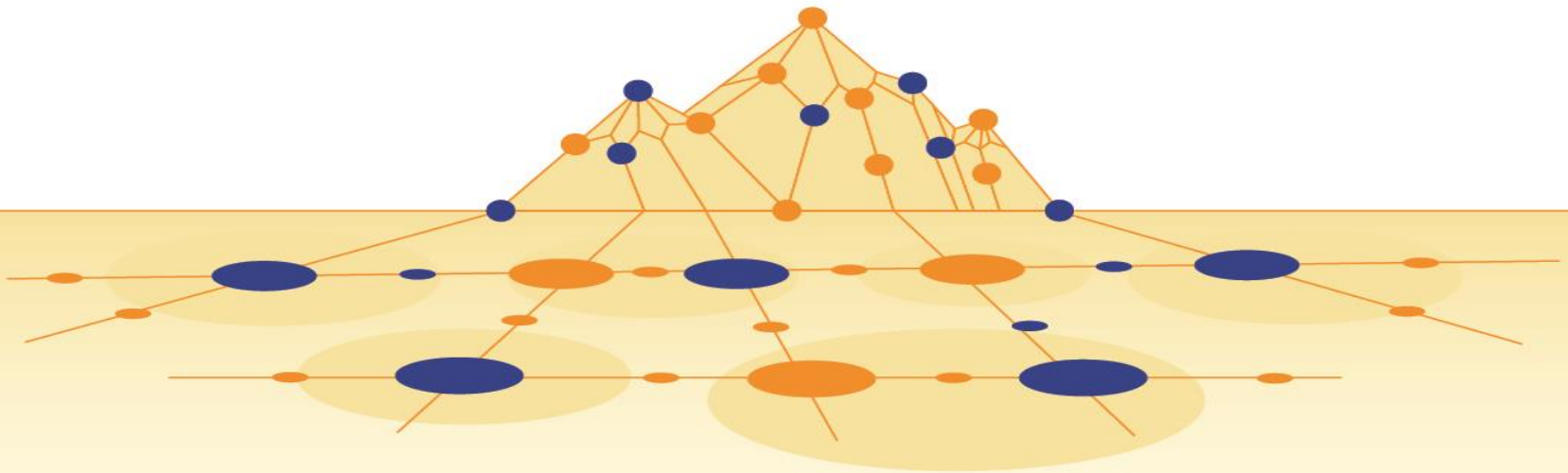


S3-4AlpClusters

Smart Specialisation with Smart Clusters Evaluation 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:

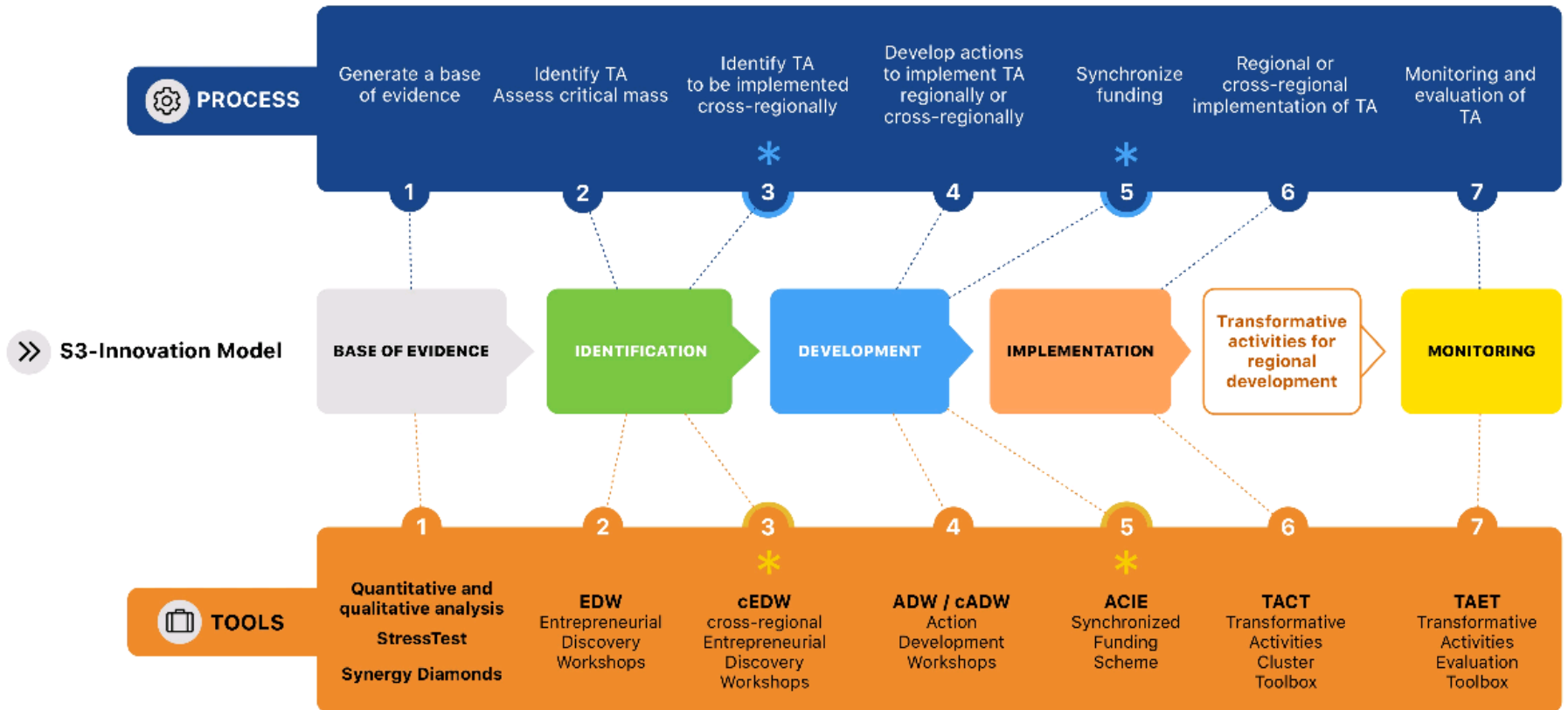
1. Provide a **Base of Evidence**
2. **Identification** of Transformative Activities
3. **Development** of actions
4. **Implementation** of Transformative Activities
5. **Monitoring**

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.

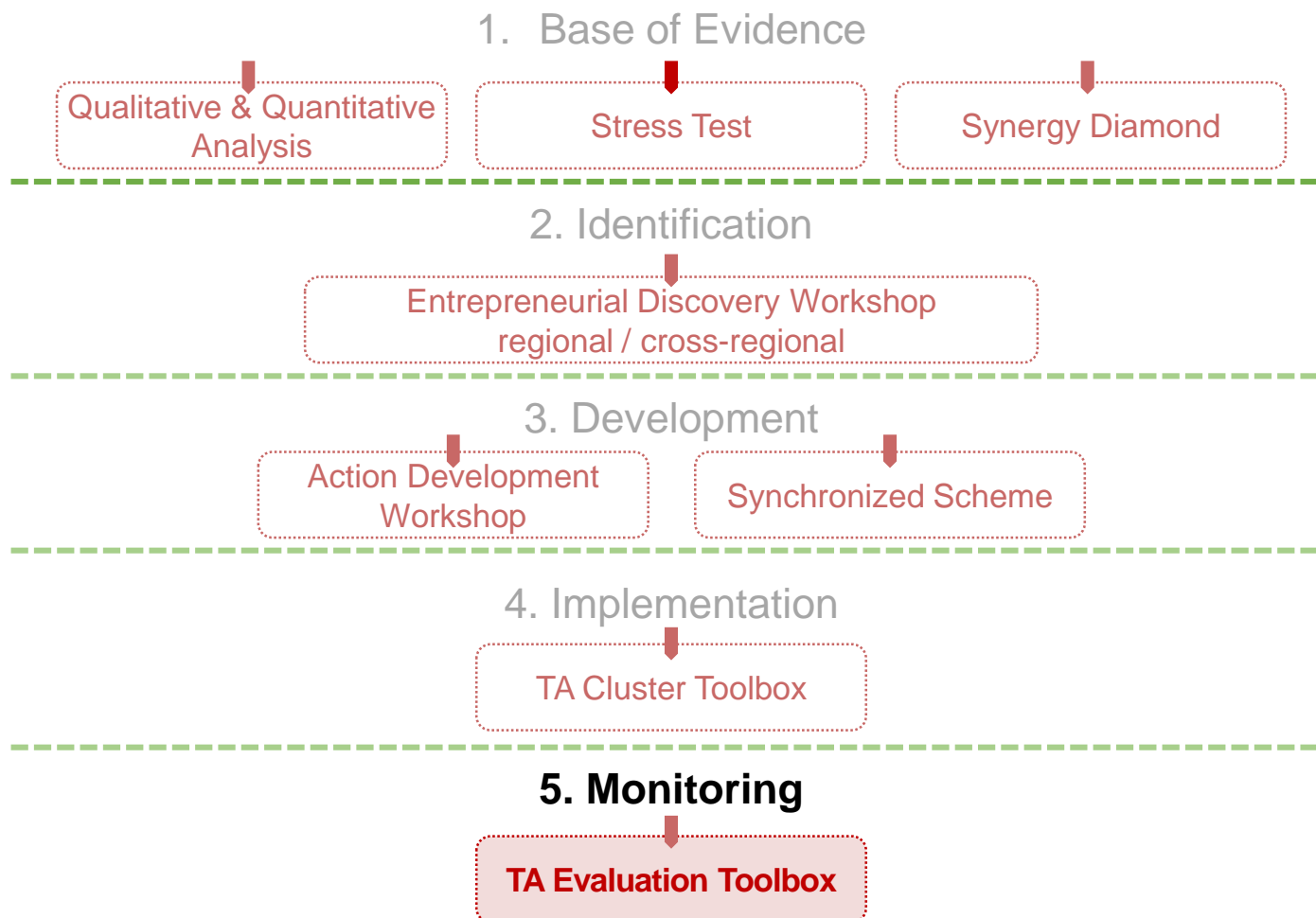


Smart specialisation with smart clusters

A new approach to generate Transformative Activities (TA)



Training Tool Kit – Smart Specialisation with Smart Clusters



Background

Evaluation Toolbox



Role and Contributions of Clusters in S3

Cluster initiatives and regional networks are ideal tools in the process of S3:

- Clusters represent **local resource concentrations**. S3 emphasises the accumulation of entrepreneurial and innovation capacities to unfold momentum to contribute to regional development.
- Clusters typically involve actors of the **quadruple helix**. Entrepreneurial discovery processes highly rely on the engagement of entrepreneurs, policy, research & education, and civil society.
- The cluster concept inherently promotes **cross-sectoral cooperation**, which supports the creation of critical mass – a prerequisite to develop Transformative Activities that contribute to structural change.

Therefore, the involvement of clusters in S3 helps to identify entrepreneurial resources and areas of strategic potential. Furthermore, clusters are ideal partners in implementing promising measures that support structural change.

Vice versa – **clusters benefit from S3-policies** that aim at supporting innovation, the establishment of new value chains and the creation of jobs in innovative new fields with high growth potential.



Monitoring and Evaluation as essential step in the Policy Cycle

The Innovation Model proposes a systematic approach to **implement S3 with clusters** and follows five action lines that are aligned with the **policy cycle**. Therefore, Monitoring and Evaluation is integrated as an individual Action Line.

Evaluation and Monitoring are essential elements of evidence based and effective policy interventions and fulfil various functions in the policy cycle:*

- **Legitimising function** to justify public intervention and the use of public funds.
- **Information function** to provide information to the public how funds are used.
- **Learning function** to support decision making processes in the field of innovation policy.
- **Steering function** for the future design of policy and its measures.
- **Mediating function** between the competing interests of different stakeholders in the innovation system.

The individual design of evaluation and monitoring efforts depend on the objective and the content of the policy and measures.



Objective

Evaluation Toolbox



Analysis of Roles and Contributions of Cluster Initiatives

The Evaluation Toolbox provides a general framework that supports a **formative evaluation** during the implementation of the Innovation Model and facilitates necessary adaptations and learning throughout the process.

The aim of the Evaluation Toolbox is:

- to demonstrate the **role and contributions of cluster initiatives** in the Innovation Model.
- to raise **awareness** for the linkages between the **two parallel processes on cluster and policy level**.
- to **increase the visibility of cluster activities** that support regional development and structural transition processes.

The Evaluation Toolbox offers guidelines for a **thorough assessment of the intensity of the cluster initiatives involvement in the process** that comprises a qualitative review as well as a quantitative analysis.

The results show how **clusters are used as a tool** in implementing the Innovation Model and serve to identify areas to further **strengthen the interplay of S3** and clusters.



Formative Evaluation

A **formative evaluation** is implemented **during the conception and implementation phase** of an intervention. The aim is to assess the components and processes of the intervention in order to improve its implementation with respect to the objectives.

The Evaluation Toolbox supports a formative evaluation of the Innovation Model:

- ⦿ When **planning** the implementation of the Innovation Model the Evaluation Toolbox can support the identification of useful instruments and provides information on how clusters can best be involved in the process.
- ⦿ It supports a **continuous reflection throughout the process** whether the potential of cluster contributions has been satisfactorily exploited. Possibilities for a better integration can be identified.

The assessment is best done as a **dialogue involving both policy and cluster level** in form of a **joint review**: Doing so, framework conditions, success factors and barriers that influence the interplay between both levels can be considered and possibilities for further improvement can be identified.

The applicability of the Evaluation Toolbox is not limited to a formative evaluation approach. It can also provide input for an **ex-post evaluation** by giving an overview about the current state of the interplay between policy and cluster level.



Components

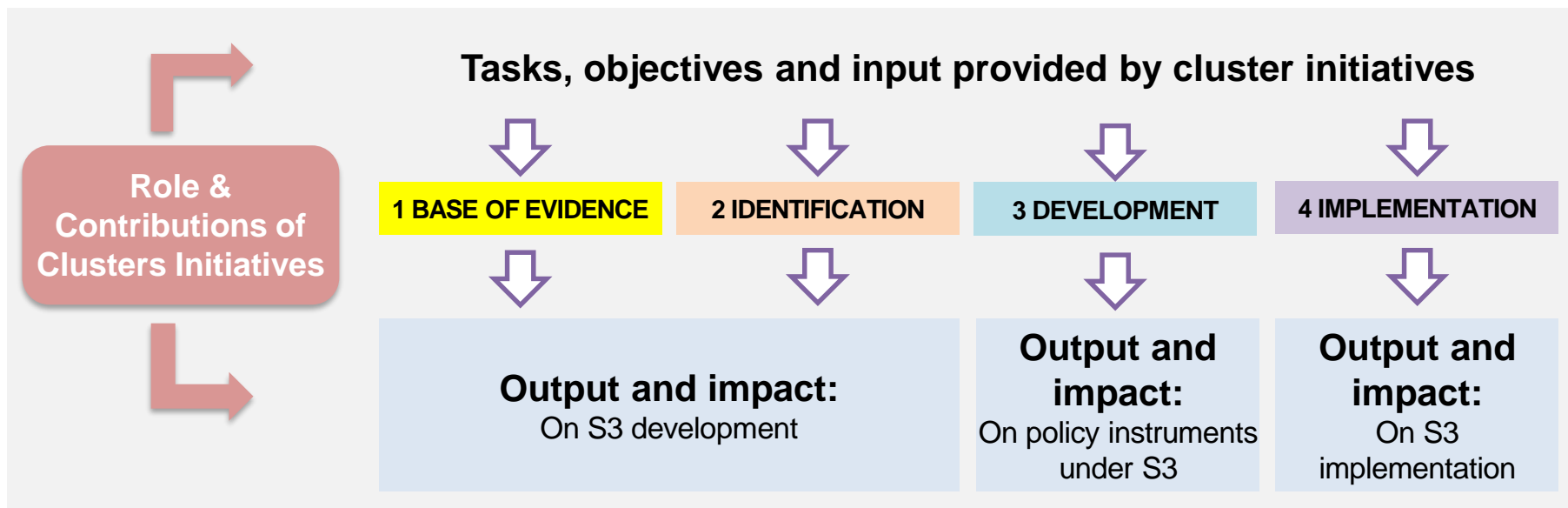
Evaluation Toolbox



Scope of the Evaluation Toolbox

The Evaluation Toolbox offers guidelines and feasible elements for a **formative evaluation** focusing on the **interplay between cluster initiatives and policy level**.

It specifically addresses the **role and contributions of cluster initiatives** during the Innovation Model **along the Action Lines**:



Structure of the Evaluation Toolbox

The Evaluation Toolbox provides an assessment table to analyse the role and contributions of cluster initiatives in the Innovation Model.

It is divided into **four subsections** that are in line with the Action Lines:

- Base of Evidence
- Identification of Transformative Activities
- Development of Transformative Activities
- Implementation of Transformative Activities

It furthermore proposes to produce a **dashboard** with the overall results of the assessment in each Action Line as a summary.



Structure of the Assessment Table

The structure of the assessment table follows the same pattern in each Action Line and is divided in two sections:

- **Tools and Rationale**
- **Analysis Area**

Tool/Instrument	Output	Contribution of cluster initiatives/ cluster management	Tool/Instrument implemented (yes/no)	Intensity of involvement of cluster initiatives (1/2/3/4)	Qualitative review of involvement of cluster initiatives
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Tools and Rationale

Contains background information about relevance of the tools for the Innovation Model and highlights the role of clusters.

Analysis Area

Serves as guidance for the quantitative and qualitative assessment of the implementation of the tools proposed.



Example: Assessment Table for Action Line „Identification of TA“

Tool/Instrument	Output	Contribution of cluster initiatives/ cluster management	Tool/Instrument implemented (yes/no)	Intensity of involvement of cluster initiatives (1/2/3/4)	Qualitative review of involvement of cluster initiatives
Entrepreneurial Discovery Workshop: regional/cross- regional*	Transformative activities are identified, and critical mass are assessed.	<ul style="list-style-type: none"> • Identification and mobilisation of stakeholders for EDW-participation • Active participation (cluster management) in the EDW for identification of TAs (based on current challenges and activities within the cluster) and for the assessment of critical mass (based on overview about cluster related companies and organisation active/interested in the TA-development) • Provision of input regarding potential twin-regions if cross-regional cooperation is needed to develop the TAs 	yes/no	1 no involvement 2 little involvement 3 medium involvement 4 strong involvement	
Analysis of R&D projects in the region (data by funding agencies)	Evidence about the current R&D activities in the region is available.	<ul style="list-style-type: none"> • Provision of additional information about ongoing R&D projects of cluster related companies and organisations 	yes/no	1 no involvement 2 little involvement 3 medium involvement 4 strong involvement	
Other [...]			yes/no	1 no involvement 2 little involvement 3 medium involvement 4 strong involvement	
Composite Indicator				1-4	

*Tools proposed by the Innovation Model

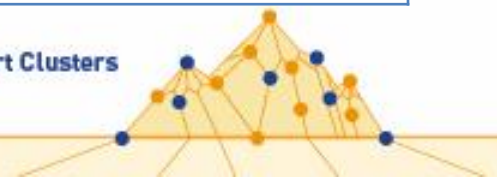


Tools and Rationale

The section „Tools and Rationale“ provides background information about the **relevance** of the different tools for the Innovation Model and highlights the **potential role and contributions of cluster initiatives**. The sections is divided in the following parameters:

Tool/Instrument	Output	Contribution of cluster initiatives / cluster management	Tool/Instrument implemented (yes/no)	Intensity of involvement of cluster initiatives (1/2/3/4)	Qualitative review of involvement of cluster initiatives
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Collum Titel	Explanation
Tool / Instrument	The first column provides a catalogue of tools and instruments to support the respective Action Line. It includes tools proposed in the Innovation Model as well as other supportive instruments. Further instruments can be added.
Output	For each tool the potential outputs in the context of each Action Line are described. In the planning phase, this information supports the decision about the implementation of the tool.
Contribution of cluster initiatives / cluster management	For each tool potential contributions of cluster initiatives („inputs by cluster initiatives“) are explained. It provides a rationale for the involvement of cluster initiatives in the individual tool. Furthermore, it serves as a reference for the assessment of the intensity of cluster’s involvement.

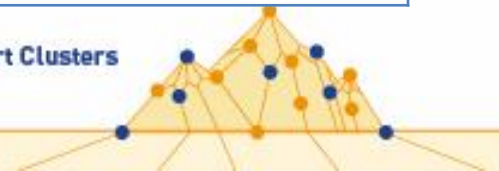


Analysis Area

The **Analysis Area** provides the **guidelines for the assessment of the individual tools** listed in the analysis unit area. It consists of the following parameters:

Tool/Instrument	Output	Contribution of cluster initiatives / cluster management	Tool/Instrument implemented (yes/no)	Intensity of involvement of cluster initiatives (1/2/3/4)	Qualitative review of involvement of cluster initiatives
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Collum Titel	Explanation
Tool / Instrument implemented (yes/no)	This column serves as a checkbox, whether this task was performed in the context of the Innovation Model (yes or no).
Intensity of involvement of cluster initiatives (1/2/3/4)	This column is reserved for a quantitative assessment of the intensity of cluster's involvement in the specific tool. It proposes a 4-part rating scale from 1 (no involvement) to 4 (strong involvement). For each Action Line a composite indicator can be calculated by the means of the quantitative assessment of each tool performed.
Qualitative review of involvement of cluster initiatives	The last column is provided for results of a qualitative review of the involvement of cluster initiatives. This allows to add important background information about the involvement of clusters in the specific step: e.g. framework conditions, success factors, barriers and challenges



Dashboard to present overall results

The overall results show how clusters are used as a tool in implementing the Innovation Model.

Therefore, it is recommended to produce a **dashboard** that **summarizes the results** of each Action Line on one page. This **snapshot** of the overall results serves to identify areas to further strengthen the interplay of S3 and clusters in the regions.

The dashboard should include:

- Results of the **calculated composite indicators** of each Action Line – by means of a graph or other simple illustrations (e.g. spider graph).
- **Main insights of the qualitative assessment** to convey a deeper understanding of the results.



Overview of Tools covered in the TAET

Evaluation Toolbox



Tools for Action Line: Base of Evidence (I)

Tool/Instrument	Output	Contribution of cluster initiatives / cluster management
Regional quantitative and qualitative analysis*	Comprehensive data and information about regional entrepreneurial basis and economic development is collected and analysed.	<ul style="list-style-type: none"> • Provision of cluster related data that supports the creation of a base of evidence for the region (e.g. mapping/number of cluster related companies and organisations, employment data, overview of current cooperation/innovation projects)
Synergy Diamond*	Current regional strengths and priorities as well as relevant trends and challenges for the region are identified; they are mapped on the synergy diamond and facilitate the identification of transformative activities.	<ul style="list-style-type: none"> • Provision of information regarding relevant trends and challenges perceived by cluster initiatives and cluster related companies and organisations • Provision of in-depth input from the perspective of cluster initiatives for the identification of transformative processes (e.g. current research endeavours and needs of cluster members)
Surveys among entrepreneurial basis in the region	Relevant primary data is available concerning e.g. trends, challenges, requirements and needs for support.	<ul style="list-style-type: none"> • Identification of and mobilisation of cluster related companies and organisations to participate in the survey • Active participation in a follow-up workshop and/or the discussion of the results of the survey

*Tools proposed by the Innovation Model



Tools for Action Line: Base of Evidence (II)

Tool/Instrument	Output	Contribution of cluster initiatives / cluster management
StressTest*	Status quo of involvement of cluster initiatives in current S3-policy is assessed.	<ul style="list-style-type: none"> • Participation in StressTest survey • Active mobilisation of other stakeholders to participate in StressTest • Active participation in follow-up workshop to discuss results
Analysis of regional cluster portfolio	Overview of the regional cluster portfolio is developed (assessment of capacity of cluster initiatives and potential of regional clusters).	<ul style="list-style-type: none"> • Provision of information regarding potential of the regional cluster and capacity of cluster initiatives
Cluster Strategies	Cluster strategies are available for policy makers as reference documents for S3 development.	<ul style="list-style-type: none"> • Provision of strategy documents as references for the S3-development • Alternative: development of cluster strategies in line with the development of S3
Relevant strategy / discussion papers and studies	In depth knowledge about specific topics is available.	<ul style="list-style-type: none"> • Preparation/commission of specific strategy papers and studies and making it available for other relevant stakeholders

*Tools proposed by the Innovation Model



Tools for Action Line: Identification of TA

Tool/Instrument	Output	Contribution of cluster initiatives / cluster management
Entrepreneurial Discovery Workshop: regional / cross-regional*	Transformative activities are identified, and critical mass are assessed.	<ul style="list-style-type: none"> • Identification and mobilisation of stakeholders for EDW-participation • Active participation (cluster management) in the EDW for identification of TAs (based on current challenges and activities within the cluster) and for the assessment of critical mass (based on overview about cluster related companies and organisation active/interested in the TA-development) • Provision of input regarding potential twin-regions if cross-regional cooperation is needed to develop the TAs
Analysis of R&D projects in the region (data by funding agencies)	Evidence about the current R&D activities in the region is available.	<ul style="list-style-type: none"> • Provision of additional information about ongoing R&D projects of cluster related companies and organisations

*Tools proposed by the Innovation Model



Tools for Action Line: Development of TA

Tool/Instrument	Output	Contribution of cluster initiatives / cluster management
Action Development Workshop: regional / cross-regional*	Concrete actions to further develop the TAs activities are identified (roadmap).	<ul style="list-style-type: none"> • Identification and mobilisation of stakeholders for ADW-participation • Active participation and input regarding potential actions supporting the development of TAs • Provision of input regarding potential twin-regions if cross-regional actions are needed to develop the TAs
TA-Task forces	Specific working groups are in charge of developing TAs.	<ul style="list-style-type: none"> • Active participation in task forces of relevance for the cluster initiatives

*Tools proposed by the Innovation Model



Tools for Action Line: Implementation of TA (I)

Tool/Instrument	Output	Contribution of cluster initiatives / cluster management
Clusters in charge of implementing TAs with a mandate and assigned budget	Different types of activities and services targeted at the implementation of TAs are carried out by cluster initiatives.	<ul style="list-style-type: none"> • Implementation of targeted activities to implement TAs • Monitoring of the cluster measures to implement TAs
Regional Scheme	<p>Regional call to develop TAs is implemented and cross-sectoral projects to develop TAs are implemented.</p> <p>Projects are carried out supporting the implementation of TAs.</p>	<ul style="list-style-type: none"> • Input for call development (agenda setting) • Support in communication and advertisement of the regional scheme on stakeholder level • Support in advertisement and mobilisation of cluster related companies and organisations to submit proposals • Support for matchmaking • Support in preparation of research/ innovation projects and proposal writing • Support for the cluster related companies and organisations in implementing research/innovation projects • Collection of information about the project results

*Tools proposed by the Innovation Model



Tools for Action Line: Implementation of TA (II)

Tool/Instrument	Output	Contribution of cluster initiatives / cluster management
Synchronized Scheme*	Joint cross-regional call to develop TAs is implemented and cross-sectoral/regional projects to develop TAs are implemented.	<ul style="list-style-type: none"> • Input for call development (agenda setting, identification of regions) • Support in communication and advertisement of the synchronized scheme on stakeholder level • Support in advertisement and mobilisation of cluster related companies and organisations to submit proposals • Support for matchmaking • Support in preparation of research/ innovation projects and proposal writing • Support for the cluster related companies and organisations in implementing research/innovation projects • Collection of information about the project results
Other policy / supporting Instruments	[...]	<ul style="list-style-type: none"> • Support and feedback for the development of other targeted policy instruments • Support in communicating instruments • Mobilisation of actors to use instruments

*Tools proposed by the Innovation Model



Tools for Action Line: Implementation of TA (III)

Tool/Instrument	Output	Contribution of cluster initiatives / cluster management
Cluster Services to support TA development*	Different types of services with relevance to regional economic development are implemented by the cluster initiatives.	<ul style="list-style-type: none">• Provision of actions and services related to the development of the TAs (ref. action development workshop / best practice report):<ul style="list-style-type: none">– Cluster expansion– Innovation and technology– Education and training– Commercial cooperation– Policy action– Research and networking

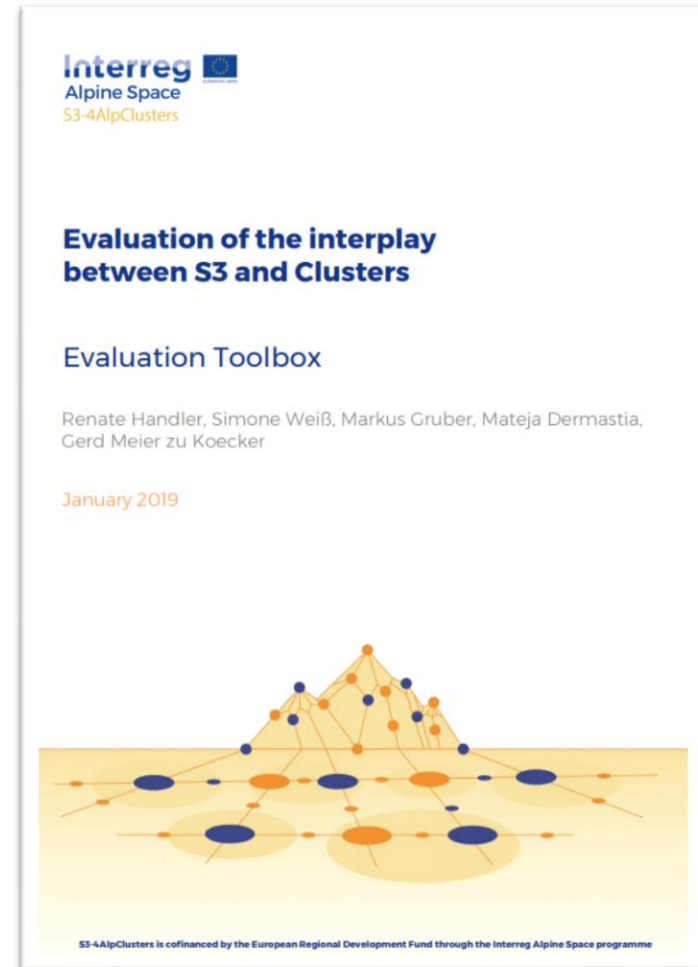
*Tools proposed by the Innovation Model



Access to the Evaluation Toolbox

The Evaluation Toolbox is available on the S3-4AlpClusters project website:

<https://www.alpine-space.eu/projects/s3-4alpclusters/project-results/the-s3-innovation-model/taet.pdf>



Evaluation Toolbox: Contribution to the Process

The results of the Evaluation Toolbox contribute to the overall process by providing information about the **potential contribution of cluster initiatives** in the individual steps.

It facilitates a continuous review during the process whether the potential of cluster initiatives has been satisfactorily exploited and **facilitates adjustments**.

Evaluation Toolbox Outputs:

The interplay of S3 and clusters is improved.

- The awareness about potential roles and contributions of cluster initiatives for S3 implementation is strengthened.

The role and contributions of cluster initiatives are more visible.

- The qualitative and quantitative review assess and highlight the contribution of clusters throughout the process.
- The overall results give an overview about the status quo of the interplay between policy and cluster level

enables

Continuous learning and adaptations in the process



Considerations for an ex post Evaluation of Outcomes and Impacts

Evaluation Toolbox



Observation levels of results

For evaluation efforts that aim at assessing the impacts of the implementation of an intervention, a distinction can be made **on which level results are observed**:

- a) Outcome level** (effects on actors involved in the process)
 - Learning effects: e.g. improved innovation capabilities of actors involved (behavioral additionality)
 - Economic effects: new activities as a result of the process e.g. micro-data level / survey data (mid-term perspective)
- b) Impact level** (effects on regional level)
 - Learning effects: e.g. improved innovation capabilities of regions (behavioral additionality)
 - Economic effects: achievements on a meso- and macro-level with reference to the Base of Evidence (long-term perspective)



Learning Effects on Outcome and Impact level

a) Outcome level:

Learning effects on actors directly involved (companies, R&D, HEI)

- Analysis based on surveys, interviews, control groups with actors involved
- Potential effects in the context of Transformative Activities:
 - Changes in awareness about new market trends, societal challenges and technological strengths
 - Uptake of systematic innovation processes
 - New collaboration patterns (cross-sectoral, cross-regional)

b) Impact level: Learning effects on regional level (Triple Helix System)

- Analysis based on surveys, interviews, focus groups with relevant actors
- Potential effects in the context of Transformative Activities:
 - Improved innovation capabilities through demand driven collaboration
 - Improvement of the interplay of S3 and clusters
 - Increased cross-regional cooperation in policy implementation



Economic Effects on Outcome level

a) Outcome level:

Economic effects on actors directly involved (companies, R&D, HEI)

- Analysis based on **micro-data level & surveys**
- **Timespan:** short-/mid-term
- **Potential indicators in the context of Transformative Activities**
 - New collaborations (B2B, B2R, B2E) in fields of TA (short-term)
 - Increased R&D-expenditure in companies / R&D organisations in the fields of TA (mid-term)
 - New products / services in the companies in fields of TA (mid-term)
 - New patents of companies / R&D organisations in fields of TA (mid-term)



Economic Effects on Impact level

b) Impact level:

Economic development on regional level

- Analysis based on **statistical data on meso-/macro-level**
- **Feedback loop to “Base of Evidence”** to analyse the change of indicators over time on regional level
(see [Training Tool Preparation of a Base of Evidence](#))
- **Timespan:** long-term (7-10 years)
- **Potential indicators in the context of Transformative Activities:**
 - New “specialisation” recognisable by sectorial or patent concentration
 - Foreign direct investments
 - Increased firm formation
 - Changes in supplier linkages



Challenges for the Assessment of Outcomes and Impacts

Evaluation efforts to assess the outcomes and impacts of the Innovation Model face the following **challenges**:

- ⦿ **Individual regional scope:** The Innovation Model proposes a generic process and its implementation needs to be adapted according to the regional circumstances and challenges. Therefore, **evaluation efforts to assess the results** of the Innovation Model can only be **specified in line with the individual case**.
- ⦿ **Timing Issues:** Actual results of an intervention (especially economic effects) are only observable with considerable time-lags.
- ⦿ **Attribution issues:** External factors influence the results on outcome and impact-level. Measured effects cannot be attributed directly and entirely to the intervention.



Contact and further Information

Evaluation Toolbox



Contact and further information

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

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S3-4AlpClusters Partners



Haute école d'ingénierie et d'architecture Fribourg
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