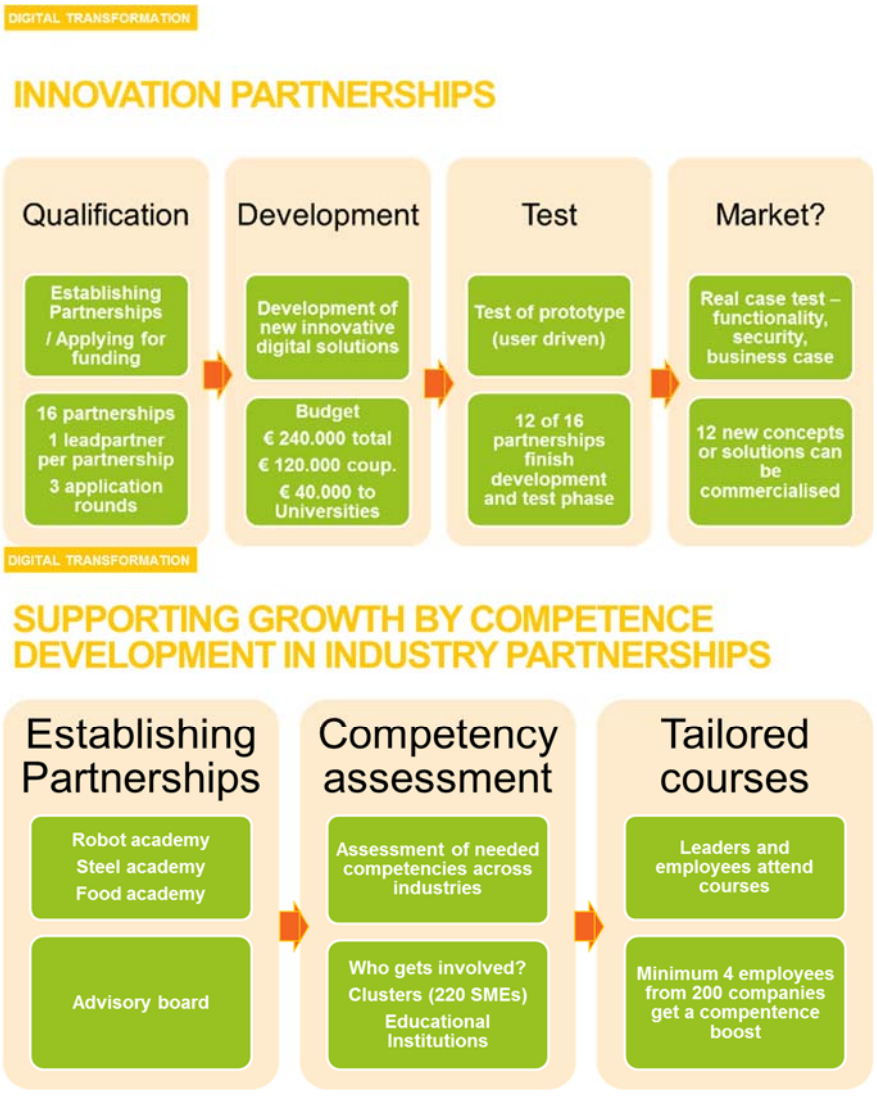
- ecoplus and the Department for Economy tested the Design Thinking methodology in internal workshops, e.g. to improve the Lower Austrian Clusterland Award (workshop 23 Feb 2018).
- ecoplus organized a seminar for cluster management staff, the Regional Government and other innovation intermediaries (22-23 March 2018).

- The ecoplus Green Building Cluster management tested the Design Thinking approach in workshops with companies in spring 2018 and included the methodology in a new concept for "Collaborative projects aiming at the development of new business models for companies in the building sector using digitalization" (May 2018).

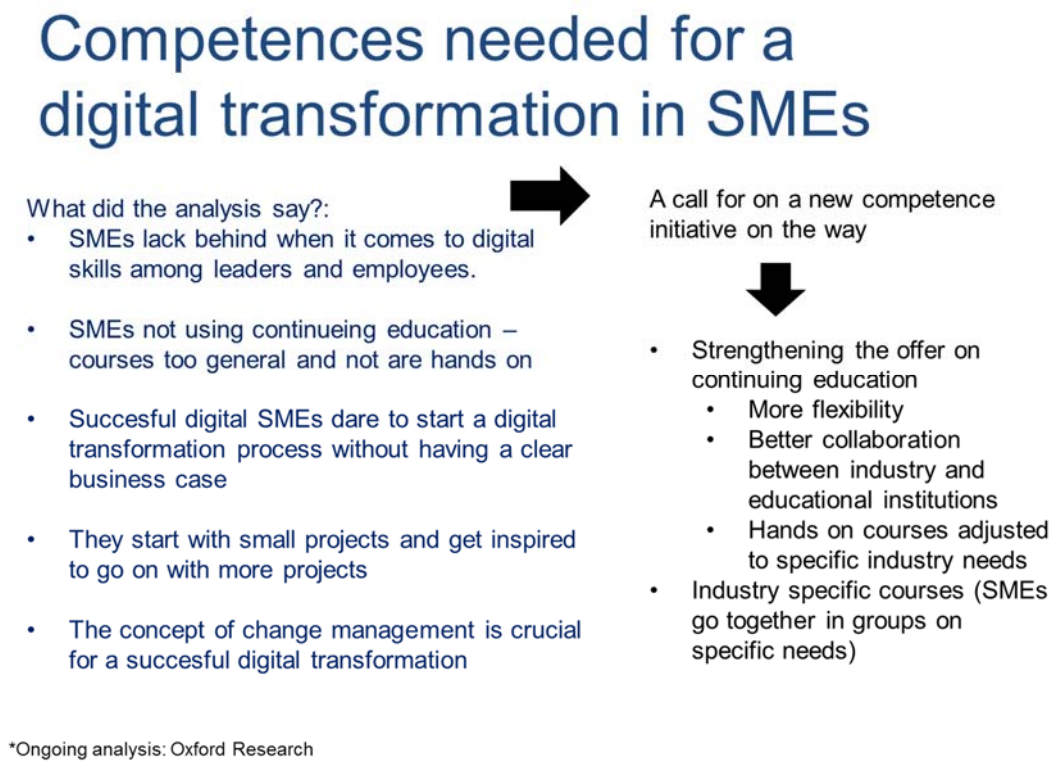
2. Inspiration from sharing experience in the Working Group Digitalization and the staff exchange of Björn Bog (PP7 Region Southern Denmark), hosted by ecoplus.

The CLUSTERIX 2.0 working group Digitalization was launched in Györ (Feb 2018), where partners shared information about regional and national digitalization strategies. In the second meeting in Clermont-Ferrand (May 2018) the discussion focussed on qualification and specific SME support instruments. In addition, ecoplus and Region Southern Denmark exchanged experience in more detail during the staff exchange in Lower Austria in April 2018.

Form the discussion ecoplus gained the understanding that there is no "one-size-fits-all" approach, companies of different size and different sectors need various support. However, it is important to enable know-how-transfer across sectors, for example through establishing partnerships in the Southern Denmark:



In the discussion the CLUSTERIX 2.0 partners also agreed on the understanding that qualification offers shall allow for a tailor made, modular training including not only theoretic knowledge but also hands on experience. Example input from Southern Denmark:



Specific lessons learnt and "transferred":

- We learned from the PP7 Region Southern Denmark good practice "Strategic Use of Design" that this innovation management approach using creativity techniques helps to think outside the box about new services or new business models. Whenever relevant, the cluster managers now use the Design Thinking method in workshops with companies to develop new projects mobilizing ideas for new business models (see step 2 below).
- The Danish (PP7) experience shared with us in the working group Digitalization and during the staff exchange clearly showed that companies of different size and different sectors need various support. It confirmed the cluster managers in Lower Austria that the heterogeneous economic structure makes it necessary to develop differentiated approaches and support offers for the companies. The cluster managers developed new concepts for collaborative projects specified to their sector addressed or to the size of the companies, which include hands-on practical trainings (see step 1 below).
- The Danish recommendations highlighted the importance of enabling know-how-transfer across sectors. This learning will be transferred to Lower Austria by organizing workshops for the cluster management teams of the four Lower Austrian clusters at least once a year in order to make sure that the know-how developed in one cluster shall also benefit other clusters (see step 3).

1.2 Description of Action

The Lower Austrian Clusters initiate new collaborative projects of companies specifically addressing the digital transformation, i.e. fostering capacity building and the development of innovative digital solutions (processes, products, services).

1. **Step 1**: Development of concepts how to address needs of cluster members in the fields of:

- Digital Technologies and Processes in the Construction Sector (Green Building Cluster)
- Digital Technologies and Processes in the Food Sector (Food Cluster)
- Cross-cutting Digital Technologies and Processes such as Augmented/Virtual Reality (Mechatronics Cluster)
- How to address the specific challenges of small enterprises in digital transformation (Plastics Cluster).

The cluster managers developed concepts, carried out respective info events in 2018 and integrated them in their work plans for 2019.

2. **Step 2**: Initiation of collaborative projects of companies and researchers: ongoing process starting Q4/2018

The Lower Austrian cluster management teams initiate collaborative projects of companies on innovation for digital transformation. Typically, this process starts with an information event to raise awareness of cluster members. This is followed by smaller workshops with interested companies defining the needs, necessary partners and a common understanding of the project goals and activities. The consortium then applies for funding, addressing mainly regional but also national funding instruments. Once the project has been approved and started, the cluster managers usually keep an observer role, provide input when necessary and ensure dissemination in the broader community / sector.

First projects already approved:

- Project “Company positioning in the digital age” initiated by the Plastics Cluster especially for small companies, co-financed by the Lower Austrian (regional) funding scheme for cooperation projects: 8 SMEs learn and share experience about digital marketing.
- Project “BIM-Süd”: testing “Building Information Modelling” in a real live construction project, initiated by the Green Building Cluster, co-financed by the Lower Austrian (regional) funding scheme for cooperation projects: 6 companies and 1 knowledge provider involved.

3. **Step 3**: Share / disseminate learnings from projects; integrate learning in next project cycle

The cluster management teams of the four Lower Austrian clusters (Mechatronics, Green Building, Food, Plastics) will meet at least once a year in order to share experience gained in the projects. The learnings from the projects and the cross-cluster exchange of experience will be integrated in the preparation of new collaborative projects in 2020.

1.3 Players involved

- Cluster managers (+teams): Mechatronics, Green Building, Food, Plastics
- Cluster member companies (beneficiaries),
- Universities of applied science in Lower Austria, research institutes, universities
- other external experts (digitalization/innovation management consultant)

- The Department for Economy is not only programme owner of Cluster Programme, but also provides regional funding for collaborative innovation projects. Being in charge of supervising the Lower Austrian Digitalization Strategy, the Department Economy is very much interested to see many good innovation projects on digital transformation.

1.4 Timeframe

- Development of concepts: 2018
- Initiate new projects: 09/2018 – ongoing (2021/03)
  Milestone 1: New projects for digital transformation (initiated by cluster) approved for funding under the additional policy instrument addressed ("Cooperation scheme"): September 2019
- Share / disseminate learnings from projects, integrate learning in next project cycle: 2020 – ongoing (2021/03)
  Milestone 2: Workshop for cluster management teams of the four Lower Austrian clusters (Mechatronics, Green Building, Food, Plastics) to share experience gained in the projects: December 2019 latest.
  Milestone 3: Further projects for digital transformation (initiated by cluster) approved for funding under the additional policy instrument addressed ("Cooperation scheme"): September 2020.

1.5 Costs

Development of concepts: no extra costs, staff costs of cluster managers covered by Lower Austrian Cluster Programme (ERDF, policy instrument addressed).

Costs of projects: depending on project; typical project volume 20.000 – 50.000 €, min. 50% contribution of companies, up to 50% public funding.

1.6 Funding sources:

Cooperation Scheme ("Kooperationsförderung") supporting collaborative innovation and qualification projects of minimum 3 partners, out of which one has to be a SME, fostering qualification of employees, an increase of productivity and resource efficiency and the development of new products and services. Projects are supported up to 50% (maximum 20,000.00€ per partner).

(see above additional policy instrument addressed).

1.7 Monitoring

The cluster managers collect number of projects initiated in the cluster and number of involved companies and research institutions and report it 2 times a year to Department of Economy in monitoring process. We will report the number of companies collaborating with R&D institutions specifically in projects on digital transformation.

PUBLIC PRIVATE INNOVATION (PPI)

ACTION 2: Improve the Cooperation of Public and Private Players in PPI

1. **The background**

Challenge:

Public Private Innovation (PPI) is defined as a model for collaboration by which public institutions and private enterprises together develop new innovative solutions. PPI is characterised by the relation between the participants who are not suppliers or clients/ purchasers of a well-known solution or product. The participants are development partners exploring together new innovative solution on problems that are defined in common.

There is a need for innovation in the public sector, in particular in the health and social care sector, because of increasing expenses due to demographic changes and an ageing population. Innovative solutions have to be found if public authorities and institutions wish to deliver services at the same level as before but with limited budgets. Many public institutions do not have resources or competencies to develop innovative solutions on their own. However, often they seek solutions or products that are not available or produced but could be developed in partnership in others. Innovative companies can bring new products or solutions into public institutions, but it is an advantage to test out solutions together with staff or end-users, citizens or patients.

In a specific Local Stakeholder Group Workshop on PPI organized by ecoplus within CLUSTERIX 2.0 on 6 March 2019 in St. Pölten, the participants further specified the following challenges:

- Purchase processes are often very fixed – there is little room for innovation and PPI
- Risk taking is difficult in the public sector
- Decision makers must be on board and create as well as define the innovation space
- Help for e.g. Open Innovation Challenge Procurement is available – but the organisations hesitate when it comes to new procedures
- SME's need assistance in order to participate in PPI partnerships
- It is difficult to establish partnerships with people you do not know – clusters play in important role in connecting public institutions and private companies, especially SME's
- Mind-sets must change!

However, Lower Austrian stakeholders do not have to start PPI activities from scratch. There are already communication formats and support services for PPI available:

The Regional Government Department for Energy and Environment (RU2) and the Lower Austrian Agency Energy and Environment (eNu) provide guidance on sustainable procurement to regional government departments and municipalities in the region.

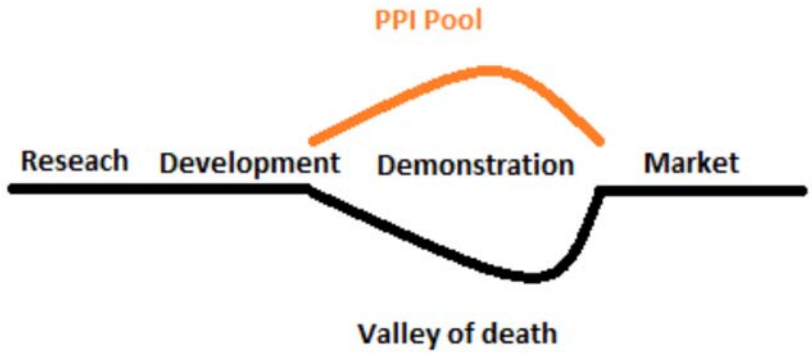
The Austrian *Public Procurement Promoting Innovation Service Center* (PPPI Service Centre, "IÖB Servicecenter") offers several services both for public procurers as well as for innovative companies/innovations providers but finds it difficult to mobilize both sides. CLUSTERIX 2.0 LSG meetings considerably contributed to re-strengthening the communication and collaboration between Lower Austrian stakeholders and the PPPI Service Centre.

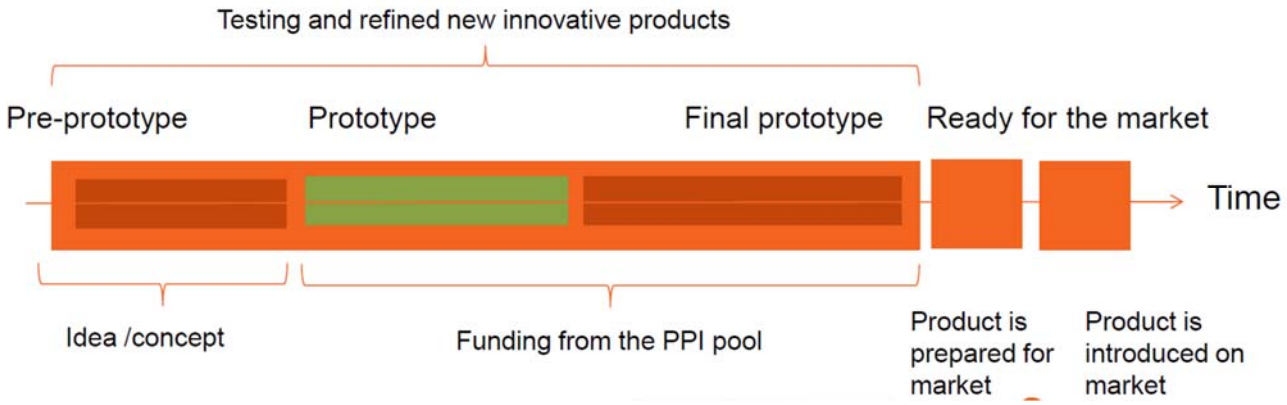
The main challenge for Lower Austria is to better link innovation support intermediaries (cluster managers, but also others) representing innovative companies with purchasing departments in the

regional government, municipalities and other public institutions, in order to match innovative products and services or innovative ideas with the demand of public procurers.

Relevance of CLUSTERIX 2.0 / Lessons learned:

Representatives of ecoplus and the Reg. Government Department Economy participated in the CLUSTERIX 2.0 project meeting in Kolding/Billund in Southern Denmark in September 2017 and learned about P7 Southern-Denmark's Good Practice "**Public-Private Innovation Pool**", a **funding instrument supporting demonstration projects of innovative companies with public test users**.





- PPI Pool funds projects by a minimum of DKK 400.000 (€ 53,000) and a maximum of DKK 1.475.000 (€ 198,000).
- Funding rate: 75 % with a requirement of 25 % financial contribution from private companies.
- Normally, projects last for a period of 12 months.
- PPI projects should be carried out in collaboration between at least one private company and one public partner

The Department Economy was very interested in testing this instrument also in Lower Austria. At the meeting of the PPI working Group in Györ/HU (February 2018) and during the staff exchange of a representative of Southern Denmark in Lower Austria in April 2018, they used the opportunity to ask the Danish partners further details on the funding scheme (eligibility criteria, funding volume and rate, timing etc.), but also necessary framework conditions and processes. The Lower Austrian and the Southern Danish partner intensively discussed, how to match the demand of public procurers and prototypes of innovative companies and what was the role of cluster managers in this matching.

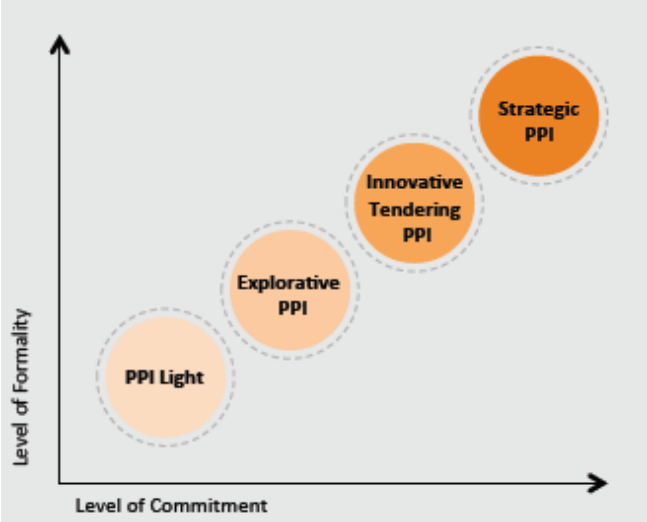
At regional level, ecoplus presented and discussed the Good Practice "PPI Pool" with the Local Stakeholder Group (Oct/2017, 2018/05, 2018/10). The Department Economy discussed the practice in a meeting of regional procurement experts (Sept/2018).

First lesson learnt in Lower Austria: it is not possible to copy paste the funding scheme "Public-Private Innovation Pool" to Lower Austria and launch a call for demonstration projects with public test users. It needs a lot of preparatory communication and network building in order to match public procurers and innovative providers. It also became clear that there is confusion about the term and "PPI" ("Innovationsfördernde Öffentliche Beschaffung") among Lower Austrian stakeholders. Clarification and awareness raising is necessary.

In autumn 2018, the Department Economy participated in the CLUSTERIX 2.0 study on the different use of PPI in the partner regions (carried out by the Danish PPI expert INNOBA and coordinated by P7). The results were shared in November 2018 and discussed at the project meeting in Debrecen (23 Nov 2018).

This study provided a very well-structured description of the broad variety of PPI aspects and the different types of PPI regarding level of formality and commitment:

- "**PPI light**": Informal knowledge sharing of public bodies and innovation providers
- "**Explorative PPI**": Contract based mutual experiments, pre-procurement -> which e.g. can be supported by funding instruments such as "PPI Pool"
- "**Innovation Tendering**": Public procurement with Co-Creation
- "Strategic PPI": Long-Term, high-level strategic partnerships over a longer period of time



In Jan/2019, ecoplus organized a meeting of Lower Austrian stakeholders with the new head of the Austrian PPPI Service Centre, in order to share experience from the past, information about existing service offers and potential collaboration.

In March/2019 ecoplus, together with the Department Economy and the Department Energy and Environment organized a local stakeholder workshop on PPI providing insight from Danish experience (external expert INNOBA) and opportunity to share ideas on future PPI activities. This workshop was

attended and very positively received by 22 participants, about 50:50 public procurers and innovation intermediaries. In total, the participants came up with several new ideas for PPI projects/activities:

- Sustainable, easy to use e-Charging stations in remote areas
- Digital Communication Platform for Physicians
- Innovative Reflectors for Cyclists free from PVC
- Improved Bio-Degradable Bags for Organic Waste
- Innovative Measurement System for Salt on Roads (Decrease of Salt Consumption on Roads)

Specific lessons learned and "transferred":

- The Department Economy, ecoplus, but also the other involved regional stakeholders gained a better understanding of the different types of PPI.
- The Department Economy and ecoplus understood that transferring the good Practice "Public-Private Innovation Pool" as a funding instrument for "Explorative PPI" needs a lot of preparation and additional accompanying measures to foster the communication and coordination of relevant players. The partners from Southern Denmark build on several years of experience of close collaboration between regional public procurers and the Welfaretech Cluster in the field of PPI for the health sector. This network and experience do not exist in Lower Austria. The network of relevant people and the process of matching public demand and innovative solutions still needs to be established. This "homework" needs to be done before the Danish good practice "Public-Private Innovation Pool" can be transferred to Lower Austria.

  Therefore, the main learning from the Danish good practice was, that ecoplus and the Department Economy need to initiate and take care of this process by organizing meetings of the relevant regional and national actors, following-up and enabling the exchange of experience. This was started already in the LSG meetings in phase 1. It became clear who are the main relevant players on regional and national level, what is their individual role and who offers what kind of service. Most importantly, the players met each other during the several LSG meetings described above and started to exchange ideas.
- The Department Economy of course learned in detail about all aspects of the "Public-Private Innovation Pool" funding instrument for demonstration projects, about eligibility criteria, funding volume and rate, timing and procedure, etc. However, it is too early to transfer the funding instrument to Lower Austria. At a later stage, when the project ideas in the PPI light dialogue triggered in phase 1 and followed-up in phase 2 will result in prototypes that can be tested with public test users, the Regional Government intends to financially support this demonstration projects using the learnings from the Danish "Public-Private Innovation Pool" funding instrument. It will use regional resources (Lower Austrian Fund for Economy and Tourism, additional policy instrument addressed, the exact scheme still needs to be defined).

2. Description of Action

Step 1: Common picture of roles and services of relevant players on regional and national level

ecoplus and the Department Economy organized several coordination meetings and workshops for Lower Austrian PPI players and the national PPPI Service Centre

Step 2: PPI light test run – Improve dialogue of PPI actors

ecoplus and the Department Economy will accompany at least two PPI activities (e-Charging stations, Innovative Measurement System for Salt on Roads) out of the five PPI ideas developed in the Workshop in March/2019. That means they will participate in follow-up workshops (first round in April 2019), mobilize further players to step into PPI cases where necessary and support the involvement of innovative companies.

Step 3: PPI light follow-up

ecoplus and the Department Economy will evaluate the output and outcome of the PPI test run and collect feedback on the other cases identified at the workshop in March/2019. In order to generate additional potential ideas for PPI activities, ecoplus will collect short descriptions of innovative solutions developed in the clusters and technopoles and forward them to the Department Economy. The department of Economy will distribute these descriptions among public procurers and relevant networks (other departments in the regional government, association of municipalities, Landeskliniken Holding, etc.) and organize meetings to match public demand and innovative solution providers.

(Step 4: Support for demonstration projects with public test users

As a result of the learning process described in the background section above, the Department Economy intends to support demonstration projects of innovative companies and public test users based on the P7 good practice "Public-Private Innovation Pool". I.e. in case the process described above results in prototypes, which shall be tested with public test users, the Department Economy will provide the necessary financial support. In the first step, the Department Economy needs to clarify the legal framework conditions for the implementation in our region. For example: eligibility of demonstration projects under the Lower Austrian regional funds, use of de-minimis, eligibility of potential costs of public procurers, etc. The financial support shale be tailor made to the specific needs.)

3. Players involved

Representing innovation providers: Department Economy (WST3); ecoplus cluster managers, ecoplus technopol managers; Technology and Innovation Partners (Chamber of Commerce); accent

Representing public procurement: Department for Energy and Environment (RU2) supporting sustainable procurement in all departments of the Regional Government, e.g. Department for Street Maintenance (ST2); Lower Austrian Agency Energy and Environment (eNu); Landeskliniken Holding

PPI process facilitators: Austrian PPPI Service Centre
Public Procurement facilitators: Chamber of Commerce ("Vergabedialog"), arbitration body ("Schlichtungsstelle") at the regional Government of Lower Austria.

4. Timeframe

Step 1: October 2017 - March 2019: Meetings of regional and national PPI actors:

- Milestone 1: meeting of Lower Austrian stakeholders with the new head of the Austrian PPPI Service Centre, in order to share experience from the past, information about existing service offers and potential collaboration: Jan/2019.

- Milestone 2: local stakeholder workshop on PPI providing insight from Danish experience (external expert INNOBA) and opportunity to share ideas on future PPI activities with 22 participants (public procurers and innovation intermediaries). Result: better understanding for PPI and the stakeholders in Austria; identification of new ideas for PPI projects/activities: March/2019

Step 2: March 2019 – December 2019: PPI light test run of at least two PPI cases (e-Charging stations, Innovative Measurement System for Salt on Roads)

PPI case "e-Charging stations":

- April/2019: Meeting of Department for Energy and Environment (RU2), Lower Austrian Agency Energy and Environment (eNu), Austrian PPPI Service Centre, ecoplus Mechatronics Cluster to define challenge and prepare matching of demand and solutions.
- May-August/2019: search for interested companies offering solutions.
- September/2019: Workshop with public procurers and companies.
- September-December/2019: Depending on the results of the workshop in September: start procurement process or define R&D project to develop the solution needed.

PPI case "Innovative Measurement System for Salt on Roads":

- April/2019: Meeting of Department Economy (WST3), Department for Street Maintenance (ST2), Austrian PPPI Service Centre, ecoplus Mechatronics Cluster, ecoplus Technopol Wiener Neustadt, Technology and Innovation Partners (Chamber of Commerce) and University of Applied Science Wiener Neustadt (Department for integrated Sensor Systems) to define challenge and the technological state of the art.
- May-October/2019: search for interested companies offering solutions.
- November 2019: Workshop with Department for Street Maintenance (ST2) as public procurer and companies.
- November-December/2019: define R&D project to develop the solution needed.

Step 3: September 2019 – ongoing (03/2021): Follow-up

- September/2019-December/2019: ecoplus and the Department Economy will follow the activities in Step 2.
- September/2019 - ongoing: ecoplus will follow-up and collect feedback on the other ideas identified in the Workshop in March/2019 and coordinate meetings to foster the process where necessary.
- September/2019 – ongoing: ecoplus will collect short descriptions of innovative solutions developed in the clusters and technopoles and forward them to the Department Economy. The department of Economy will distribute these descriptions among public procurers and relevant networks (other departments in the regional government, association of municipalities, Landeskliniken Holding, etc.) and organize meetings to match public demand and innovative solution providers.
- Milestone 3: ecoplus and the Department Economy will evaluate the output and outcome of the PPI test run and decide on next steps: December 2019.

(If relevant: Step 4: January 2020 – ongoing: Support for demonstration projects with public test users

- the Department Economy needs to clarify the legal framework conditions for the implementation in our region.
- Tailor-made financial support to project(s) developed in step 1-3.)

5. Costs

Step 1-3: No extra costs, only staff costs (ca. 10,000 €) covered by own expenses
(Step 4: Based on the Danish good practice the typical project volume is 50,000 – 200,000 € with a public co-funding of 75%. However, the definition of the project volume, as well as the total budget for the pilot call in Lower Austria still need to be defined.)

6. Funding sources:

Step 1-3: No relevant costs, only staff costs covered by own expenses

(Step 4: As the policy instrument addressed ERDF OP 2014-2020 does not allow funding for demonstration projects, the pilot call will be financed by regional funds (non ERDF), i.e Lower Austrian Fund for Economy and Tourism (additional policy instrument addressed).

7. Monitoring

In step 3 ecoplus will collect number of PPI cases initiated as well as the number of PPI cases successfully implemented and failed.

In step 4 the Department Economy will collect the number of companies involved in PPI projects.

FURTHER DEVELOPMENT OF LOWER AUSTRIAS SPECIALIZATION IN 3D PRINTING

ACTION 3: "AM Voucher"

1. The background

Challenge:

Additive Manufacturing (AM) has been seen as a game changing technology helping to reduce material input, boosting the trend of personalized goods, enabling new business models, etc. As the production costs are high, AM needs to find relevant niches, AM requires new thinking. AM not only implies technological challenges but most of all new thinking of engineers and business model innovation.

Clusters – working at the interface of researchers, companies and policy makers - can help the successful implementation of additive manufacturing by disseminating Success Stories and Best Practices, connecting knowledge, infrastructure and market, enabling innovation across disciplines and business sectors.

In 2012 the Lower Austrian Regional Government started a process of developing an RTI Strategy and Programme in order to strengthen regional research structures, to set thematic priorities and – supplementing the Economic Strategy Lower Austria – to foster the innovative capacity of companies.

In total, about 250 stakeholders participated in more than 30 workshops in 2013 and 2014 and defined in a bottom-up process 10 research areas. Underlying criteria: relevant research and education available, benefit for society and economy, critical mass of employees in related research and businesses and innovation potential.

The Mechatronics cluster manager, assigned with the coordination of the working group on the research area automatisation & manufacturing, assured the involvement of industry and relevant researchers. In an entrepreneurial discovery process, the group agreed on 3D Printing as a key domain and developed ideas for lead projects in the region.

Since 2014 the cooperation on 3D Printing resulted in a broad variety of 3DP projects with a total volume of 5 Mio € involving 60 companies:

- Infrastructure investment in a Laboratory for Manufacturing Innovation (LMI) at FOTEC Wiener Neustadt;
- Two interregional collective research projects (CORNET) on additive manufacturing;
- Development of trainings for AM professionals; new Curriculum 3DPrinting at University of Applied Science Wr. Neustadt.

However, there companies in the region report still existing barriers and challenges for the adoption of AM:

- *Productivity is still too low compared to "conventional" processes*
- *Lack of standards to secure the use of the technology (e.g. strength calculation)*
- *Lack of "System Thinking": To take advantage of the process, it is necessary to think in systems and functions rather than in Production Technologies*
- *Development of new business models, which use the advantages of AM*

Relevance of CLUSTERIX 2.0 / Lessons learned

In the CLUSTERIX 2.0 project, ecoplus shared this case as example for the potential role of clusters in implementing Regional Innovation and Smart Specialization Strategies (governance) in the project meeting in Gent (February 2017). ecoplus and ADR Nord Est (P10) decided to continue the discussion and explore the transferability of practices in a separate Working Group "3D Printing". At the next WG meeting in Györ (February 2018) ecoplus and ADR Nord Est (P10) and its stakeholder from the EURONEST ICT Hub Cluster shared experience on the role of clusters and what is needed to foster adoption of this new technology. At the WG meeting in Vienna (November 2018) linked to the 3rd Metallic Additives Manufacturing Conference, also a representative of the Flam3D cluster (stakeholder of P9) joined the group.

Learnings from the interregional exchange of experience

As there is a lack of information (both on standards as well as on successful business cases), companies need a certain "playground" to design, test, validate their prototypes both in technological and economic aspects and get expert guidance. In order to get things on the ground, companies need opportunity to test/try things out (development through trial and error). This triggered the idea to develop and launch a Voucher for Additive Manufacturing supporting consulting costs for planning and concept development, external services such as design services, but also 3D printing of the designed component, post-treatment and finishing according to the design drawing. This is also based on the Flemish experience provided by Flam3D cluster (stakeholder of P9) of what is needed to stimulate collaboration between technology bidders, research institutes and potentially interested companies, namely matchmaking between companies and relevant researchers, funding for prototypes and demo pieces (fully documented 'real' business cases), in order to be able to demonstrate the potential of additive production to other companies operating in the same industry. However, we cannot refer to a "good practice" from Flanders, because the proposal of Flam3D to support 3D printing with vouchers for individual companies was not accepted by the Flemish policy makers. Flam 3D had to We let go of the idea of using vouchers and have now set up a different system. Lower Austria decided to test the Voucher.

2. Description of Action

Step 1: Regional Government Department for Economy (WST3) together with ecoplus MC and TIP (Chamber of Commerce) designed a new Voucher for Additive Manufacturing: Guideline for application until April 2019

Step 2: The Department Economy launches the Voucher for Additive Manufacturing ("3D-Druck Bonus") as a pilot scheme. The pilot call will be open from May to October 2019.

- Innovation voucher for testing and first pilot applications. It should be evident that the production of the product with the aid of additive manufacturing brings a valueable benefit for the applicant company and that a successful implementation on the market is possible (market prospects, exploitation possibilities). These criteria are also used for the selection of funding projects.
- In addition, the beneficiary must prove that the new product is implemented in Lower Austria, and that Know How building takes place in the applicant company

- No funding will be provided under this call for series productions and 3D printing of standard products
- Funding is provided in the form of a grant of a maximum of 50% (max. € 5,000.00) of the eligible costs. The maximum upper limit of the eligible costs is therefore € 10,000.00.
- Only costs incurred in direct connection with the project (the component to be produced) are eligible for funding: External consulting costs (planning, concept development) and external services (design services, additive manufacturing (3D printing) of the designed component, post-treatment and finishing according to the design drawing)
- not eligible: Costs for testing functional capability, Samples for destructive testing, Destructive tests.

Step 3: Evaluation of the results of the pilot scheme.

Indicator: number of companies collaborating with knowledge providers using the new Voucher. (target figure not confirmed yet).

3. Players involved

Regional Government Department for Economy (WST3)
Intermediaries mobilizing and informing companies about the call: ecoplus Mechatronics Cluster, TIP (Chamber of Commerce), accent.
Knowledge providers: fotec, Hirtenberger, SGP, etc.
Beneficiaries: Lower Austrian companies

4. Timeframe

Step 1: October 2018 - April 2019

Milestone 1: pilot call launched: 2 May 2019

Step 2: May 2019 – October 2019

Step 3: November 2019

Milestone 2: Department Economy decides on continuation of the voucher scheme.

5. Costs

The voucher will support max 50% for a maximum project volume of 10,000.00 €.
The total budget available for the Voucher for Additive Manufacturing ("3D-Druck Bonus") as a pilot scheme is max. 400,000.00 €.

6. Funding sources:

As the policy instrument addressed ERDF OP 2014-2020 does not allow funding for demonstration projects, the pilot call will be financed by the Regional Fund for Technology (non ERDF), i.e. an additional policy instrument addressed. **Action 3 (developed based on the interregional learning in CLUSTERIX 2.0) contributes to the improvement of the policy instrument addressed by improving governance.**

7. Monitoring

Regional Government Department for Economy (WST3) will collect and report number of companies collaborating with AM experts (R&D institutions, but could also be specialized companies) with the help of this new voucher.

Place, date: St. Pölten, 2019-10-01

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