

StressTesting Regional Approaches Conducive to Implement S3 through Clusters

Policy Report

Gerd Meier zu Köcker, Mateja Dermastia

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For further information about the S3-4AlpClusters project, you will find a short description at the end of the document. To learn more and to download additional resources please refer to the project website <http://www.alpine-space.eu/projects/s3-4alpclusters/en/home>.

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Concepts and Definitions

For the purpose of this report the key concepts and definitions are understood as follows:

- **Clusters:** Clusters are generally described as groups of companies, mainly SMEs, and other actors (government, research, and academic community, institutions for collaboration, financial institutions) co-locating within a geographic area, cooperating around a specialised niche, and establishing close linkage and working alliances to improve their competitiveness.
- **Cluster initiatives:** A cluster initiative is an organised effort aimed at fostering the development of the cluster either by strengthening the potential of cluster actors or shaping relationships between them. They often have a character like a regional network. Cluster initiatives are usually managed by cluster organisations.
- **Cluster organisations:** Cluster organisations are entities that support the strengthening of collaboration, networking, and learning in innovation clusters and act as innovation support providers by providing or channelling specialised and customised business support services to stimulate innovation activities, especially in SMEs. They are usually the actors that facilitate strategic partnering across clusters. Cluster organisations are also called cluster managements.
- **Cluster participants:** Cluster participants are representatives of industry, academia or other intermediaries, which are commonly engaged in a cluster initiative. Given the case a cluster initiative has a certain legal form, like associations, cluster participants are often called cluster members.
- **Cluster policy:** Cluster policy is an expression of political commitment, composed of a set of specific government policy interventions that aim to strengthen existing clusters and/or facilitate the emergence of new ones. Cluster policy is to be seen as a framework policy that opens the way for the bottom-up dynamics seen in clusters and cluster initiatives. This differs from the approach taken by traditional industrial policies, which try (and most often fail) to create or back winners.
- **Programme:** Programmes are a vehicle to implement a policy, e. g. funding programme for R&D in environmental technology. In addition to programmes, policies are also implemented through regulation (= regulatory framework, e. g. law on consumer protection).
- **S3-Smart Specialisation Strategies:** Smart Specialisation is a strategic approach to economic development through targeted support for research and innovation. It involves a process of developing a vision, identifying the place-based areas of greatest strategic potential, developing multi-stakeholder governance mechanisms, setting strategic priorities and using smart policies to maximise the knowledge-based development potential of a region, regardless of whether it is strong or weak, high-tech or low-tech¹.

We will clearly distinguish between clusters, cluster initiatives and cluster organisations to make it easier for the interviewee to understand what is intended with the corresponding question.

¹ Foray (2015): *Smart Specialisation, Opportunities and Challenges for Regional Innovation Policy*, Routledge.

Summary

Several European Union (EU) regions have developed Smart Specialisation Strategies (S3) as integrated part of their regional innovation strategies. The challenge is to implement S3 through clusters in order to gain sustainable and inclusive growth while generating critical mass of economically viable activities.

The objective of the S3-4AlpClusters project is to improve framework conditions for innovations induced by clusters and SMEs as well as to create new jobs and employment opportunities. As implemented by clusters and cluster organisations, S3 can offer an innovative approach to improve innovation in the Alpine Space. Cross-regional approaches can serve as support for coordinated actions between the different sectors/regions. Transnational cluster cooperation facilitates the achievements of a critical mass of SMEs and enhances cross-regional collaboration to innovate for new products in areas relevant to the Alpine Space.

Against this background, each of the 11 partner regions of the S3-4AlpClusters conducted a policy benchmarking (StressTesting) to ascertain how to implement S3 through clusters as individual benefit. Additionally, the StressTesting provided a joint benefit to the S3-4AlpClusters partnership by allowing for a better understanding of each other's policy instruments. The StressTesting addressed policy making and implementation processes, namely the role of clusters in the design and implementation of the S3, regional support schemes for cluster initiatives, coordination and alignment of S3 at the regional and national level. Benchmarking also explores the role of a regional cluster excellence portfolio to provide inputs for development and testing innovation models initiated by cluster organisations and subsequently identifies areas for (common) improvements.

The present Policy Report summarises the findings of the partner regions' StressTest reports and provides reflections how to make more use of cluster-based approaches in implementing S3.

The main conclusions are:

- Cluster initiatives have been strongly involved in the development process of S3 and significantly contributed to it. Their expertise was requested in a very different way.
- Cluster initiatives are significantly involved during the implementation process of S3, whereas extent and manner varies significantly.
- Monitoring and evaluation is understood as tool to improve policies, but there is a significant lack of appropriate evaluation schemes.
- There is already a significant impact of S3 on cluster initiatives.
- Aligning S3 and related policy instruments with policies on national or neighbouring regional level remains challenging.

The last conclusion is of significant importance since it indicates that cross-regional cooperation is not sufficiently supported. Respective policies and related policy instruments are missing. The Report on "Strategy Alpine Space Areas for Cross-regional Cooperation" clearly highlighted the need for cross-regional cooperation as well as deduced promising strategic areas.

Both reports will lay the foundation for the first attempt to design a joint Alpes Cluster Innovation Express – ACIE. The ACIE is a synchronised scheme for cross-regional funding, which is built on existing regional programmes. By aligning these programmes cross-regional consortia can be supported through a joint call for proposals, which are implemented according to regional funding procedures. A synchronised scheme neither requires additional funds nor leads to modifications of regional funding procedures.

The Context: Interplay between Smart Specialisation and Clusters

Clusters are a fundamental part of the European industrial landscape as 38 % of European jobs are based in clusters. They are key drivers for the European economy with regard to competitiveness, growth and jobs. Over the last years, cluster policy in the EU has increasingly gained importance to improve competitiveness of local industries and facilitate industrial transformation processes by stimulating the development of infrastructure in support of business innovation. The recent economic crisis and on-going global industrial transformations have highlighted the need to modernise regional industrial structures and build new industrial competences in order to respond to global competition and to address societal challenges, such as environment, health and resource efficiency.

Starting from the observation that the implementation of Smart Specialisation Strategies often fails to generate the desired effects, there is a strong need to better understand the relationship between S3 and clusters. The underlying problem in the implementation of S3 has been detected at two fundamental levels: a lack of experience among regions on how to use clusters in the implementation of Smart Specialisation Strategies and a lack of alignment between and knowledge about other regions' strategies.

The interplay between S3 and clusters implies a two-way relationship between the two concepts. As suggested by the overall title of the project ("S3-4AlpClusters – Smart Specialisation Strategies to build an Innovation Model for Alp Clusters"), a first way to study the interdependency is to look at how S3 can be used to foster innovation processes and spark entrepreneurship within clusters ("S3 → Clusters"). Turning the relationship on its head, existing clusters can also be used as a tool in the implementation of S3 ("Clusters → S3"). The overall design of the project allows focusing on different aspects of the interplay between S3 and clusters in its different work packages.

Taking the above-mentioned into account, regions should apply a broad set of policy instruments when implementing their S3 through clusters. History has shown that there is no single policy appropriate to cope with all regional challenges². This also leads the attention away from single clusters rather than to the **regional cluster portfolio**.

A well-balanced, matured regional cluster portfolio is necessary to have capable clusters and cluster managements in place as tool to support the entrepreneurial discovery and identify those opportunities a region can benefit most. Consequently, regions need

- Strong clusters, since enterprises located in strong clusters have a higher growth rate and higher productivities³.
- Strong cluster managements that can provide higher impact in terms of innovation and competitiveness than weak ones⁴.
- Systematic implementation approach. If a region intends to use clusters as a tool to implement S3, it has to follow a throughout and systematic approach.

² Izsak, Ketels, Lämmer-Gamp, Meier zu Köcker (2016): *Smart Guide to Cluster Policy*, European Cluster Observatory, Brussels, http://ec.europa.eu/enterprise/initiatives/cluster/observatory/cluster-mapping-services/services/index_en.htm.

³ Ketels, Protsiv (2013): *Clusters and the New Growth Path for Europe*, WWWforEurope Working Paper, WIFO, Vienna.

⁴ Lämmer-Gamp, Meier zu Köcker, Christensen (2012): *Clusters are Individuals. New Findings from the European Cluster Management and Cluster Program Benchmarking*, Danish Ministry of Science, Technology and Innovation, ISBN: 978-87-92776-22-8, Copenhagen/Berlin.

The StressTest Approach

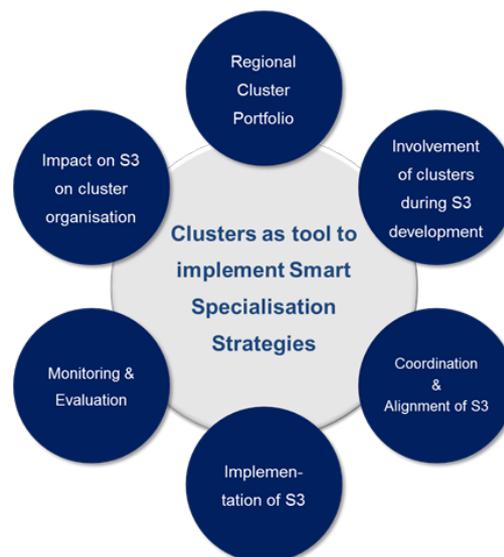
StressTesting is a transnational benchmarking-based approach that enables an empirical review and assessment of regional policies for implementation of Smart Specialisation Strategies (S3) through clusters. StressTesting determines how and where clusters can be most supportive of industrial transformation and growth in an integrated, coordinated and sustained manner. The overall aim is to develop new and better ways of designing and implementing modern cluster-based regional economic development policies. The approach draws maximum advantage from analysis of the regional cluster portfolio to better understand the forces that shape new industrial value chains and sectors. StressTesting is intended for regional implementation organisations, policy makers and business development entities that are interested in comparing their own region with European frontrunner regions.

The StressTest and its related report will thus mainly focus on the question of how clusters are used as a tool of S3 and study the modality of use and influence of clusters in the implementation of S3. By including questions about the ability of cluster initiatives to implement new innovation models, the results of the StressTest will nevertheless also pave the way for another important question of how S3 can contribute to define new innovation models in further detail. It thus fully considers the two-way interplay between clusters and S3.

StressTesting addresses both policymaking and implementation processes. The approach examines the role of clusters in the design of S3 and the regional support schemes for cluster initiatives. It provides insight views on the coordination and alignment of S3 at the regional and national level. Furthermore, it identifies the current and potential role of clusters in the implementation of S3.

The process of using clusters as tool to implement S3 is a multi-facetted and complex process. However, although regions are very different, it follows the six key dimensions shown in Fig. 1.

Figure 1: Dimensions of policy-making and implementation process in connection with S3



The importance of the regional cluster portfolio and individual clusters already starts during the design phase of S3. Clusters can act as a more efficient tool, if the respective S3 is built upon them and takes the needs and potentials of the cluster actors into account. The main challenge then is the implementation of S3, meaning to turn the S3 into a set of policy instruments that helps to meet the desired objectives.

Even if the concept of S3 helps to concentrate the resources on selected priority areas, regions often do not have the critical mass or capacity to successfully develop the necessary transformative activities completely on their own.

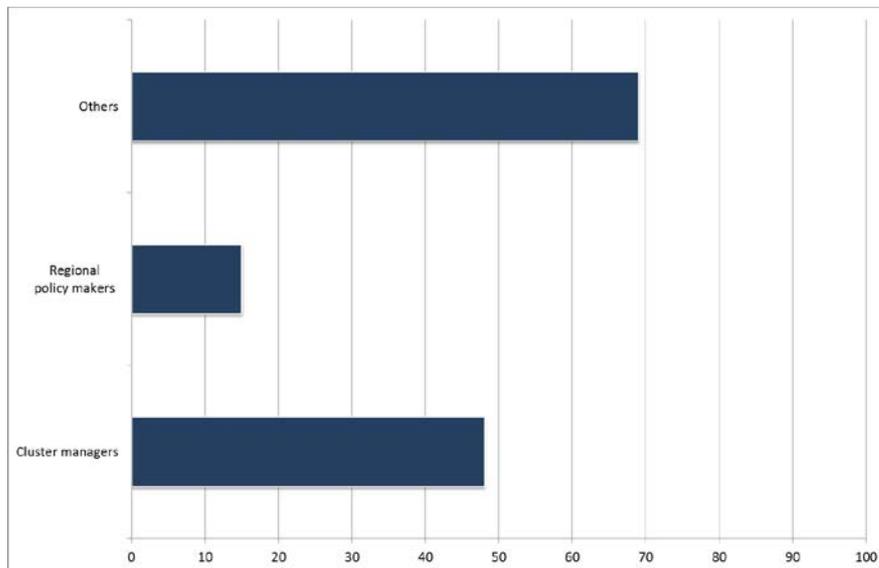
Thus, aligning S3 related policy instruments with those on national level or with those of the neighbouring regions, enables regions to attract additional funding or other kinds of support. Evaluation and monitoring as tool to do better policies is also an important dimension, thus considered during the StressTesting.

The StressTesting exercises (online questionnaire) were completed by all partner regions, based on the involvement of representative group of regional stakeholders from three different levels

- Regional policy makers in charge with the development and implementation of S3
- Cluster managers
- Other stakeholders like representatives from regional development agencies, regional councils or other entities closely involved in the development and implementation of S3.

In total more than 130 stakeholders from all levels (cluster organisation, stakeholder responsible to implement S3 and policy makers) participated in the online survey (s. Fig. 2), incl. 58 cluster managers. Most participants came from smaller Alpine Space regions, like Slovenia, Franche-Comté and Fribourg⁵.

Figure 2: Distribution of participants of the StressTest exercises



Thus, the data gathered provides a unique source of insight and a “snap-shot” portrait of each region’s theoretical and practical approach in order to implement S3 through clusters. As an integrated part of the StressTesting, the region specific data were compared among 25 European regions in order to stimulate mutual learning (s. Fig. 3). Further details are given in the regional StressTest reports.

⁵ Comparable high number of participants also came from Baden-Württemberg.

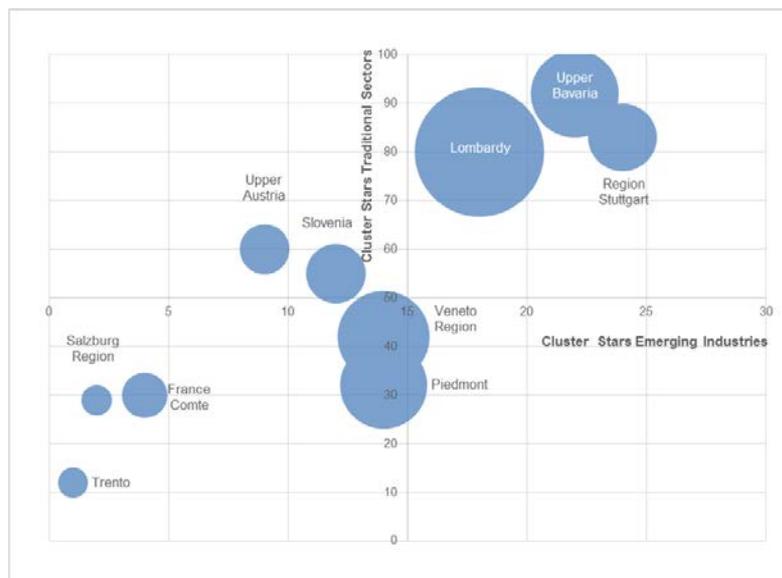
Learnings from the Analysis of Partner Regions and Related S3

The report “Strategic Alpine Space Areas for Cross-regional Cooperation” identified potential synergies among Smart Specialisation Strategies (S3) of the S3-4AlpClusters partners⁶. The findings went beyond the current state of discussion on S3 formulation and promoted a better understanding of the implications of cross-regional collaboration and resulting synergies have for the selected partners from the Alpine Region in the context of Smart Specialisation. The learnings from the report can be summarised as follows:

- The partner regions are innovation front-runners, but their investments in R&D and Innovation differs significantly.
- The related S3 of the partner regions are very different, but most of them focus on similar Priority Areas.
- The partner regions vary significantly in terms of industrial critical mass, but they can be grouped into three areas.
- None of the S3 or related policy instruments actively promote cross-regional cooperation, although many smaller regions have to go cross-border due to limited size or critical mass.
- Five Strategic Alpine Space Areas for Cross-regional Cooperation can be defined, based on common needs and interests outlined in the related S3 and the Alpine Space Macro-regional Strategy (EUSALP)⁷.

Fig. 4 illustrates the current position of the partner regions by comparing their competitiveness in the fields of traditional, sectoral industries with emerging, cross-sectoral industries.

Figure 4: Comparison of strengths of clusters in traditional and emerging industries



According to the most recent European Cluster Observatory data; Methodology based on data presented in the European Cluster Panorama 2016; no data available for Switzerland/Fribourg region

⁶ <http://www.alpine-space.eu/projects/s3-4alpclusters/en/home>.

⁷ EUSALP is the macro-regional strategy for the Alpine region.

Partner regions can be found in three of the four quadrants:

1. **Upper right corner:** Regions with a strong industrial base in traditional industrial sectors and strong emerging industries (Quadrant I): Bavaria, Baden-Württemberg and Lombardy.
2. **Upper left corner:** Regions with a comparable strong industrial base in traditional industrial sectors, but a few strong emerging industries (Quadrant II): Slovenia and Upper Austria.
3. **Lower left corner:** Regions with limited industries in traditional and emerging sectors (Quadrant III): Franche-Comté, Trento and Salzburg.

Piedmont and Veneto build a certain group “in the middle”, sharing some characteristics of the other groups.

A closer look reveals some common patterns relevant for each region of the quadrants.

Findings

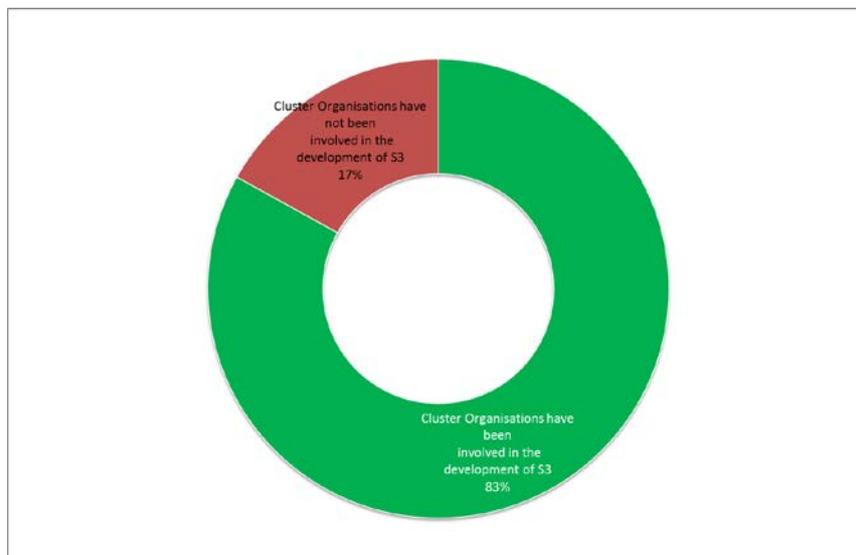
In the following, the main findings of the StressTest exercises, conducted in the 11 regions of the S3-4AlpCluster partners, are presented and discussed. They allow for further insights into the interplay between S3 and cluster initiatives. These findings clearly move beyond the current state of discussion. This chapter is structured according to the dimension of policy making and implementation as presented in Fig. 1.

Involvement of Cluster Initiatives during S3 Development

Cluster initiatives have strongly been involved in the development process of S3, but have contributed in a very different way.

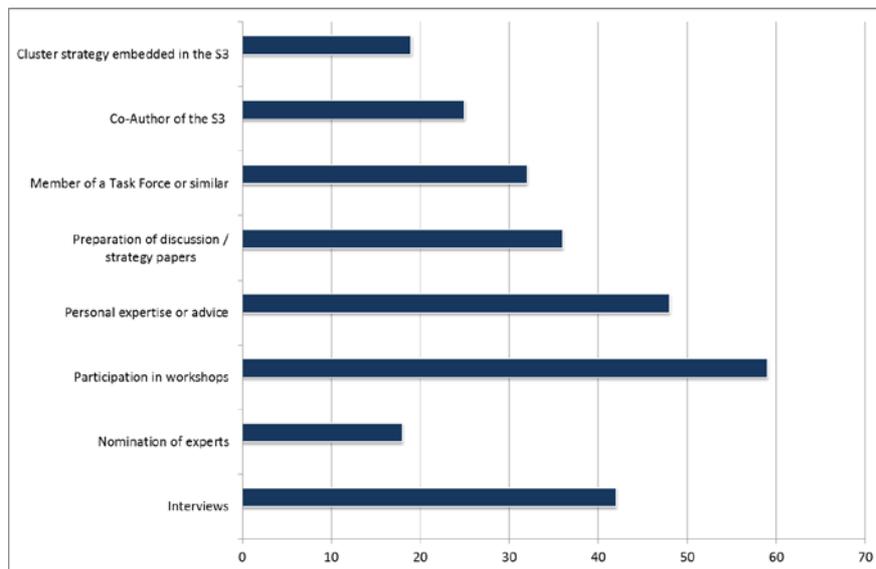
As far as the Alpine Region is concerned, the idea of involving cluster initiatives in the development process of S3 seems to be well acknowledged. A clear majority of the cluster managers confirmed their involvement (s. Fig 5).

Figure 5: Share of cluster initiatives' involved in S3 development



However, the extent to which the initiatives have been involved and how precisely they have contributed varied significantly. As shown in Fig. 6, the involvement differs significantly. In some cases, the cluster managements provided expertise through interviews or by nominating experts. In other cases, they assumed a very active role.

Figure 6: Kinds of involvement of cluster organisations in the development process of S3



Several answers allowed

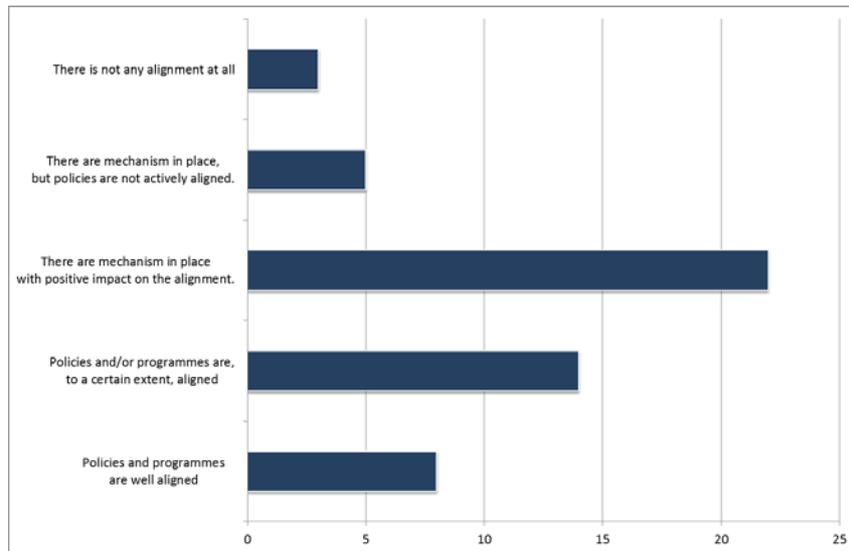
Coordination and Alignment of S3

Aligning S3 and related policy instruments with policies on national or on neighbouring regional level remains a challenge.

S3 is not a closed process, but rather benefits from complementarities with other policies and regions. Aligning S3 related policy instruments with those on national level and/or with those of the neighbouring regions enables them to attract additional funding or gain critical mass through inter-regional cooperation. This can significantly assist regions to meet the objectives defined in their S3 in a faster or more efficient way. Bundling resources also decreases the risk of individual regions.

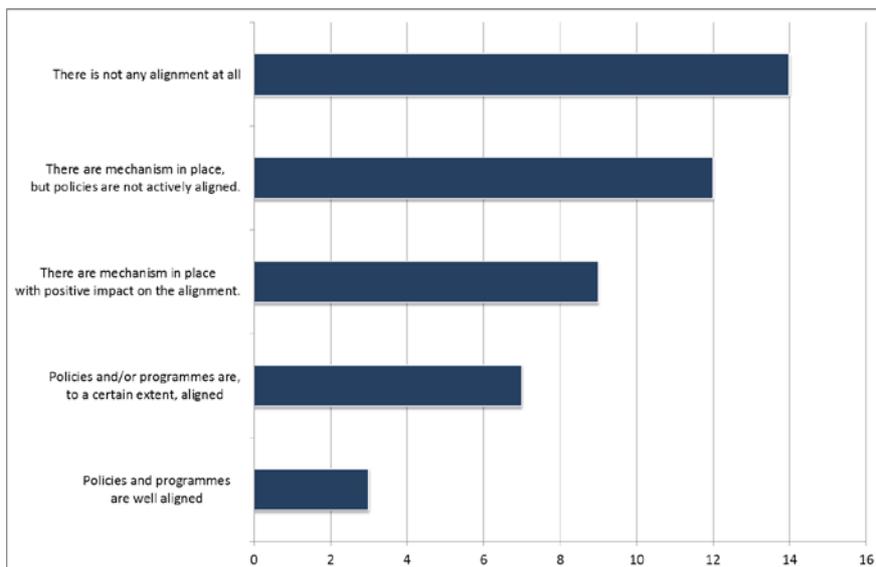
The reality is different as Fig. 7 and 8 illustrate. Most regions have some mechanism for information and experience exchange between the regional as well as federal (national) level in place, which lead to a minimum alignment. It works quite well in Baden-Württemberg, Salzburg and Veneto. However, none of the S3-4AlpClusters partner regions confirmed that there is an active alignment on federal and regional level. Exceptions are Slovenia and Austria that have a S3 on national level, which guarantees proper alignment.

Figure 7: Alignment of partner regions' S3 with policies and programmes on national level



As far as any alignment of S3 and related policies with the neighbouring regions are concerned, the findings are even worse. Any alignment between the partner regions appears to be an exception. These findings are in line with the outcome of the report on “Strategic Alpine Space Areas for Cross-regional Cooperation”⁸ which concluded that only a handful of policy instruments are in place to actively facilitate cross-regional cooperation. A good example is the Fribourg region that, since the cantonal implementation programme for the 2016-2019 phase of the *Nouvelle Politique Régionale*, foresees cross-regional cooperation both within and across the boundaries of Switzerland. All other S3-4AlpClusters partner regions are lagging behind.

Figure 8: Alignment of partner regions' S3 with policies of neighbouring regions



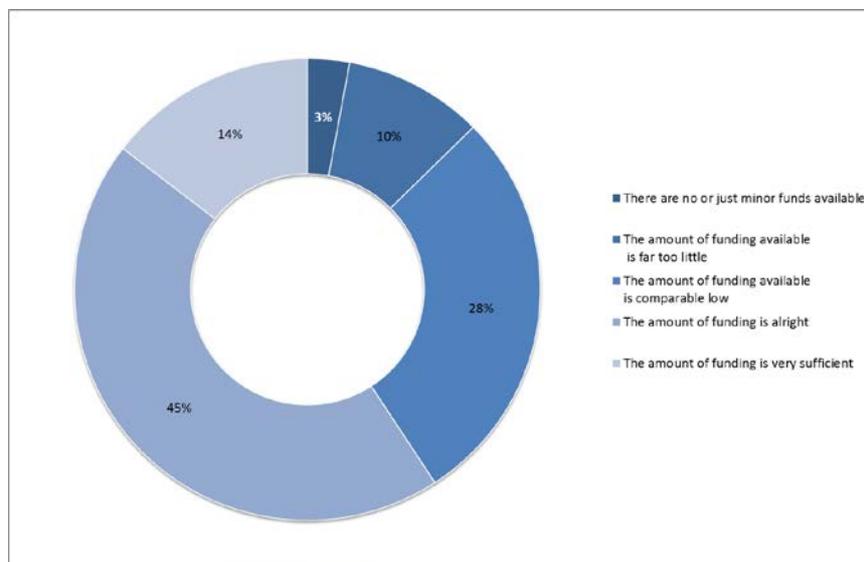
⁸ <http://www.alpine-space.eu/projects/s3-4alpclusters/en/home>.

Implementation of S3

Cluster initiatives are involved during the implementation process of S3, whereas extent and manner vary significantly

S3 is a comparably new and multi-faceted approach, without much experience present on how to implement S3 by different policy instruments as well as on what implementation tools or entities work best. This is due to the reason that the implementation has just started recently. To seriously implement a given S3 it has to be backed by appropriate policy instruments and public funding. The amount of investment research, development and innovation between the S3-4AlpClusters partner regions differ significantly - from less than 10 Mio EUR per anno (Fribourg region and Franche-Comté) up to 1.700 Mio EUR (Bavaria). In total, all partners invest about 4.000 Mio EUR annually.

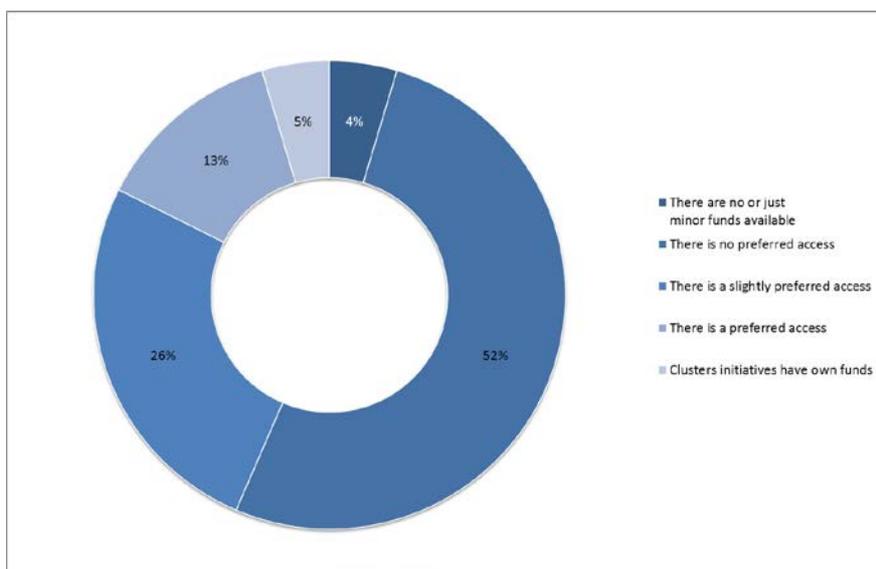
Figure 9: Adequacy of the public investments to implement S3



The overall picture is quite positive, since the majority of interviewees affirmed that the amount of funding is (at least) satisfactory (Fig. 9). However, this feedback varies considerably from region to region. As some regions have just begun to implement S3 and not many programmes are currently running, some respondents might have been influenced by the present situation. This might especially be the case when the opinion between policy makers and other respondents differs significantly.

Cluster participants of the S3-4AlpClusters partner regions do not have a preferred access to regional funding programmes by design (s. Fig. 10). However, a quarter of the respondents indicated that proposals/applications developed within a cluster initiative have a higher likeliness of obtaining funding. This might be due to several reasons, but very often such proposals/applications are more demand-oriented and based on industrial need. Another motive might be that the involvement of a cluster organisation as a moderator/coach might result in higher quality as well. Only in exceptional cases, applications obtained preferred access to funding since they are labelled as outcome of a dedicated common undertaking of cluster participants.

Figure 10: Accessibility of funds by cluster participants



All partner regions provide funding for cluster organisations. The adequacy, from the cluster managers' perspective, varies substantially as about half of the managers consider the amount of funding to be adequate (Fig. 11). The key information about the cluster initiatives involved in the StressTest exercises is given in the table below (Fig. 12). The share of regional funding is decisive for the cluster initiatives, but they succeeded in attracting a high share from private sources, which resulted in comparably high long-term financial security.

Figure 11: Availability of funding for cluster initiatives

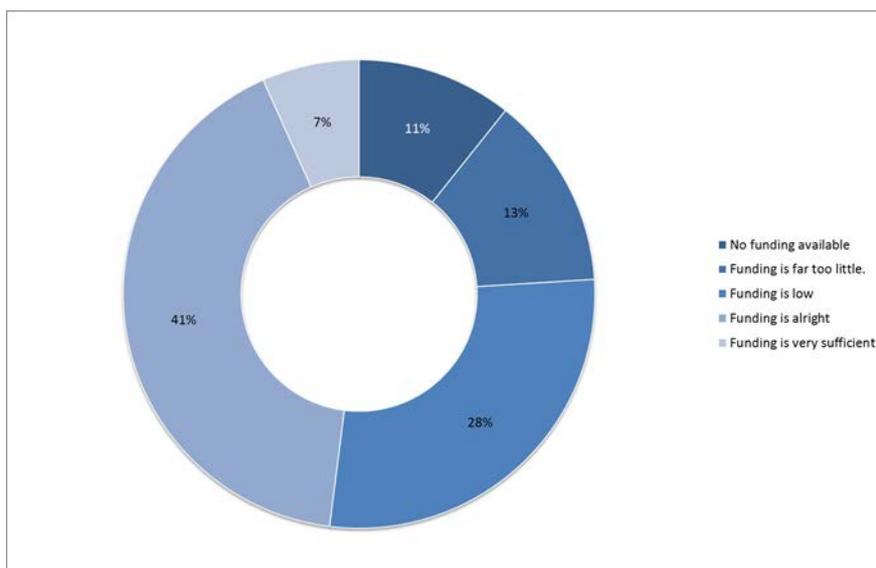


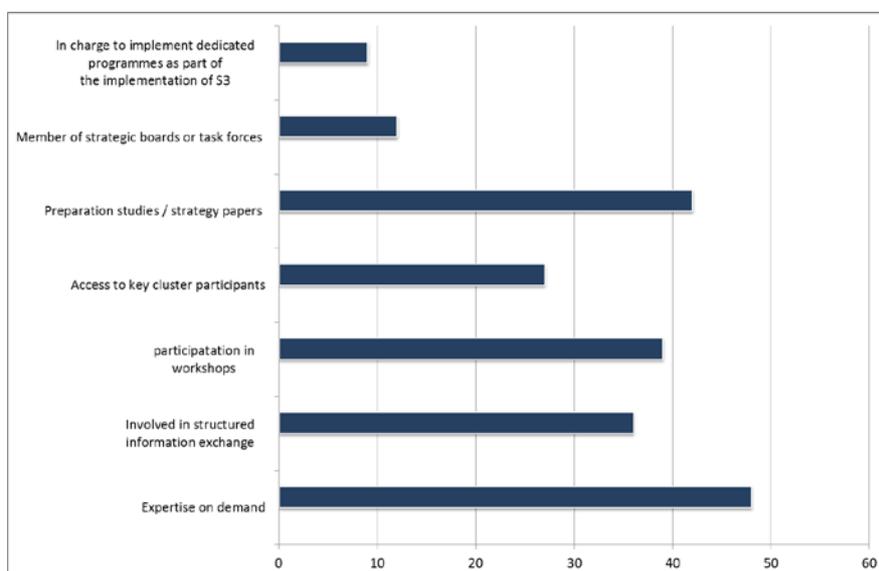
Figure 12: Size and financing of cluster initiatives involved in the StressTest

	Cluster organisations from partner regions	EU-average ⁹
Number of members	113	85
Staff working in cluster organisations (FTE)	3,4	3,6
Share of funding from regional sources	19 %	N. A.
Share of private financing	44 %	35 %
Share of cluster initiatives with high financial security ¹⁰	45 %	38 %

The StressTest revealed to what extent and how differently cluster initiatives support regional policy makers in implementing their S3 (Fig. 13). It varies from region to region: Austrian, Italian and Slovenian policy makers tend to use cluster managers more intensively than policy makers from Baden-Wuerttemberg (BW) and Bavaria.

In most cases, cluster organisations provide expert advice by means of interviews, participating in workshops or contributing to strategy papers. Nonetheless, only a small part of the cluster managers plays a very pro-active role by being involved in strategy or regional decision making boards or is even in charge of implementing a dedicated measure under S3.

Figure 13: How cluster initiatives support policy makers in S3 implementation



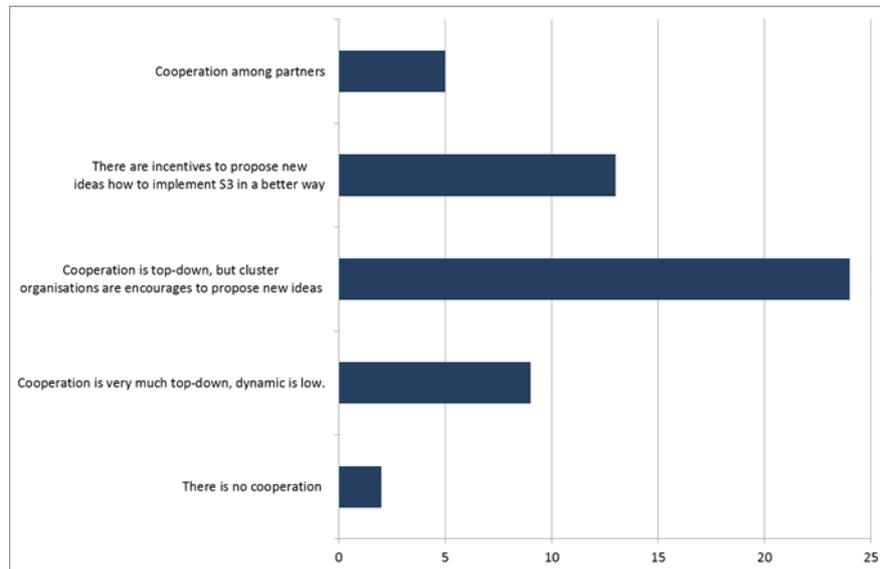
Feedback from cluster managers and policy makers

The way how cluster organisations cooperate with policy makers can be characterised as top-down (Fig. 14). Although in most cases they are encouraged to contribute proactively, the final decision is still made by policy makers.

⁹ Based on ESCA database (28 EU member states, Switzerland and Norway), 492 data.

¹⁰ Financing assured for at least two years.

Figure 14: How cluster initiatives support policy makers in S3 implementation



Monitoring and Evaluation

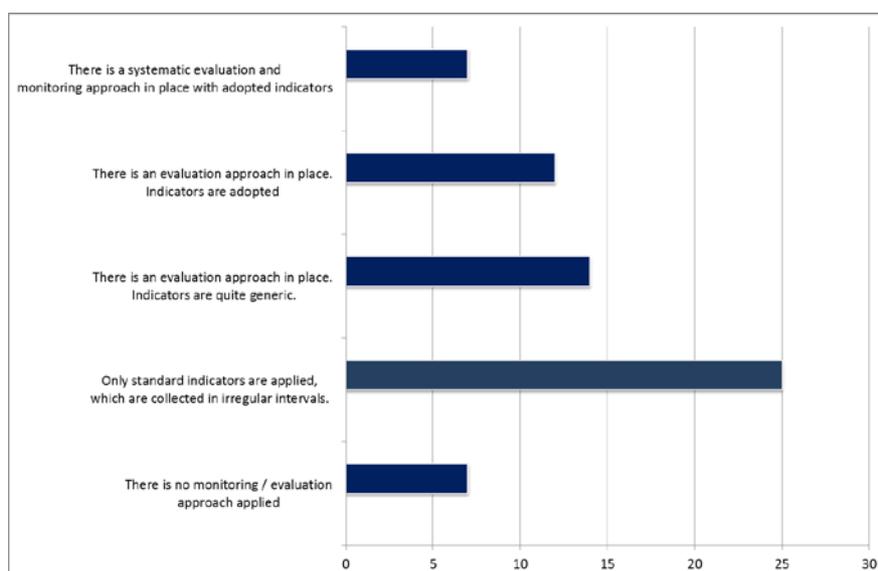
Monitoring and evaluation are understood as tools to improve policies, but there is a significant lack of appropriate evaluation schemes.

Monitoring and evaluation usually help to assure policy objectives and to meet desired goals. Due to the novelty of S3 and the new role cluster initiatives are going to play, existing evaluation designs do not fit properly. In addition, indicators given in connection with the ERDF cannot be considered to adequately measure the contribution of S3 or involved cluster initiatives. Given the case that cluster-based approaches are adopted to implement S3, applying a tailored monitoring and evaluation system becomes mandatory¹¹. Furthermore, there is a dedicated trend from the traditional ex-post evaluation towards a formative evaluation and monitoring in order to enable a learning and improvement process during the S3 implementation.

Fig. 15 illustrates the state of the art in the S3-4AlpClusters partner regions. Evaluation is done in almost all regions where collecting standard indicators at irregular intervals is the prevailing approach. A systematic monitoring and evaluation approach is only given in very exceptional cases. In these cases, the entire approaches as well as the indicators are commonly agreed on between cluster organisations and policy makers. Regions like Upper and Lower Austria already have very appropriate approaches in place.

¹¹ Kind, Meier zu Köcker (2014): *Evaluation of Clusters, Networks and Cluster Policies – Challenges and Implementation*, iit working paper, <http://www.iit-berlin.de/de/publikationen/iit-perspektive-14>.

Figure 15: Monitoring and evaluation approaches applied



Impact of S3 on Cluster Organisations

There is already a significant visible impact of S3 on cluster initiatives

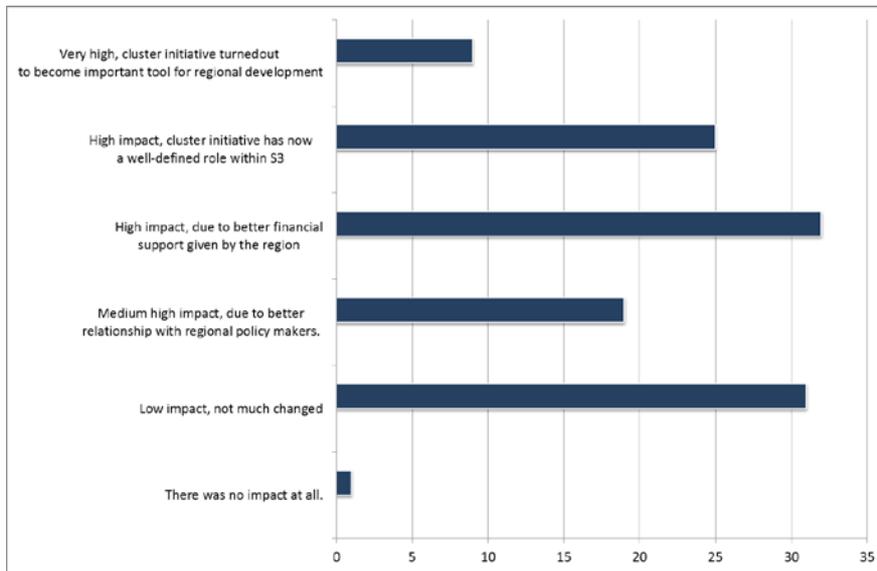
Utilising a cluster-based approach to implement S3 assigns cluster initiatives a new role, which they often did not have in the past. It shifts the attention from a “cluster as innovation driver” towards a tool of regional development. Thus, it is interesting to see how this paradigm changes the impact on the day-to-day operation of cluster organisations.

Fig. 16 illustrates striking findings, which warrant a more detailed discussion. The fact that cluster initiatives report improvements of the financial conditions is not a surprise, as it is common sense in the Alpine region that cluster organisations need funding to operate, especially if they are supposed to take over certain tasks which are intended for regional development. Many interviewees confirmed that cluster initiatives now have a better defined role within the S3 context, which is, without doubt, a very positive finding. The Veneto region is a good example for this observation.

It has to be taken into account that some regions, like Bavaria, BW, Upper Austria or Lombardy, already implemented Regional Innovation Strategies (or similar) before S3 were developed, incl. dedicated roles for cluster initiatives. Support for cluster development and funding for cluster initiatives was provided accordingly. Thus, it is hardly surprising that cluster managers from these regions responded that not much has changed. In these cases the S3 approach can be considered as an extension of previously existing cluster-based regional strategies.

A small number of respondents confirmed that due to S3, they have become an important tool for regional development, which can be considered as the most sustainable impact.

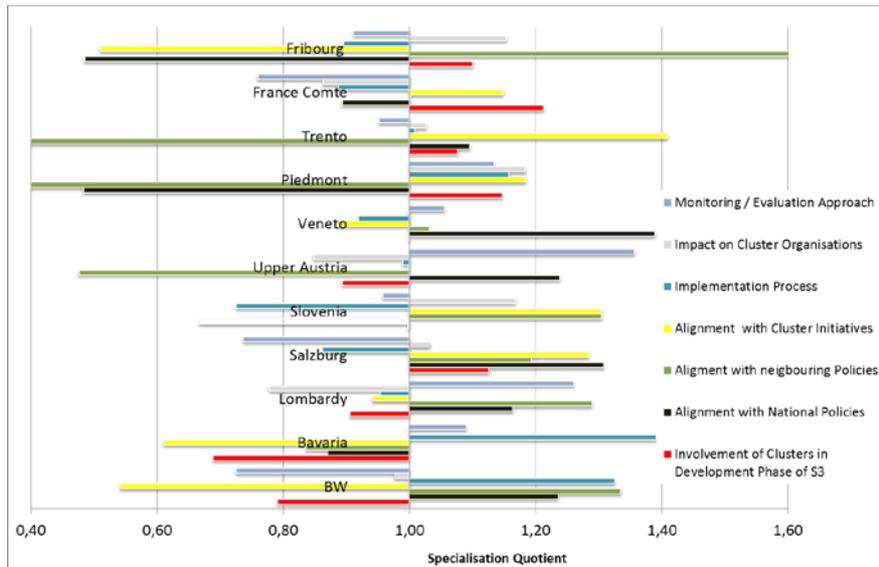
Figure 16: Impact of S3 on cluster organisations



Reflections

This chapter is intended to identify relevant patterns based on a deeper understanding of the findings presented in the previous chapter. Fig. 17 provides an overview of selected specialisation coefficients. Coefficients of specialisation measure to what degree a given S3-related indicator is specialised in comparison to all other S3-related indicators of a region in connection with all S3-related indicators of the S3-4AlpClusters partner regions¹². A value of higher than 1,2 denotes a high specialisation for an indicator.

Figure 17: Selected specialisation coefficients for S3-4AlpCluster partner regions



Observation 1: High involvement of cluster initiatives in S3 development is in line with high alignment of the respective strategies

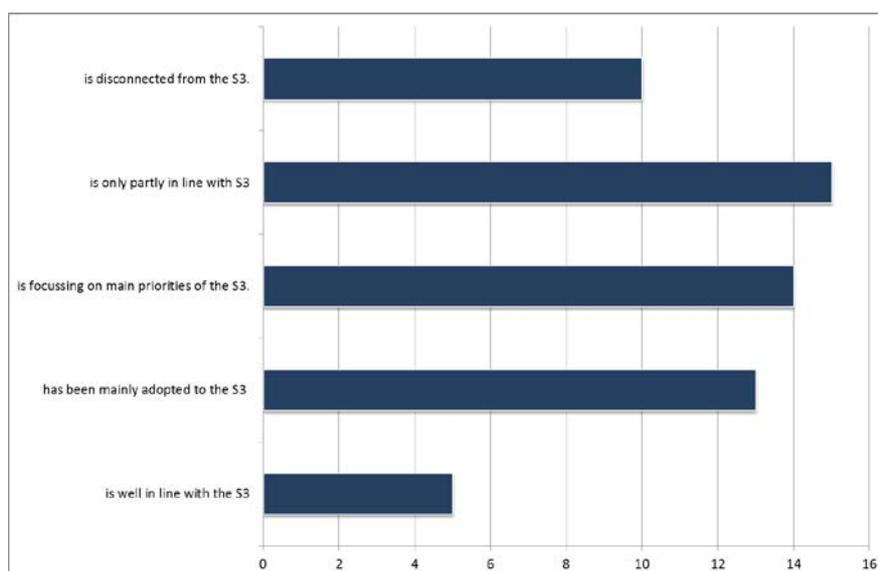
Regions that strongly involved cluster initiatives in the development of S3 report well-aligned strategies of cluster initiatives and S3 (Franche-Comté, Piedmont, Salzburg and Trento) and vice versa (Bavaria, BW, Lombardy, Upper Austria, Veneto). Furthermore, it appears that the size of the region plays an influential role.

The exceptions are Fribourg (because of a rather horizontal perspective, supporting neutral policies instead of focusing on the specific needs of the defined strategic domains) and Slovenia (implementation of SRIP as core of the cluster-based S3 approach is not yet implemented, which is why designated SRIP cannot (yet) align anything).

Fig. 18 illustrates that quite a significant number of cluster initiatives have more or less adapted their strategy to the main priorities of S3.

¹² <https://people.hofstra.edu/geotrans/eng/methods/ch3m3en.html>.

Figure 18: Alignment of strategies of cluster initiatives with S3



Observation 2: Smaller regions involve their cluster initiatives in S3 development more intensively than bigger regions

By nature, smaller regions have a limited number of innovation actors and cluster initiatives. Consequently, the cluster initiatives often play a much stronger role in contributing to the S3 development process due to the absence of alternative actors. Larger regions tend to make less use of cluster initiatives due to the higher number of cluster initiatives, like Bavaria (19) and BW (over 100). Smaller regions involve cluster initiatives much more (Franche-Comté, Fribourg, Salzburg and Trento). Related indicators for medium-sized regions with around 10 cluster initiatives, like Upper Austria or Lombardy, score better than larger regions, but lower than smaller ones.

Observation 3: Regions with significant own investments in STI have a strong S3 implementation approach

Bavaria and BW invested enormous amounts in Science, Technology and Innovation (STI) over the last year. The majority of the investments do not come from ERDF. It is interesting to see that those regions score high regarding indicators related to S3 implementation. They apply a broad spectrum of policy instruments to support cluster initiatives, provide significant amounts of funds and are known for their long-term sustainable cluster policy.

Observation 4: Cluster initiatives that aligned their strategy with S3 report above average impact

Aligning their strategies with S3 helps cluster organisations to benefit from S3 implementation approaches. This observation supported the hypothesis that the interplay between S3 and cluster initiatives is important. Cluster initiatives can benefit by taking over new roles in the field of regional development and the S3 implementation benefits from making use of cluster-based approaches.

Policy Implication

The StressTest exercises conducted in the 11 project partner regions confirmed the relevance of cluster-based development and implementation of S3. This report contributes to an increased understanding of the interplay between S3 and clusters. It provides valuable insights on how regions make use of clusters. The Alpine Space regions are, on the one hand, very heterogeneous. On the other hand, the regions apply similar cluster-based approaches of S3 implementation.

The observation and conclusions described in the previous chapters, lead to the following policy implications:

1. Regions applied different approaches on how to develop their S3. There is no “golden standard” since regions are individual. It has to be acknowledged that regions need sufficient flexibility in this regard in order to consider S3 as a strategic approach to economic development and not just as an ex-ante conditionality to receive ERDF.
2. The StressTest exercises provided good evidence that a cluster-based approach to develop and implement S3 can offer added value for the regions. However, the S3 approach has to be consequently designed and implemented.
3. The interplay between cluster initiatives and S3 matters. For this purpose, strategies of cluster initiatives should be in line with respective S3 in order to assure that cluster initiatives can provide tailor-made support for implementing S3.
4. The implementation of S3 is of importance. It has to be supported with a proper spectrum of policy instruments for tailor-made support and sufficient public investments.
5. If cluster initiatives play a dedicated role in the implementation of S3, they have to be properly enabled to fulfil their role. This contains sufficient co-investments and capacity building.
6. The S3 approach shifts cluster policy towards cluster-based regional development policy. This leads to the consequence that less emphasis should be placed on just funding cluster initiatives, and more on taking measures that enable cluster initiatives to become a tool for regional development.
7. Aligning S3 and related policy instruments among neighbouring regions is still a challenge. The insight gained at the macro-regional level so far indicates that much more work is needed to overcome the obstacles that arise from the local context of S3 and the absence of alignment. The challenge remains to understand the potential of the market and the mechanisms required to facilitate linkages among Alpine Space actors for purposes of initiating transformative actions through cross-regional cooperation. Smaller regions in particular need to improve framework conditions for cross-regional activities in order to reach a critical mass in terms of companies and public investments. Existing funding schemes like INTERREG or Horizon 2020 are not an option.
8. Since S3 is a new approach, appropriate monitoring and evaluation approaches are missing. More attention shall be directed towards development and implementation approaches in a cross-regional and international exchange of experiences.

S3-4AlpClusters in a nutshell



Smart Specialisation with Smart Clusters

Smart Specialisation Strategies (S3) are a lever of EU Cohesion Policy. One of the biggest challenges is to make use of the interplay between S3 and clusters. How can S3 be used to foster innovation processes and spark entrepreneurship within clusters? How can S3 be implemented through clusters to gain sustainable and inclusive growth? There is a lack of experience among regions on how to use clusters in the implementation of S3 and how to develop implementation tools to fully benefit SMEs. In addition, alignment between and knowledge about other regions' strategies are very limited.

This is exactly the focus of the S3-4AlpClusters project, which believes that the interplay between S3 and clusters is an innovative approach that could spread innovation in the whole Alpine Space. S3-4AlpClusters will launch cross-regional coordinated actions between the different sectors/regions involved and enhance transnational cluster cooperation. The final aim is to generate critical mass for SMEs and to improve the framework conditions for innovation in the Alpine Space.

S3-4AlpClusters will develop:

- ✓ A joint transnational cluster action plan to improve transnational, cluster-based cooperation
- ✓ An S3-based innovation model for cluster development
- ✓ A fully synchronized call scheme
- ✓ New services validated by pilot clusters

The S3-4AlpClusters community includes cluster managers, entrepreneurs, academics and policymakers, and is supported by public authorities and S3 experts.

The NUMBERS of S3-4ALPCLUSTERS

15 Partners

9 Observers

830 SME

35 decision makers

11 Alpine Regions

10 pilot clusters to be involved

FOLLOW S3-4AlpClusters

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S3-4ALPCLUSTERS Partners

HES-SO // FR-HEIA-FR INNOSQUARE CLUSTERS



Business Upper Austria - OÖ Wirtschaftsagentur GmbH



ClusterAgentur Baden-Württemberg



Veneto Region - Research Clusters and Networks Unit



Poly4EMI hosts by Anteja ECG d.o.o



Innovation and Technology Transfer Salzburg GmbH



University of Franche-Comté - FEMTO-ST



PROPLAST - Consortium for the Plastic Culture Promotion



Cluster Technologies for Smart Cities & Communities Lombardy Foundation



Autonomous Province of Trento (PAT)



Trentino Innovation Hub



Lombardy Region Government



Bavarian Research Alliance GmbH



Government Office for Development and European Cohesion Policy



Veneto Innovazione S.p.A.

