ClusterNanoRoad

723630

Expert Advisory Board Meeting

Brussels
April 11th, 2018

Horizon 2020
European Union funding
for Research & Innovation

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WP1

VALUE CHAIN OPPORTUNITIES: mapping and benchmarking of Cluster-NMBP RIS3 good practices

[M1-M7]

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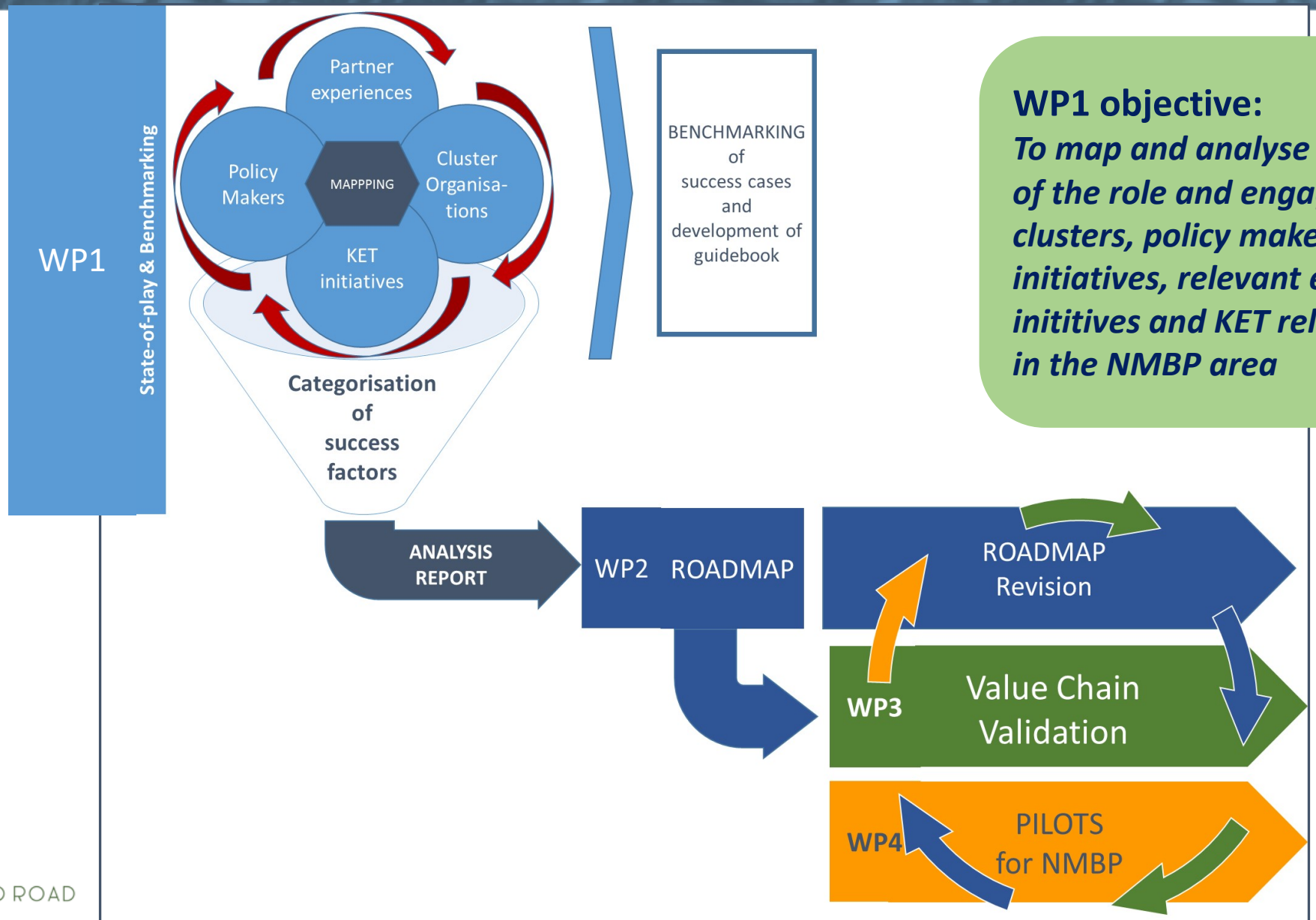
WP1 as basis for further project activity



WP1 objective:

To map and analyse the state-of-play of the role and engagement of clusters, policy makers, key regional initiatives, relevant existing KET inititives and KET related value chains in the NMBP area

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WP1: VALUE CHAIN OPPORTUNITIES [M1-M7]

Side Note: WP1 reports where prepared during Sept 2016-July 2017

3 main tasks, each with a specific output:

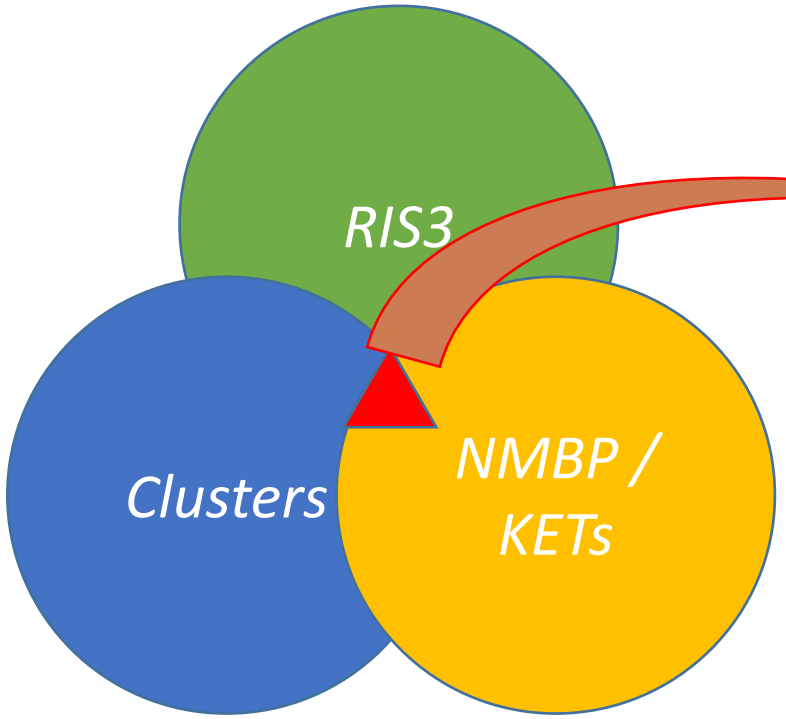
Mapping of EU national and regional initiatives and good practices
→ *Mapping report*

Benchmarking of several KET cases for visualisation of good practices that identify success factors and challenges/barriers
→ *Benchmarking guide*

Presentation of the novel approaches and categorisation of success factors
→ *Synthesis of findings in an analysis report with policy recommendations*

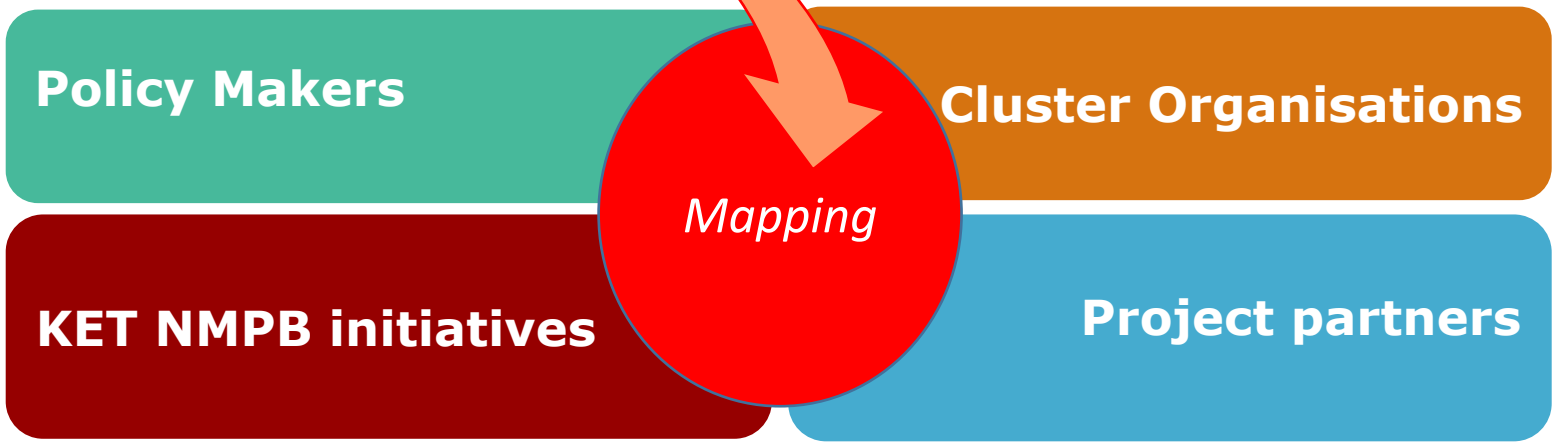
T1.1: Mapping of EU national and regional initiatives and good practices

→ Identification and mapping of initiatives at the interconnection of 3 major elements:



Note:
the mapping is not aimed at being exhaustive but rather to provide examples and to identify key trends

4 Categories of actors/processes and sources of information (*methodology: desk research, online survey, interviews*)



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T1.1: Mapping of EU national and regional initiatives and good practices

→ Initiatives that have contributed in shaping regional RIS3 strategic priorities in NMBP related fields, involving clusters.

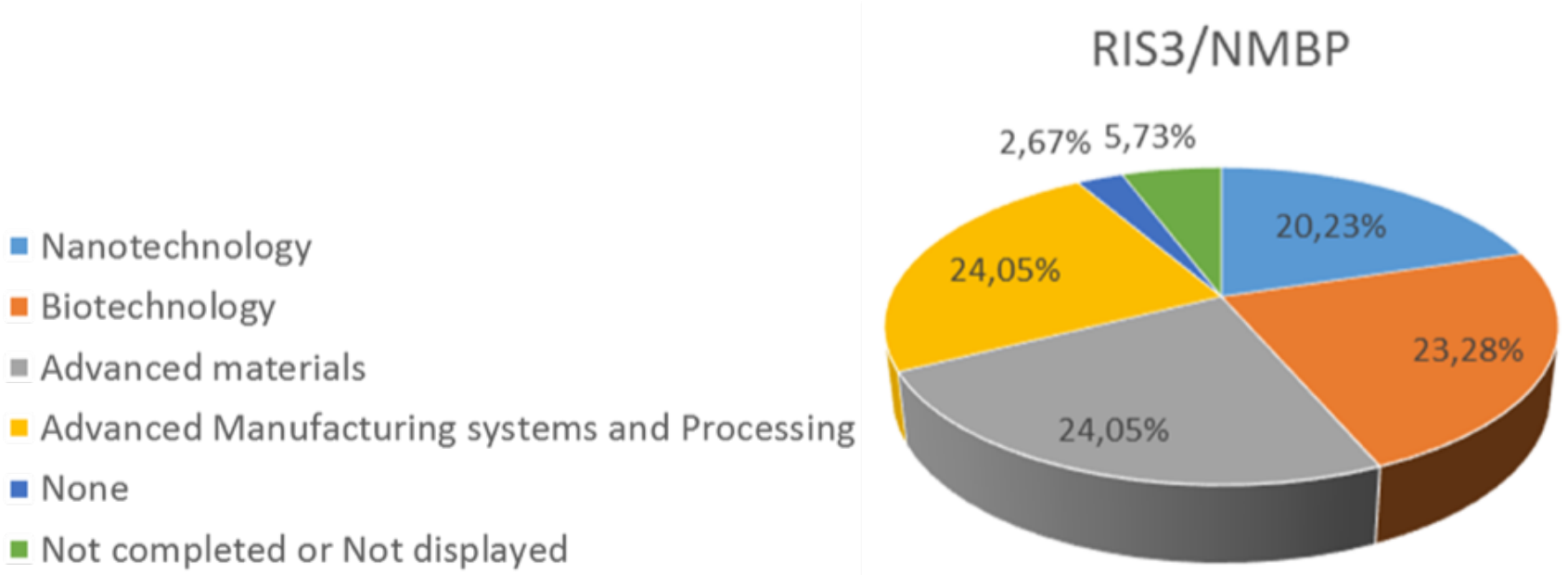
Types of initiatives considered:

- Services (e.g. consultancy, matchmaking, training)
- Projects
- Equipment (e.g. R&I infrastructure)
- Test platforms (e.g. pilot plants)
- Incubators/business startup centres
- Science and Technology Parks, laboratories, innovation parks, etc.

T1.1: Mapping of EU national and regional initiatives and good practices

Main findings of the mapping report (1)

- Large EU-28 coverage of the **KET sector priorities in all European countries** (Eye@RIS tool), however for sectors individually: Advanced Manufacturing Systems and Processing is the dominant sector followed by Advanced Materials
- Supported by findings according to **mapping of clusters in KET sectors** (European Cluster Collaboration Platform)
- **The CNR survey underlines and confirms the ranking of the most dominant KET in RIS3 priorities:**

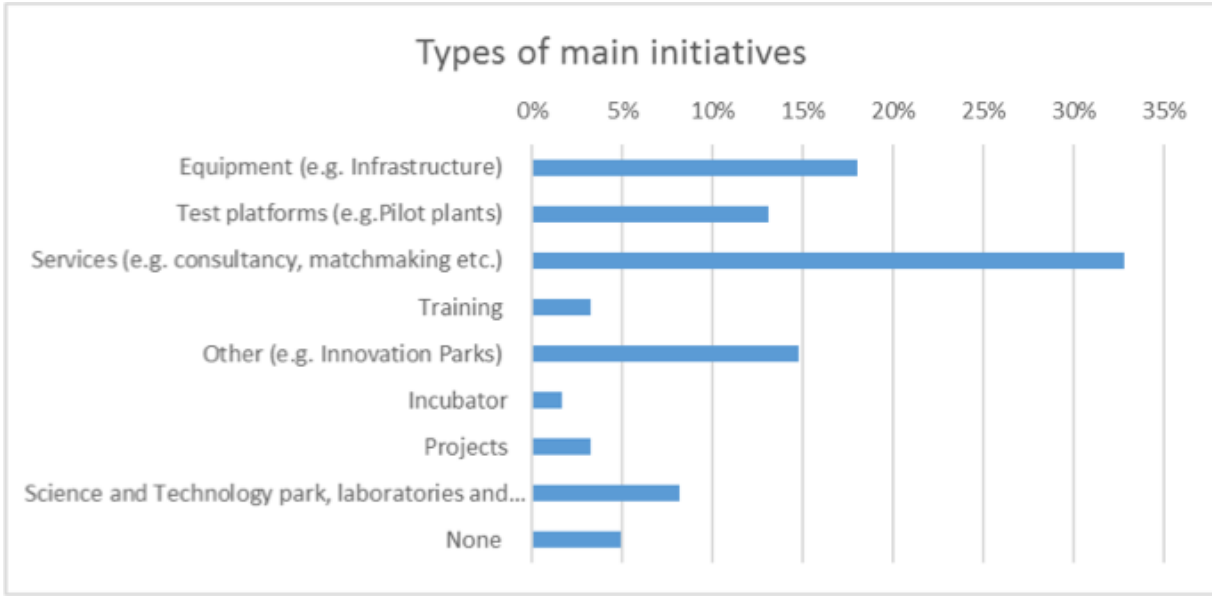


T1.1: Mapping of EU national and regional initiatives and good practices

- A number of **initiatives in NMBP / KET sectors related to innovation strategies** - examples:
  - 6 partnership projects (pilot projects, large scale demonstrators) on the Smart Specialisation Platform for Industrial Modernisation (S3P-Industrial Modernisation): a number of EU regions collaborate in KETs related sectors.
  - Within the Vanguard initiative (new growth through smart specialisation), a large number of regions are involved in collaboration projects related to European priority areas out of which currently 2 projects related to KETs [High Performance Production through 3D-Printing, New nano-enabled Products]
- A number of **cluster initiatives related to innovation strategies** – examples:
  - 6 Innosup-1 projects under implementation and a number to come *(NB: more since)*
  - Already expressed interest in upcoming ESCP-S3 partnerships

Main findings of the mapping report (2)

- The majority of cluster managers and policy makers are aware of the RIS3 NMBP specialisations of their territory



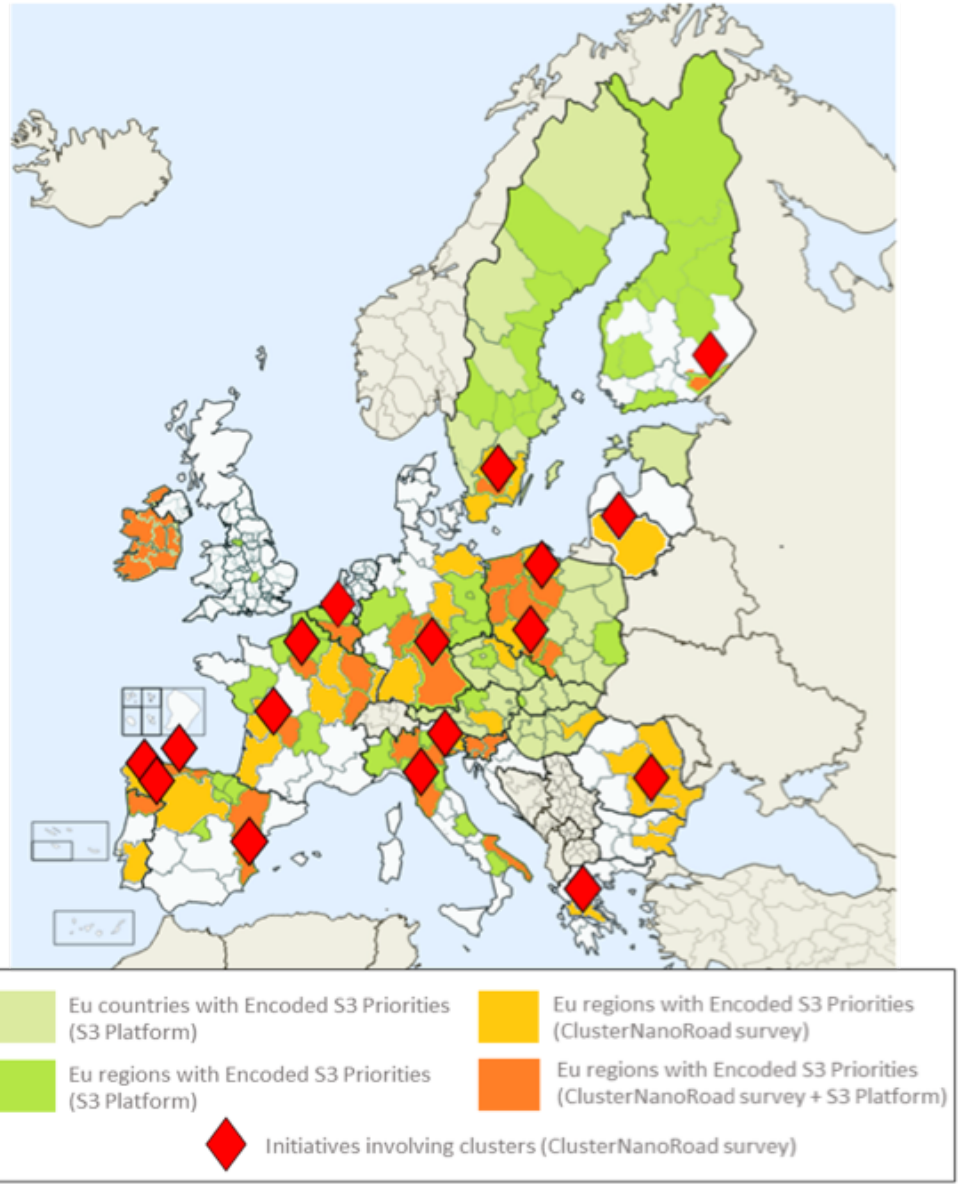
Types of existing initiatives in NMBP / KET sectors relevant to innovation strategies according to survey respondents

T1.1: Mapping of EU national and regional initiatives and good practices

Main findings of the mapping report (3)

The mapping has confirmed a strong correlation between KET-sector related innovation strategies (RIS3) in Europe and cluster presence in these sectors and territories

→ potential for interaction, i.e. for the involvement of clusters in the policy/project design/set up and/or implementation of innovation strategies.



Example of elaborated map:
RIS comprising Advanced manufacturing systems and Processing (source: EYE@RIS, S3 Platform with information from the ClusterNanoRoad survey)

CLUSTER NANO ROAD

T1.1: Mapping of EU national and regional initiatives and good practices

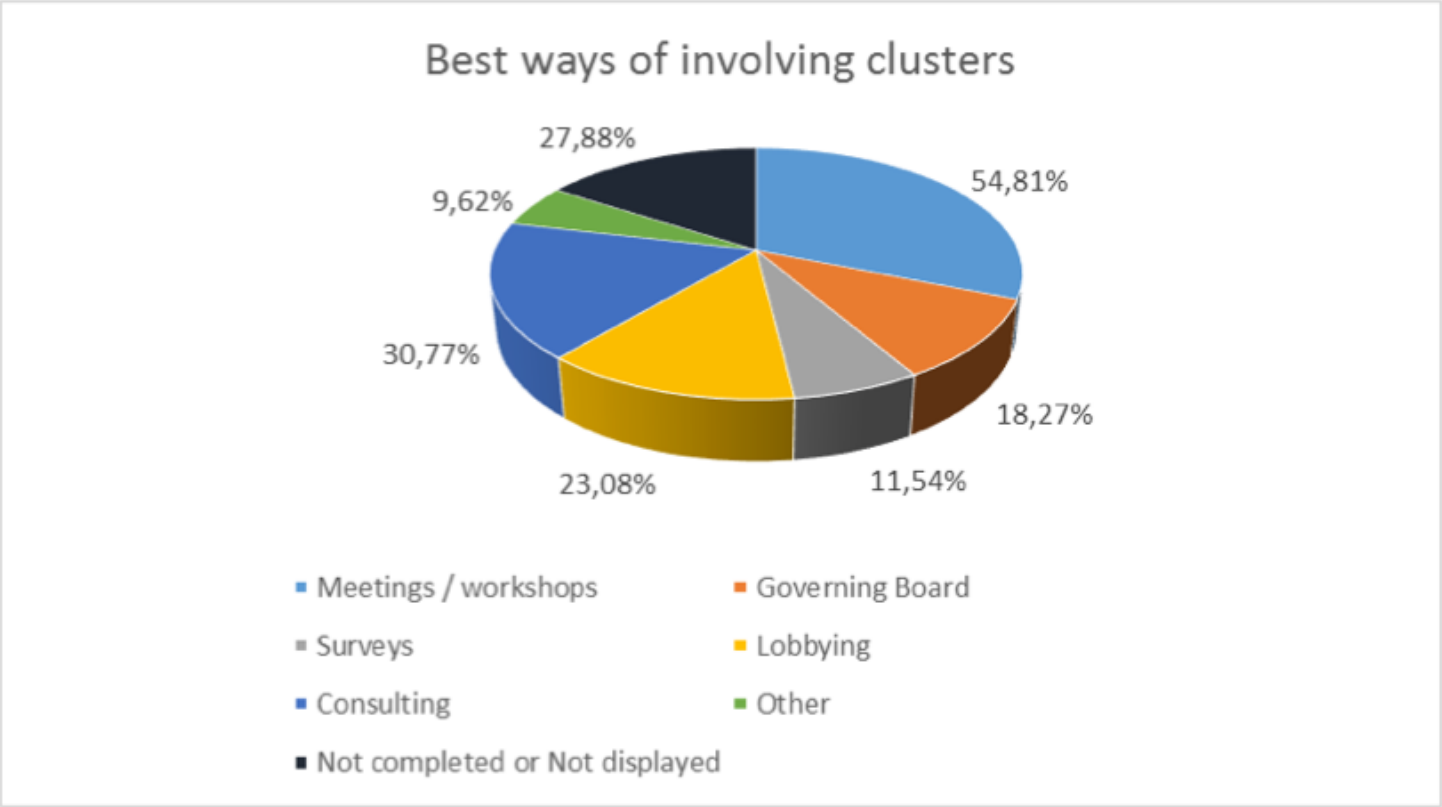
Main findings of the mapping report (4)

- **Funding:**
  - Most initiatives rely on European Structural and Investment Funds, followed by Regional government financing which are not of EU funds origin. Private funds come in third place.
  - Main financial models are private and public co-funding, membership or participation fees, as well as EU partnership agreements
- **Management role**
  - Mostly lead by regional authorities.
  - Clusters do not lead as many initiatives, e.g. they do not provide as many services, as before; some feedback suggests nowadays less available budget which concludes in less strategic cluster support.
  - Clusters are mainly identified and involved in the management of initiatives such as equipment and delivery of services.
- **Target users / beneficiaries:**
  - Mostly targeted by all types of initiatives are SMEs, followed by universities/researchers preceding the category of large companies and finally clusters.
- **Openness:**
  - 26% of the overall respondents indicated the initiative(-s) of their territory to be open to actors from beyond their regions.

T1.1: Mapping of EU national and regional initiatives and good practices

Main findings of the mapping report (5)

- Overall there is an incentive to more involve clusters – a good number of regional initiatives exists in the KET sectors already, but **23% of survey respondents specified that they are not aware of KET initiatives with cluster involvement in their territory**.



T1.1: Mapping of EU national and regional initiatives and good practices

Main findings of the mapping report (6)

- **Clusters' role:**
  - Clusters are equally involved in the planning stage and the implementation of initiatives.
  - The types of initiatives clusters are mostly involved in are services and equipment.

- **Strong cross-sectoral focus of initiatives involving clusters:**
  - 60% with 3 or 4 NMBP sectors.
  - No observable common association of NMBP sectors
  - Clusters are specifically active in **cross-sectoral initiatives** including the Nano/Micro-electronics sectors.

- **Only a very few initiatives are cross-border initiatives. (But this will change with the S3 Thematic Platform for Industrial Modernisation/RE-CONFIRM … already 10 projects approved)**

- **Indeed also interest in the ESCP-S3 initiatives** lets already expect some cluster-lead initiatives related to KET sectors and RIS3 in the near future. (COSME funded call expected later in 2017)

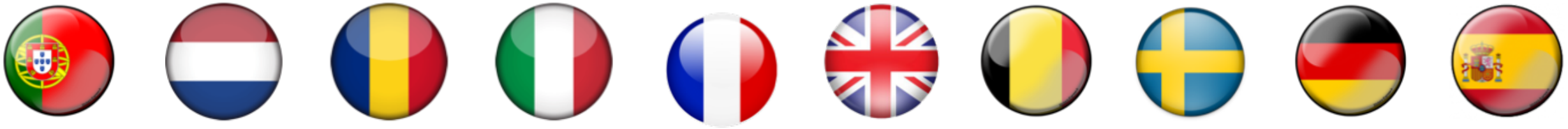
T1.2: Benchmarking of several KET cases for visualisation of good practices that identify success factors and challenges/barriers

- RIS3 setup and implementation: initiatives have often emerged as concrete support measures
- Clusters as R&I facilitators and network connectors between policy makers and R&I players are often appreciated contributors or even project leaders

→ Benchmarking report highlights successes and difficulties encountered by the actors involved (clusters, RDI players and regional authorities)
→ Sources: mapping report, additional desk research & interviews

T1.2: Benchmarking of several KET cases for visualisation of good practices that identify success factors and challenges/barriers

Main elements of the Benchmarking guide (1)



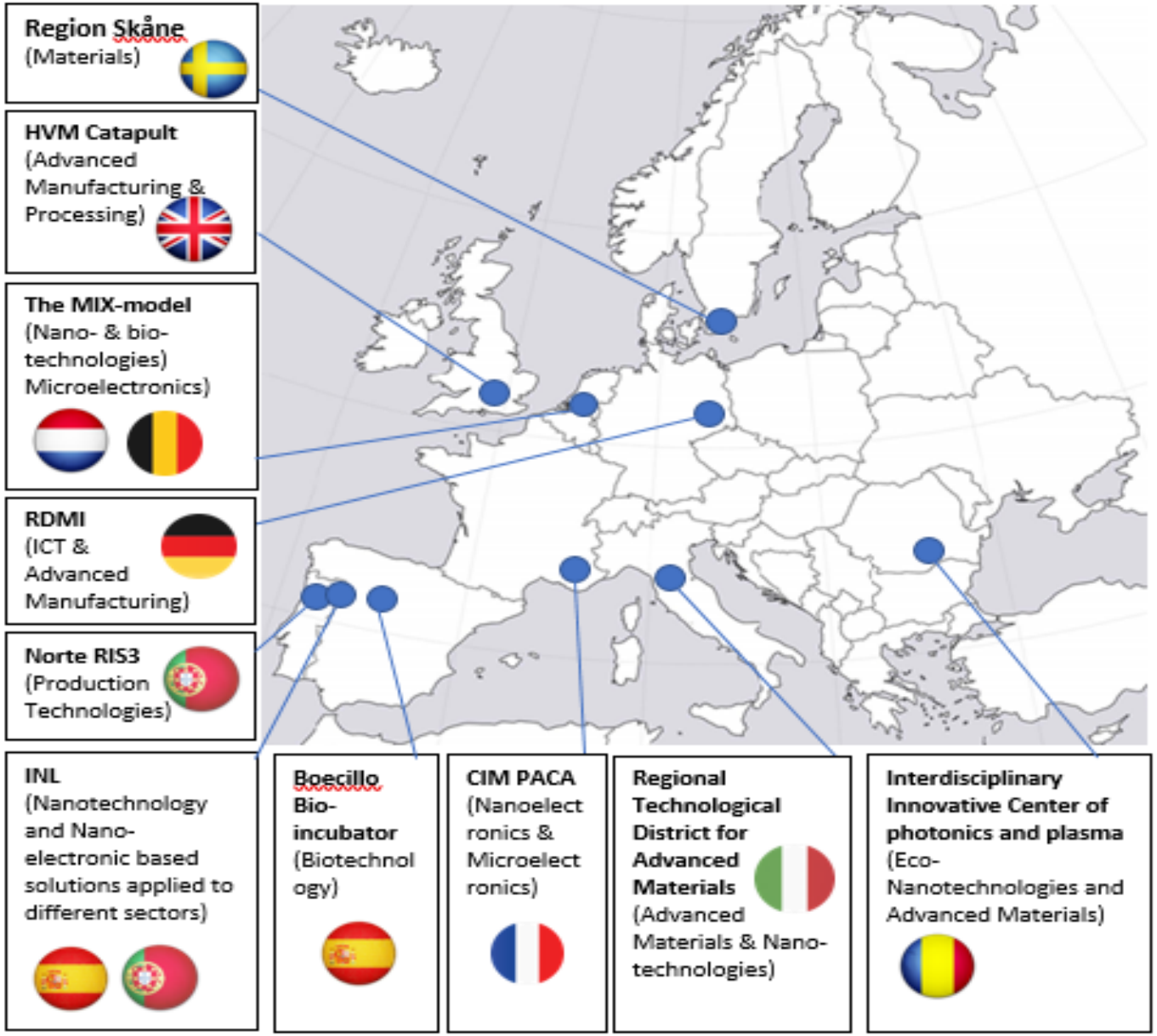
10 Benchmarks are covering all four NMBP sectors, often more than one per initiative, and are planned or implemented all over Europe

Benchmarking criteria:
- Thematic diversity: good sector coverage / cross-sectoral initiative
- Geographical coverage: EU-wide benchmarks
- Clear involvement of cluster(-s) in the initiative
- Complementarity of the cases: coverage of different types of initiatives
- Funding and programming synergies

T1.2: Benchmarking of several KET cases for visualisation of good practices that identify success factors and challenges/barriers

Main elements of the Benchmarking guide (2)

Characteristics and major elements are transferable, allowing other regions to possibly learn from experience and avoid failures



T1.2: Benchmark example: Integrated Microelectronics Centre Provence-Alpes-Côte d'Azur, France (CIM PACA)

The 12 **regional investment priority operations** of the Provence Alpes Cote d'Azur region (PACA) include the **support and introduction of KET's into large industrial and territorial projects**.
These KETs are mainly represented in the region by the sectors of Photonics, Nanotechnologies, Micro and Nanoelectronics, Semi-conductors, Digital Technology and IOT, as well as Biotechnologies.

The **main aim** : to provide research and innovation equipment and offer associated services for all members (notably SMEs) concerned by Nano-microelectronics.
The initiative comprises three test platforms specialised in different specific areas, managed each by an association.

Some of the **main impacts** :

- Support to hundreds of researchers to increase the regions research knowledge and their individual expertise.
- Increase in the number of businesses setting up in the area : attraction factor aspect of the rare services offer at national level.
- Large enterprises such as ST Microelectronics have agreed to make their existing platforms / tools available to smaller companies.

- Building on regional strengths
- Strong cluster involvement in the RIS3 and in the initiative's planning and implementation phases
- Strong policy engagement (local, regional levels)
- Complementary financing sources, funding synergies
- Involvement of the ecosystem (notably large companies)
- Openness to external beneficiaries and transferability of the concept

T1.3: Presentation of the novel approaches and categorisation of success factors

Analysis report with:

→ **Categorisation of new approaches, success factors and associated impact indicators** in the KETs-RIS3 interaction

→ **Policy recommendations, input for the Roadmap and ideas for pilot actions** → input to WP2 and WP3

Categorisation in a table format:

- 6 main axes: entrepreneurship – HR/skills – SME services – research infrastructure platforms – internationalisation – policy interventions
- 25+ characteristics of Novel Approaches / Success Factors for RIS3-NMBP interaction
- Potential Impact Indicators (including impact on SMEs, drivers for regional structural change, creation of regional competitive advantages)
- Cluster Role and Involvement
- Regional Environment and Policy Recommendations
- Illustrative Examples / Initiatives from the NMBP / KETs sectors
- Ideas for pilot activities

Policy recommendations and ideas for pilot actions:

- Recommendations to policymakers on regional, national and EU levels (including for the involvement of clusters)
- Recommendations for the RDI community

T1.3: Presentation of the novel approaches and categorisation of success factors

Main elements of the Analysis (1)

Main success factors identified (non-exhaustive list):

- **Building on selected regional strengths** as identified in RIS3;
- Building on the concrete **needs of the ecosystem**;
- **Strong policy support and engagement** (notably local and regional levels) with a long-term vision and commitment;
- **Involvement of the ecosystem** to enhance credibility and critical mass;
- Embeddedness into a **larger innovation environment** (e.g. a technopark) and networks to facilitate cross sectoral collaboration;
- Strong **cluster involvement in the RIS3 design** as a basis for the emergence of a cluster-driven initiative ;
- **Clear leadership** of a strong actor with dedicated resources;
- **Complementary financing sources and funding synergies** (notably regional and EU funds) & **long-term funding comittment**;
- **Promotion** and marketing of the initiative within national and regional networks and initiatives
- Clearly defined **KPIs**

T1.3: Presentation of the novel approaches and categorisation of success factors

Main elements of the Analysis (2)

RECOMMENDATIONS

- Lower the entrance threshold and support the capacity building for SMEs for easier access to research and innovation, including R&I infrastructure
- Identify and provide financial instruments that allow SMEs to access RDI infrastructures inter-regionally/cross border, e.g. through innovation vouchers.
- Foster dissemination and communication actions to stimulate demand amongst SMEs and enhance the access to pilot plants and technology platforms, addressing policy makers
- Support industry and application driven multi-stakeholder partnerships, strategically targeting large-scale research, development and innovation activities using a combination of different funds
- Support pilot production as the "scale-up" stage needed to cross the “Valley of Death”. Enhance communication on support that can be provided to RDI stakeholders in this context.
- Enhance cross sectoral collaboration, via clusters, as part of a RIS3 implementation strategy, to create value by stimulating demand and regional competitiveness.

WP1: VALUE CHAIN OPPORTUNITIES

Any questions?

Thank you for your attention!

Eva Fadil, inno TSD