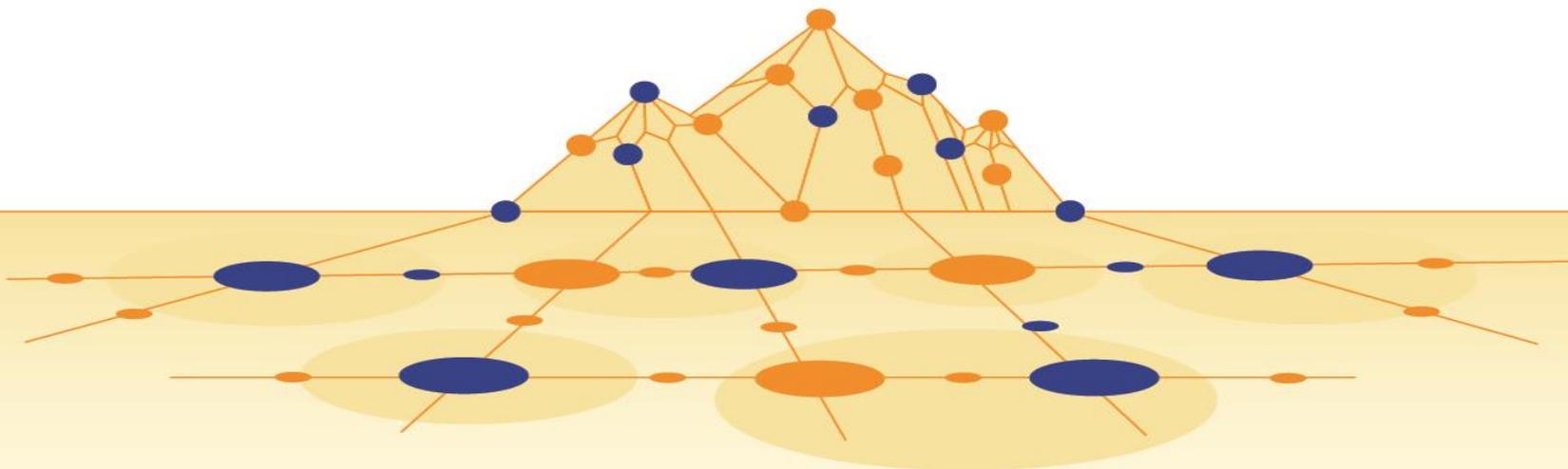# S3-4AlpClusters

Smart Specialisation with Smart Clusters

Transformative Activities – Cluster Toolbox

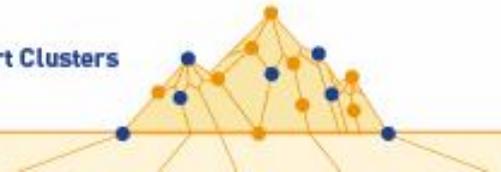**Training Tool**

Smart Specialisation with Smart Clusters

In the implementation of S3 three challenges have been identified:

- Lack of real Transformative Activities to support innovation and structural transformation
- Lack of cross-regional collaborations to gain critical mass
- Need to better integrate and collaborate with clusters in S3

Smart Specialisation with Smart Clusters proposes a **systematic process** that follows **5 Action Lines** to address these challenges:
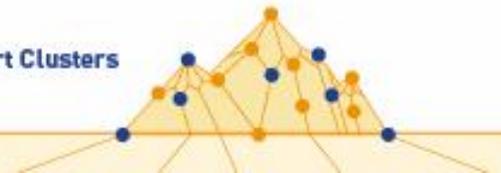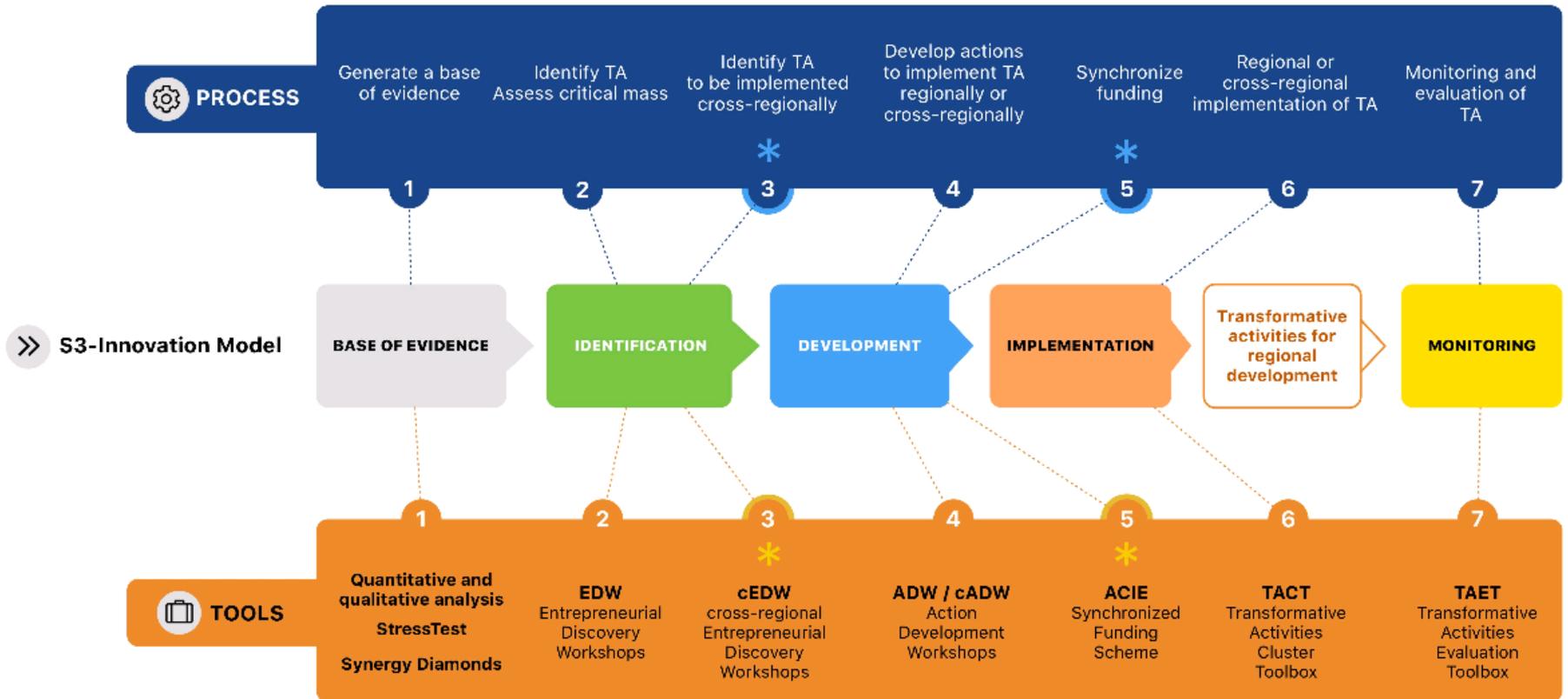
1. Provide a **Base of Evidence**
2. **Identification** of Transformative Activities
3. **Development** of actions
4. **Implementation** of Transformative Activities
5. **Monitoring**

To support the implementation of the individual process steps, **specific instruments and services** are developed. The **Training Tool Kit** provides guidance on how to implement the process and the instruments in a region.
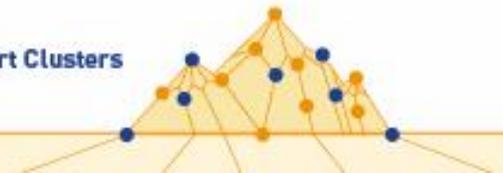
Smart specialisation with smart clusters
A new approach to generate Transformative Activities (TA)

Training Tool Kit –
Smart Specialisation with Smart Clusters

1. Base of Evidence

Qualitative & Quantitative Analysis

Stress Test

Synergy Diamond

2. Identification

Entrepreneurial Discovery Workshop
regional / cross-regional

3. Development

Action Development Workshop

Synchronized Scheme

4. Implementation

TA Cluster Toolbox

5. Monitoring

TA Evaluation Toolbox
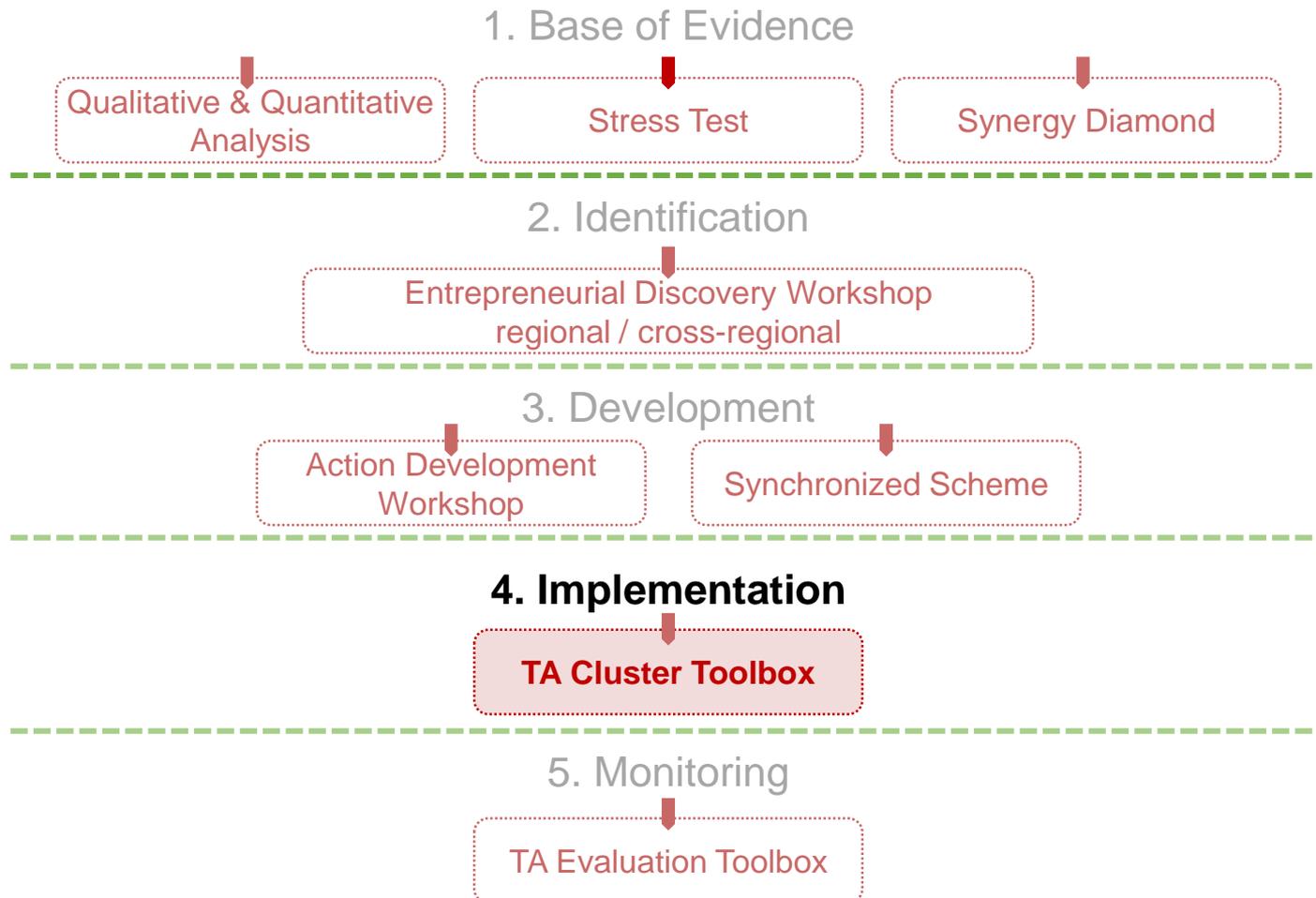
Background

Transformative Activities – Cluster Toolbox
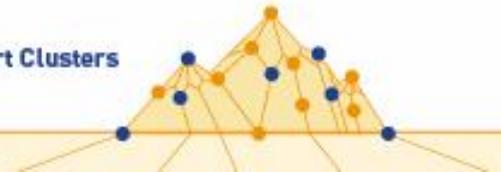
Transformative Activities

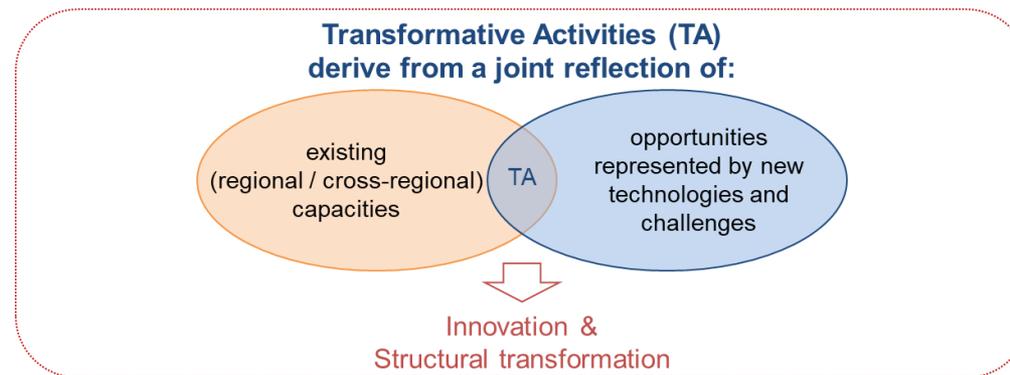Smart Specialisation postulates to set priorities or strategic domains by finding unique combinations between specific **potentials** and **capacities** and new **opportunities** = „**Transformative Activities**".

"**Transformative Activities**" (TA) can be understood as an accumulation of innovation-related capacities and activities with **sufficient critical mass** to scale and to lead to structural transformation of existing industries. Transformative Activities are inherently cross sectorial and are developed through targeted combination of activities and actors.

**Transformative Activities (TA)
derive from a joint reflection of:**

existing
(regional / cross-regional)
capacities

TA

opportunities
represented by new
technologies and
challenges

Innovation &
Structural transformation

The **identification of Transformative Activities** for the region should be the result of a bottom-up approach – an **entrepreneurial discovery process** (see Training Tool EDW). The **Synergy Diamond** is a specific tool to support the identification of TA (see Training Tool Synergy Diamond).
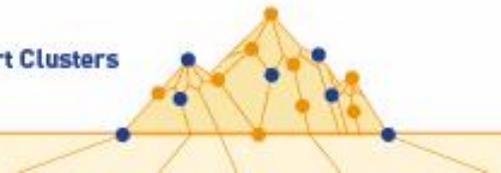
Role of clusters for developing Transformative Activities

To develop Transformative Activities, **concrete actions** need to be implemented. Actions can **significantly vary** from region to region and depend on the administrative and economic situation but also on the level of maturity of the Transformative Activities. A critical mass of entrepreneurial and innovation resources is crucial to unfold momentum and to contribute to regional development.

Cluster initiatives and regional networks play an important role in the implementation phase as they represent local resource concentrations and form a promising starting point for the implementation of actions to support Transformative Activities.

By **engaging companies in cooperation** across regions and sectors clusters can contribute to gain critical mass to better address Transformative Activities.
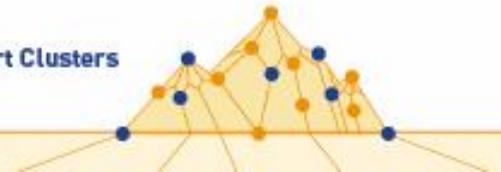
Objective

Transformative Activities – Cluster Toolbox
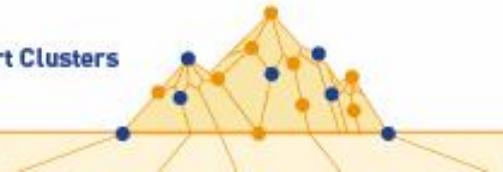
Concrete actions to develop Transformative Activities

Since **Transformative Activities** and **concrete actions** are unknown ex ante in the process and can take a multitude of different forms, they are best developed in an **Action Development Workshop** (see Training Tool ADW).

Clusters play an important role in the implementation phase by engaging companies in cooperation across regions and sectors. Hence, they support to create a critical mass to better address Transformative Activities.

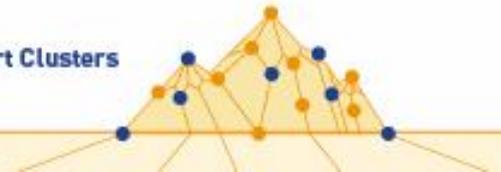The **Transformative Activities Cluster Toolbox** highlights the **potential** of clusters to contribute to the development of Transformative Activities and stimulates the **identification of suitable actions.**

Background of the development of the TA Cluster Toolbox (I)

The TA Cluster Toolbox is a collection of cluster services based on two sources:

a) **Cluster survey among cluster initiatives (23 Services)**
b) **Cluster workshops to define new innovative services (14 Services)**

Ad a) Cluster survey among cluster initiatives

Within the project S3-4AlpClusters a **survey** among 33 cluster managers in 10 regions was conducted. Each participant was asked to provide up to three detailed "best practice descriptions" about activities of their cluster initiatives ("One Pager"). In total, **76 services were identified** in this survey and allocated to 37 types of cluster activities. Thereby, a distinction was made between "**traditional**" and "**innovative**" services.

23 best practices were selected from the 76 services, based on their soundness, uniqueness and completeness. They were allocated to specific service fields and form the so-called **"Best Practices Subset".**

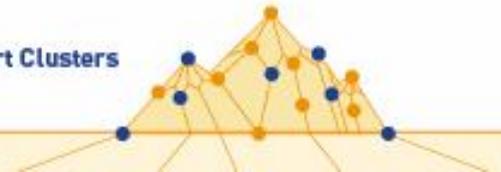# Background of the development of the TA Cluster Toolbox (II)

The TA Cluster Toolbox is a collection of cluster services based on two sources:

a) **Cluster survey among cluster initiatives (23 services)**
b) **Cluster Workshops to define new innovative services (14 services)**

Ad b) Cluster Workshops to define new innovative services

Within the project S3-4AlpClusters each participating region organized a so called **Cluster Workshop** to identify and develop new cluster services to **support the implementation of the Innovation Mode**l and to foster innovation within the cluster actors to support interregional cooperation.

In total **27 new cluster services** were proposed in the Cluster Workshops. **14** of these services were selected to **be integrated in the Cluster Toolbox** based on their regional perspective, relevance and quality and allocated to the specific service fields.
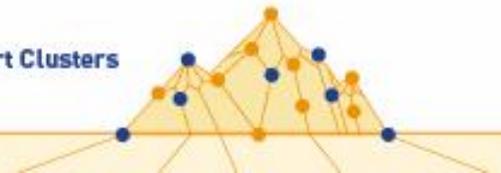
Components

Transformative Activities – Cluster Toolbox
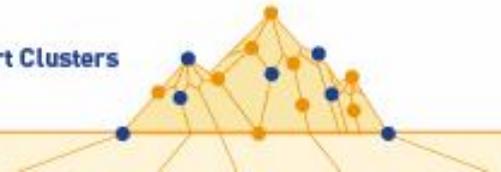
Content of the TA – Cluster Toolbox

The Cluster Toolbox comprises in total 40 cluster services:

- ◉ **23 Best Practices**
- ◉ **14 New Cluster Services**

The description of cluster services has the following structure:

| Section	Content
1. Beneficiaries	Who are the beneficiaries?
2. Goals and added value	What is the added value of this activity? What are its goals, intended results it seeks to achieve, and expected impacts?
3. Operative Details	What is the time frame for this activity, what resources are needed? Who can implement it?
4. Lessons Learned	What were lessons learnt from implementing this activity? Possible improvements for this activity? Further evolvement of this activity?
5. How to	Tips and hints to organize and run this activity successfully.
6. Coordination with regional S3	Is this activity linked to the regional S3 (e.g. part of a regional action plan, involvement of policy makers)?
7. Coordination with other cluster initiatives	Is this activity linked to other cluster initiatives (regional/cross border)?
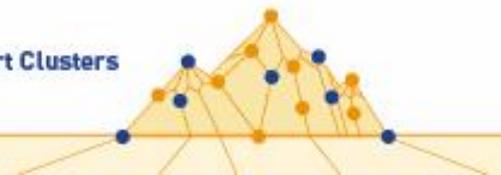
Categorisation of Cluster Services

The **23 Best Practices and 14 New Services** were analysed according their main objectives and then categorised into **5 subsets.** Each subset addresses a **specific service field.**

This classification is aligned with the "Cluster Initiative Target Board" applied in the ["The Cluster Initiative Greenbook"](#):
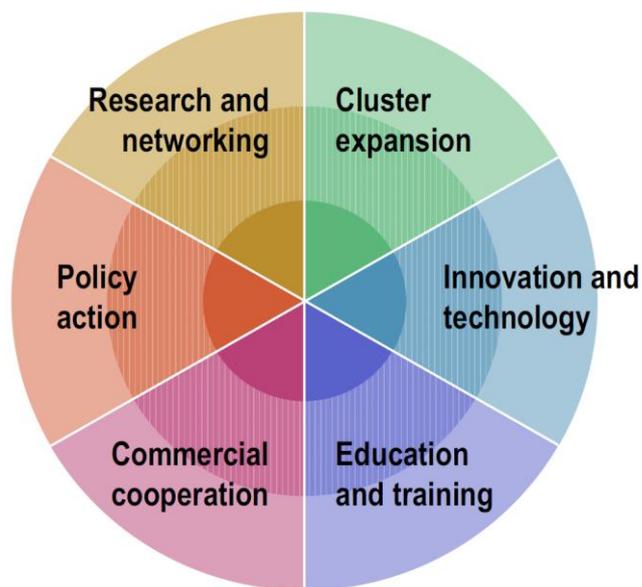
Cluster Initiative Target Board (The Cluster Initiative Greenbook)	Service field (TA Cluster Toolbox)
Education and training	**Education**
Innovation and technology	**Innovation**
Commercial cooperation	**Collaboration**
Research and networking	**Networking**
Cluster expansion	**Growth**
Policy action	(no identified cluster service predominantly addresses this objective)

Source: The Cluster Initiative Greenbook, p. 27

Interreg
Alpine Space
S3-4AlpClusters

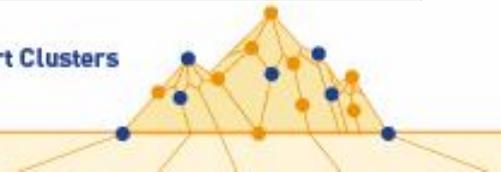Smart Specialisation with Smart Clusters

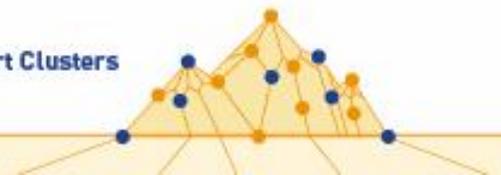# 23 Best Practices & 14 New Services - 5 subsets of Cluster Services

A **description** of the **five service field** is provided in the following table.
For each service field the **number of services included in the TA-Cluster Toolbox** is indicated in the last two columns.

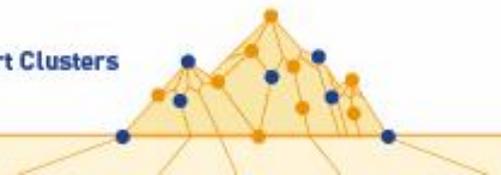| Service field	Description of the service field	No. Of cases	
		Best Practices	**New Services**
Education	The education services refer to activities that lead to the acquisition of knowledge and skills in the related industry-entrepreneurial area. Those services can be provided by experts such as professors, researcher or consultants.	5	3
Innovation	The Innovation services refer to activities that support the development of more-effective products, processes, services, technologies or business models. The activities can be referred also at IP protection, R&D support, strategies development and many others.	4	3
Collaboration	The collaboration services refer to activities that aim to increase partnerships, mainly among the cluster members, to share the 'know how' among individuals in order to create and sustain a competitive advantage.	4	2
Networking	The Networking services refer to activities that support entrepreneurs to form business relationships and to recognize and create business opportunities, to share information and to seek potential partners for joint ventures.	6	2
Growth	The growth services refer to activities that aim to support cluster members to develop new products or services, to reduce barriers to entry in certain markets, to increase the knowledge and the added value of their product or services.	4	4

Interreg
Alpine Space
S3-4AlpClusters

Smart Specialisation with Smart Clusters

Education Subset - Best Practices

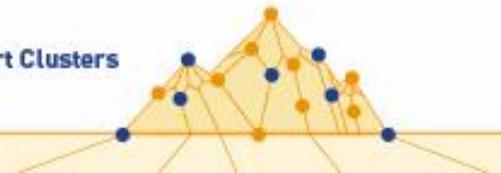| Case no.	Service Titel	Short description
1	**Program to support woman & career**	This activity is run as a program and targets female executives and specialists. The program aims at increasing the share of women in senior management due to their proved know-how, creativity and personality in management positions.
2	**Demand-oriented qualifications**	Focusing on a specific field, the activity engages high school students, unemployed and employed people for a training in the related specific field. The goal is to provide a training service that also supports recruitment activities to the HR department of the member companies.
3	**Boosting entrepreneurial culture**	This activity is dedicated to "would like to be" entrepreneurs, start-ups, SMEs (cluster participant and external) and aims at improving the knowledge of the entrepreneurial culture.
4	**Mini-Master training**	This activity addresses educational institutions (high schools, universities) and companies to support the creation of a qualified workforce. Training activities that target competences that are needed in companies.
5	**Academy: seminars and training units**	The academy offers companies the opportunity to provide their staff continuous qualification and training in order to be updated on all current technological and industry-related changes. Participating companies - especially SMEs - are able to improve their competitiveness and innovativeness.

Education Subset – New Services

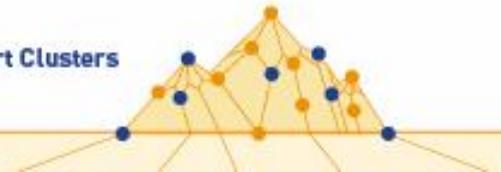| Case no.	Service Titel	Short description
1	**"Test track" for project ideas, prototypes, concepts, business models, problems ("Rüttelstrecke")**	This service supports the testing of new project ideas, services, business models or prototypes by having them analysed by a reflection group which is composed of external experts with different backgrounds (cluster, R&D, administration, users).
2	**Regional Cluster Desk**	A regional centralized and coordinated desk offers services on innovation and educational needs and supports knowledge sharing. By merging similar training needs ("joint educational package") cross-sectoral cooperation is supported.
3	**Career Platform**	A free digital platform dedicated to the development of workers' new skills is built together with HR key players (e.g. universities, education system). The main objective is to foresee the required skills of the labour market and adapt individual career plans and education programs.

Innovation Subset - Best Practices

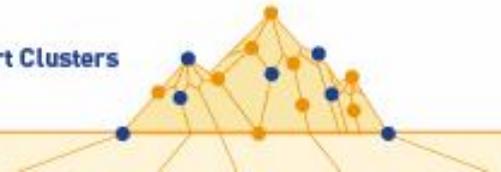| Case no.	Service Titel	Short description
1	**Support in accessing public R&D and innovation calls, grants, tenders (regional, national, EU).**	This activity offers support in setting up collaborative projects with the goal of increasing the competitiveness of the regional industries.
2	**Product prototyping for SMEs**	This service aims at reducing the barrier for prototyping, which could be very expensive for SMEs, by offering the manufacturing of small series production through the local research institutes.
3	**R&D competitive calls**	The main added value of this service is the set up of an interdisciplinary working team on specific R&D topics. The following steps are supported with this service: 1. project "design"; 2. project "execution".
4	**Health Hackathon**	The aim of this service is to bring together innovators and healthcare experts in order to foster new ideas and to develop innovative solutions to solve healthcare challenges using emerging technologies.

Innovation Subset – New Services

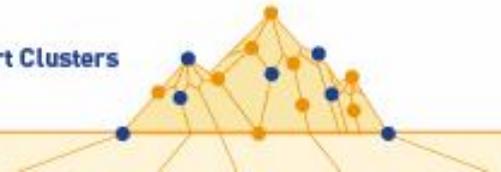| Case no.	Service Titel	Short description
1	**Think Tank of Innovation**	Students under the tutorship of professionals from industry and academia define project ideas in a specific field. An international evaluation board selects the winning proposals which will be considered for submission to a funding programme.
2	**Intellectual Property Management for SMEs**	This service supports improvements of the IP-management of SMEs. A training phase is followed by an operational phase where support is provided for the valorisation process including monitoring.
3	**Fast track to employment**	This programme supports the development of joint research activities between companies and research bodies. Young researches, following a rotation scheme, spend working periods in the companies.

Collaboration Subset - Best Practices

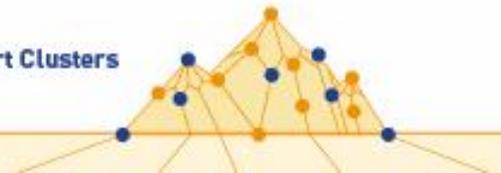| Case no.	Service Titel	Short description
1	**Innovation Days**	The objective of this service is to explore new markets and customers for cluster participants, mainly through the involvement of global OEMs at the "innovation day". The event aims at supporting collaboration among cluster participants and OEMs.
2	**Competence Centre**	This service aims at fostering the collaboration among companies along a supply chain through the implementation of a competence centre. The members work intensively on custom solutions. The support for R&D activities is guaranteed by a research institute.
3	**Cross-Cluster Collaboration**	Two or more clusters collaborate in a cross-cluster project. Companies and political authorities jointly discuss unsolved technical and legislative challenges as well as possible solutions. An online mapping of the technological competences of the stakeholders aims at triggering further collaboration.
4	**Technology Night**	The "Technology Night" is hosted by a SME that gets the opportunity to present its R&D-projects and respective results to a group of about 20 interested cluster members. The goal of this service is to encourage the collaboration of cluster members with major industrial enterprises or other SMEs.

Collaboration Subset – New Services

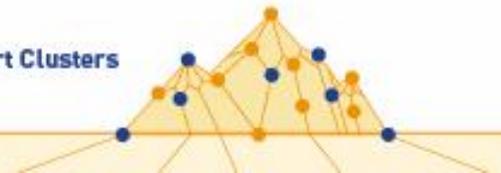| Case no.	Service Titel	Short description
1	**Cross-Industrial Sector Event for Joint Commercialization Processes**	Representatives of clusters from different sectors and countries present their projects, research results, prototypes with the aim of achieving a joint commercialization process.
2	**Synergies for internationalization**	Forecasting of supporting figures for the internationalization of the cluster that allows its members to exploit existing financing tools and funding programmes.

Networking Subset - Best Practices

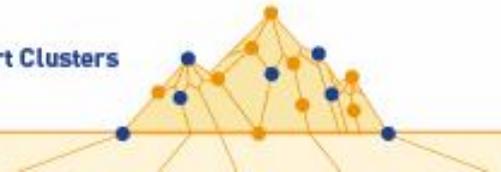| Case no.	Service Titel	Short description
1	**Technology scouting events**	This service aims at bringing together best professionals, companies and startups for the identification of trending technologies. The events are open to everyone and the participants are encouraged to present their expertise on a tech topic, to share their thoughts and learn from others in relaxed atmosphere.
2	**Tech Exhibition**	This service puts together several cluster members under one brand. Participants benefit from the joint participation at relevant international events and contacts to new potential partners are set up.
3	**Internationalization**	Internationalization activities aim at identifying new opportunities for partnership development. This service supports companies in orienting their international development, in identifying potential specific markets, and in expanding their networks.
4	**Ciclo Workshops**	The objective of this service is to promote networking among cluster members, to raise awareness, especially to SMEs, about competitive changes connected with the dissemination of new technologies and Industry 4.0.
5	**International Trade Fair**	This service offers the opportunity to participate with a joint booth at international trade fairs on a specific technology field and aims at fostering networking and cooperation.
6	**Networking Events**	This service is based on the organization of events, from workshops with 10 to 20 participants to congresses for several hundred participants, and aims at enhancing networking activities and at acquiring new cluster members.

Networking Subset – New Services

| Case no.	Service Titel	Short description
1	**Networking throughout thematic groups and project workshops/labs**	This integrated service encourages intra- and interregional partnerships in emerging sectors by the following elements: a) Dynamic mapping of the skills and needs of cluster members; b) operational and intercluster thematic workshops to identify innovative projects and ideas; c) testing of ideas through project support (scouting of funding).
2	**„International Officers": Job Positon and Periodic Events for Interregional Cross-Cluster Management Cooperation**	Clusters recruit an „international officer" who is in charge of managing contacts with other cluster managers at trans-regional level and organizes periodic networking meetings to facilitate the development of trans-regional services.

Growth Subset - Best Practices

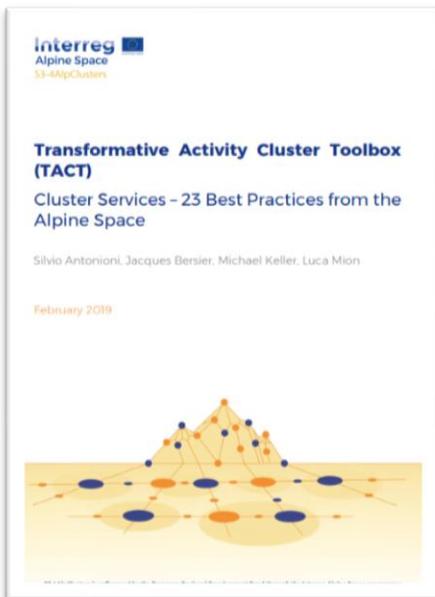| Case no.	Service Titel	Short description
1	**Industry 4.0 Self Assessment**	This service consists of a self assessment online software tool that aims at evaluate the maturity of a company in terms of advanced manufacturing. A one-day training guarantees the participant to be able to carry out the survey independently. The objective is to motivate and support the entrepreneurs to further develop their processes towards advanced manufacturing and to identify the actual degree of maturity and the intended one.
2	**HR Benchmark**	The service supports companies and regions in analysing and benchmarking of brain drain, experts immigration, and fluctuation of employees. It supports the collection of HR-key data indicators and supports further strategic development.
3	**Acceleration Programme**	The service is an acceleration program open to start-ups nearly ready to launch their products/services throughout the country and abroad. Business leaders, banks, large companies and mentors provide their expertise and support.
4	**Business strategy support**	This service provides its beneficiaries (esp. SMEs) with external expertise and mentoring services to gain professional insights and perspectives about upcoming trends.

Growth Subset – New Services

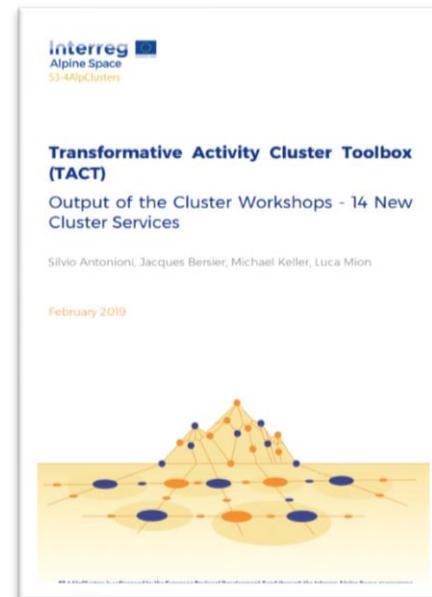| Case no.	Service Titel	Short description
1	**Transformer Maturity Model**	This activity aims at elaborating a model/tool to assist start-ups and existing small companies in the transformation to specialised entrepreneurs in a specific sector. The key elements on which to intervene (e.g. missing skills, necessary technologies, certification) will be identified and adequate services can be implemented.
2	**Cluster Ambassador Program**	The aim is to support the implementation of a structured strategy for clusters' internationalisation. By identifying core competences and matching needs of the clusters to explore the promising synergies the development of focused initiatives to support the cluster and its members to develop projects or business opportunities.
3	**Bank of Training – Large firms experience in innovation management for SMEs**	This service offers mentoring activities by managers of large innovative companies to SMEs, in particular family owned SMEs, to support the development of managerial skills, especially in the R&D sector.
4	**Tourism Services Clinic**	A platform supported by regional key stakeholder is available to cluster companies who can take advantage of specialized services provided by experts with different profiles to develop new tourism services and improve existing ones.
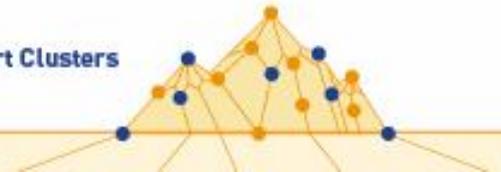
Access to the TA - Cluster Toolbox

The descriptions of the cluster services are available on the S3-4AlpClusters-project website:
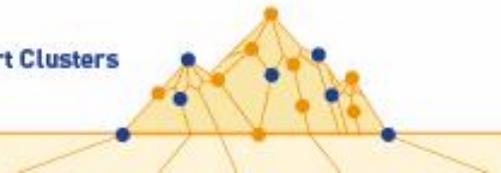
23 Best Practices:

14 New Cluster Services:

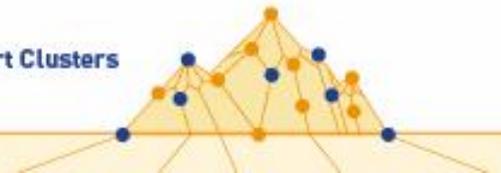https://www.alpine-space.eu/projects/s3-4alpclusters/project-results/the-s3-innovation-model/best-practices.pdf

https://www.alpine-space.eu/projects/s3-4alpclusters/project-results/the-s3-innovation-model/new-cluster-services.pdf

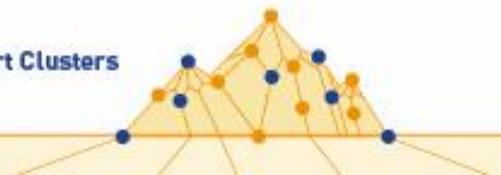Smart Specialisation with Smart Clusters

Success Factors

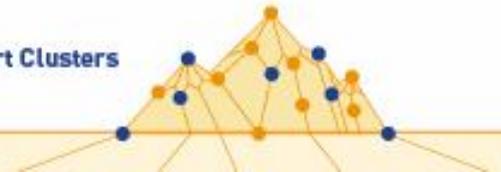Transformative Activities – Cluster Toolbox

Success Factors

- ⊙ Choose relevant services according to the **regional needs and framework conditions** and with **relevance to the targeted Transformative Activity**.
  - The categorization into service fields can give you orientation to identify suitable cluster actions.

- ⊙ The description of the services provides information about the actual implementation in one particular region/cluster. Therefore, the service description is only an input and has to be thoroughly reviewed and **adapted according to the new regional/cluster context**.

- ⊙ If **cross-regional/sectoral cooperation** is sought, **engage peers** in the targeted region/sector to adapt services for cross-regional/sectoral purposes and implement them jointly.
  - The section 7 of each description gives you a hint whether this activity was already coordinated with other cluster initiatives.

- ⊙ Set up a **monitoring system** to record the services and activities a cluster initiative implements to contribute to the development of the TA.
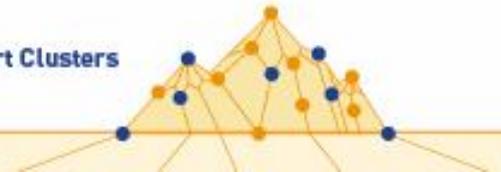
Contact and further Information

Transformative Activities – Cluster Toolbox

Further literature and information

- Foray, D., Keller, M., Bersier, J., Meier zu Köcker, G. (2018): Transformative activities for smart specialisation: consideration on a workshop methodology, Working Paper; https://www.innosquare.com/media/1205/foray-keller-bersier-and-meier-zu-koecker-2018.pdf

- Keller, M., Reingruber, I., Dermastia, M, Bersier, J., Meier zu Köcker, G. (2018): Smart Specialization Strategies (S3) and Clusters – An Innovation Model for Transformative Activities; Working Paper; https://www.innosquare.com/media/1214/s3-4alp-working-paper.pdf

- Antonioni, S., Mion, L., Keller, M. and Bersier, J. (2018): Good Practice Report. Interreg Alpine Space – S3- 4AlpClusters. https://bit.ly/2PIGRtW

- Antonioni, S., Mion, L., Keller, M. (2018): Cluster Workshop Regional Approaches to Implement S3 through Clusters – Synopsys Report. Interreg Alpine Space – S3-4AlpClusters. https://bit.ly/2Qewzw9

- Sölvell, Ö., Lindqvist, G., Ketels, C. (2003): The Cluster Initiative Greenbook, https://www.hhs.se/contentassets/f51b706e1d644e9fa6c4d232abd09e63/greenbooksep03.pdf

Contact and further information

Silvio Antonioni
HIT - Trentino Innovation Hub
Povo (TN), Italy
Silvio.antonioni@trentinoinnovation.eu
+39 0461 312 327

The training tool was prepared by Simone Weiss (Innovation and Technology Transfer Salzburg) in cooperation with Renate Handler and Markus Gruber (convelop gmbh).

This training tool has been produced within the frame of the S3-4AlpClusters project, funded by the Alpine Space INTERREG Programme of the European Commission.

S3-4AlpClusters is cofinanced by the European Regional Development Fund through the Interreg Alpine Space Programme

S3-4AlpClusters Partners

Haute école d'ingénierie et d'architecture Fribourg
Hochschule für Technik und Architektur Freiburg

Veneto innovazione

REPUBLIC OF SLOVENIA
GOVERNMENT OFFICE FOR DEVELOPMENT AND EUROPEAN COHESION POLICY

business upper austria

ITG Innovationsservice für Salzburg

proplast PLASTICS INNOVATION POLE

ClusterAgentur BADEN-WÜRTTEMBERG

REGIONE DEL VENETO

Regione Lombardia

PROVINCIA AUTONOMA DI TRENTO

TRENTINO

Bavarian Research Alliance

Anteja

femto-st SCIENCES & TECHNOLOGIES

CLUSTERSCC LOMBARDIA

HIT HUBINNOVAZIONETRENTINO

Interreg Alpine Space
S3-4AlpClusters

Smart Specialisation with Smart Clusters