

VANGUARD INITIATIVE

New growth through smart specialisation

**Aligning implementation of RIS3 and H2020
Funding across research priorities**

Brussels, 9 March 2017

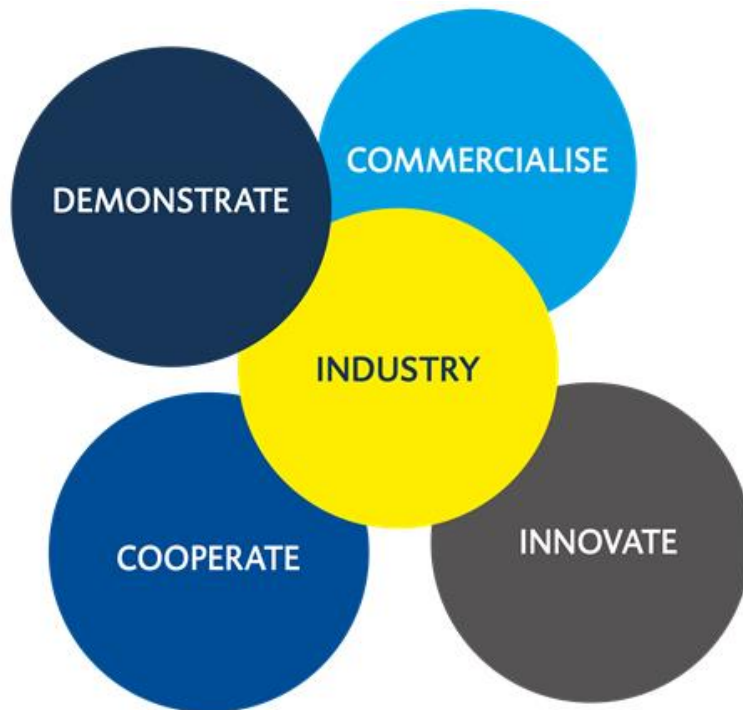
Aitor MINTEGUI
Basque Country EU Office
Vanguard Coordination Group

Asturias
Baden - Württemberg
Basque Country
Cantabria
Catalonia
Dalarna
East - Netherlands
Emilia - Romagna
Flanders
Galicia
Ile - de - France
Lombardy
Malopolska
Navarra
Nord - Pas de Calais
Norte
North Rhine - Westphalia
Pays de la loire
Ostrobothnia
Randstad Region
Auvergne - Rhône - Alpes
Saxony
Scotland
Skåne
South - Denmark
South - Netherlands
Tampere Region
Upper - Austria
Wales
Wallonia





What is the Vanguard Initiative?



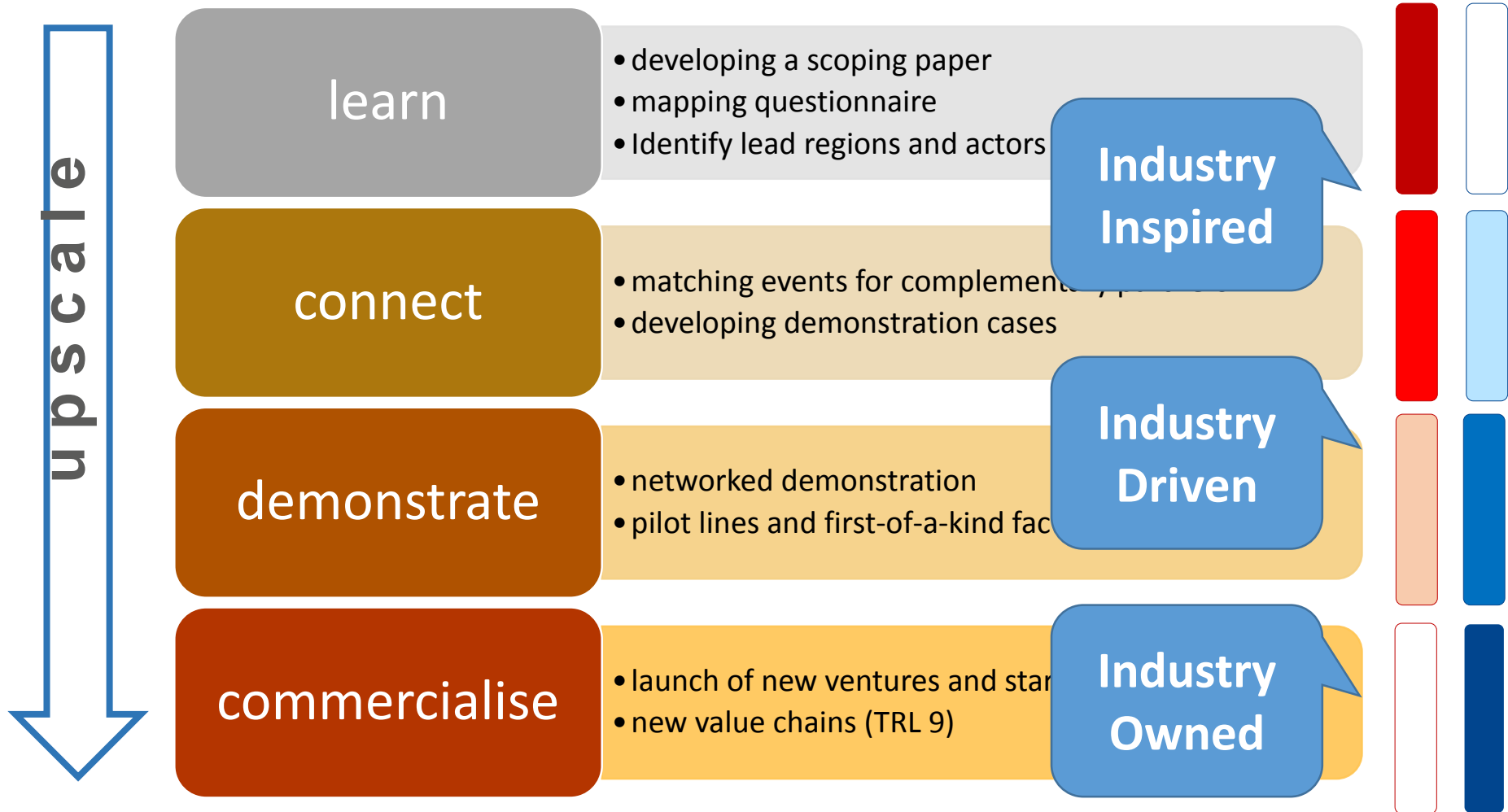
Network of 30 regions in Europe striving for modernisation, stronger competitiveness and internationalisation of Europe's industry



Key features of the Vanguard Initiative

- A. Strong political commitment and ambition**
- B. Interregional cooperation based on S3**
- C. Multilevel:** collaboration between regional authorities, clusters, business, knowledge institutes
- D. Speed up the market uptake of innovative technologies/ solutions**
- E. Exploring and facilitating Public-Private investment and co-funding possibilities**
- F. Structured dialogue with EU institutions**
- G. Bottom up**

VI Methodology – 4 step approach





Features of the Pilot Projects

- **What:** To explore opportunities for developing **interregional joint-demonstration** and **co investment**
- **Why:** to **accelerate industrial uptake of innovative solutions** and **market development** for existing and emerging industries with competitive and value added products
- **How:** Developing concrete **demo cases** within the pilots
- **Who:** **Clusters**, mobilising companies and knowledge institutes
- **Validation criteria for democases:**
 - Demonstration projects (**>TRL 5**)
 - Business involvement
 - European dimension of the value chain
 - Added-value of joint demonstration

Five Pilot Projects

	Pilot Project	Lead regions	Democases
1	Bio - economy Interregional cooperation on innovative use of non - food biomass	Lombardy Randstad Region	<ul style="list-style-type: none"> • Biobased aromatics • Lignocellulose refinery: European value chains for second-generation sugar and lignin • Turning (waste)gas into value • Biogas beyond energy • Aviation biofuel • High value food and feed from agro-food waste
2	Efficient and sustainable manufacturing	Catalonia Lombardy	<ul style="list-style-type: none"> • De- and remanufacturing • Adaptive & intelligent manufacturing • Advanced surface & coating manufacturing • Digital and virtual manufacturing • Energy and environmentally efficient manufacturing

Five Pilot Projects

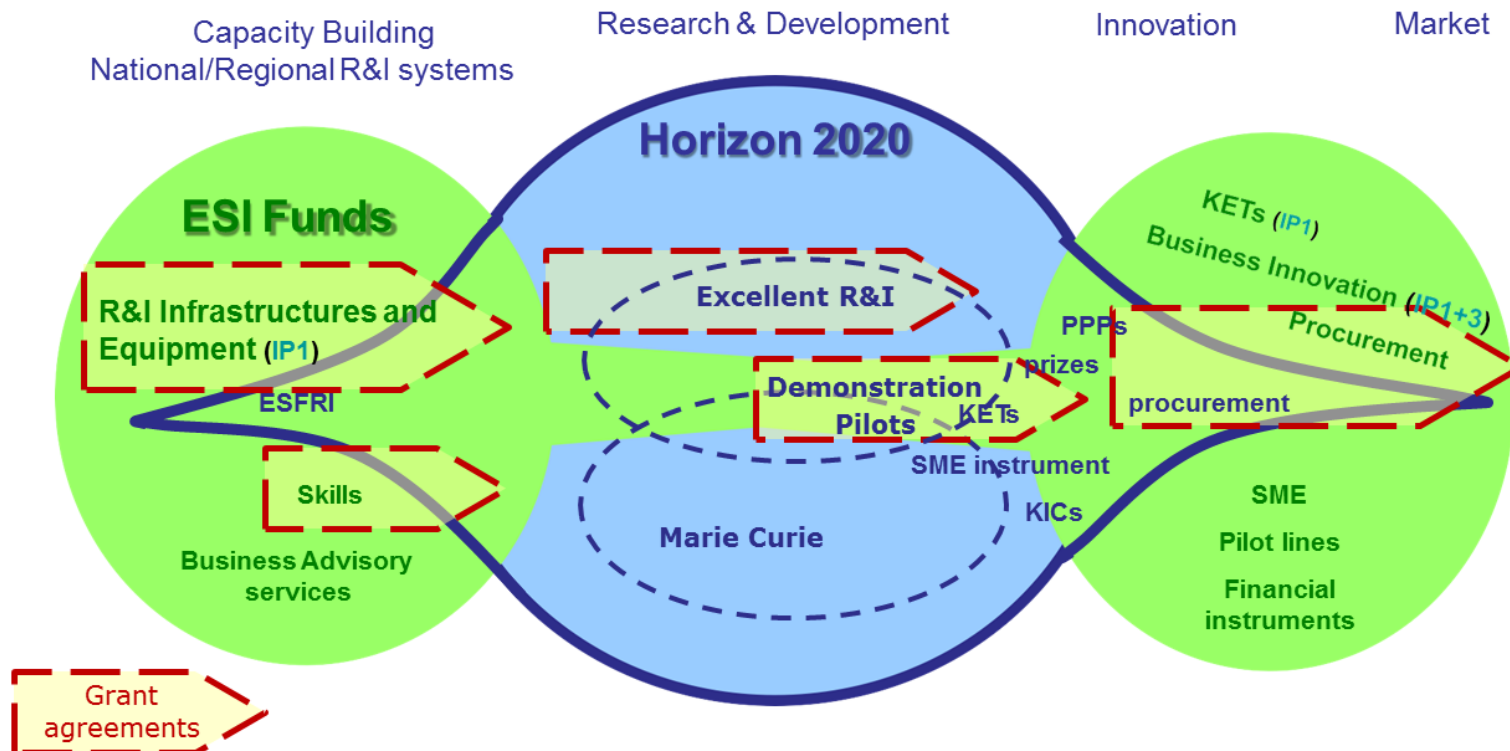
	Pilot Project	Lead regions	Democases
3	High performance production through 3D-printing	Flanders Norte South-Netherlands	<ul style="list-style-type: none"> • Multi-materials components by hybrid 3D-printing manufacturing. • Metal products 3D-Printing for automotive components, tools and moulds for large (>2500 mm), medium and small complex parts • Machine, tooling and complex parts • Additive subtractive high precision & high finish pilot production hubs. • Customised consumer goods in creative industries • Adding a dimension to 2D-printed textiles • 3D-printing in health-care • 3D-printed smart bike
4	Advanced manufacturing for energy - related applications in harsh environments	Basque Country Scotland	<ul style="list-style-type: none"> • Real condition testing of new materials for offshore • Cost-effective power transfer • Optimised corrosion management – including modelling, sensing and design

Five Pilot Projects

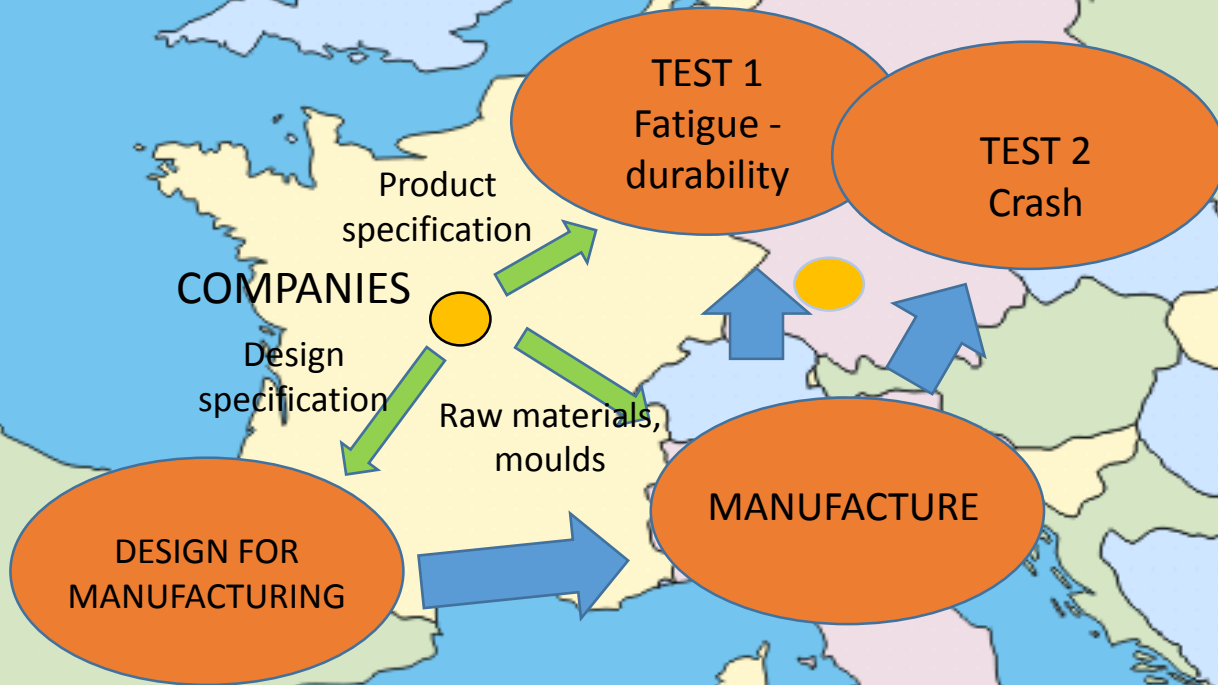
	Pilot Project	Lead regions	Democases
5	New nano - enabled products	Skåne Tampere	<ul style="list-style-type: none"> • Nano wires for ICT and energy applications • Manufacturing nano-enabled microsystems • Medtech • Printed nano-electronics: integrated energy harvesting/ cross-technology application platform • Industrial pilot production of nanomaterials establishing new value chains

It's all about joint demonstration

Scope for synergies with H202: aligning various RIS3 through inter-regional cooperation can develop critical mass combining forces and complementing capacities to tackle major industrial challenges.



3DP Case: 'Reducing weight in automotive, machinery and aerospace applications' via 3D-Printed hybrid components

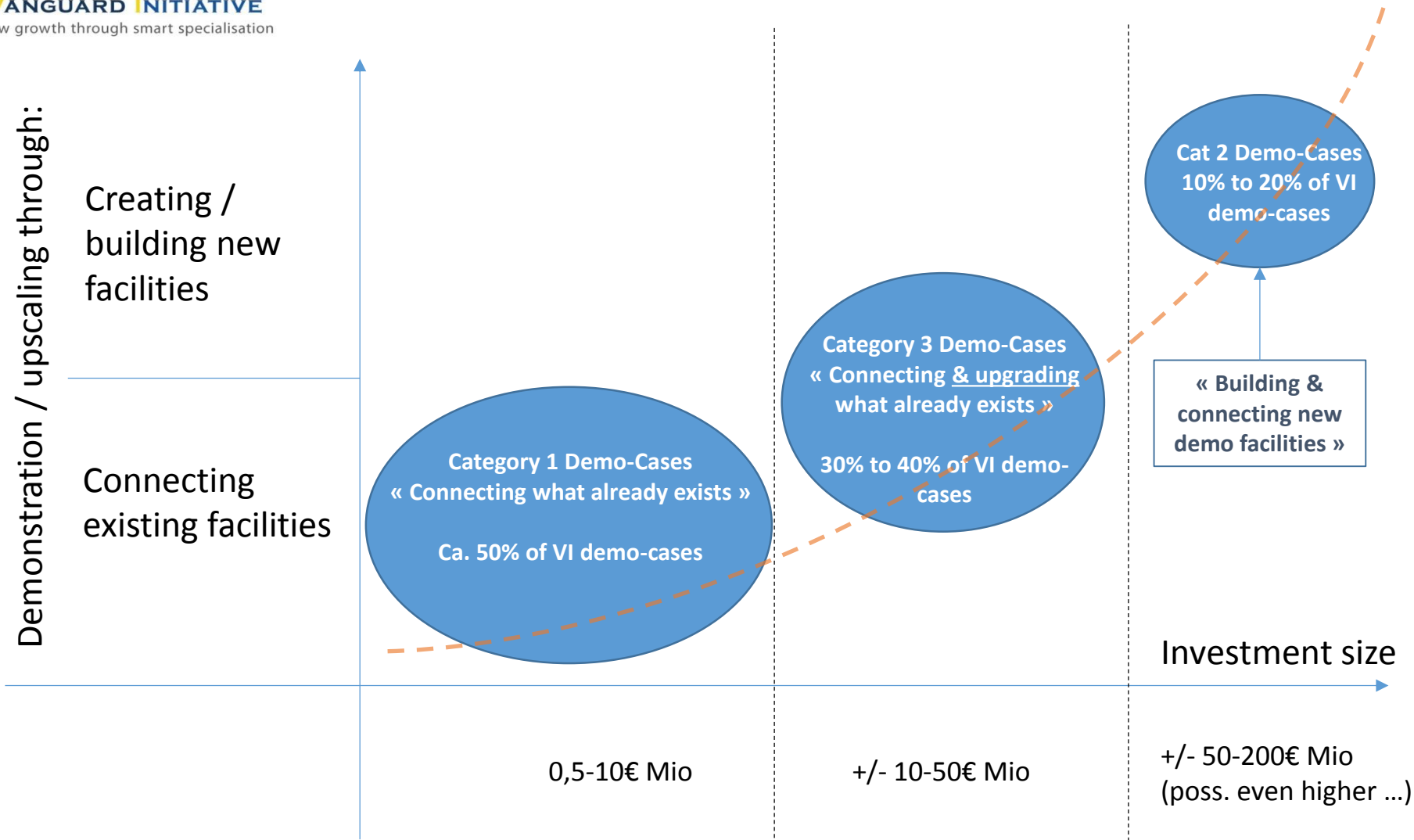




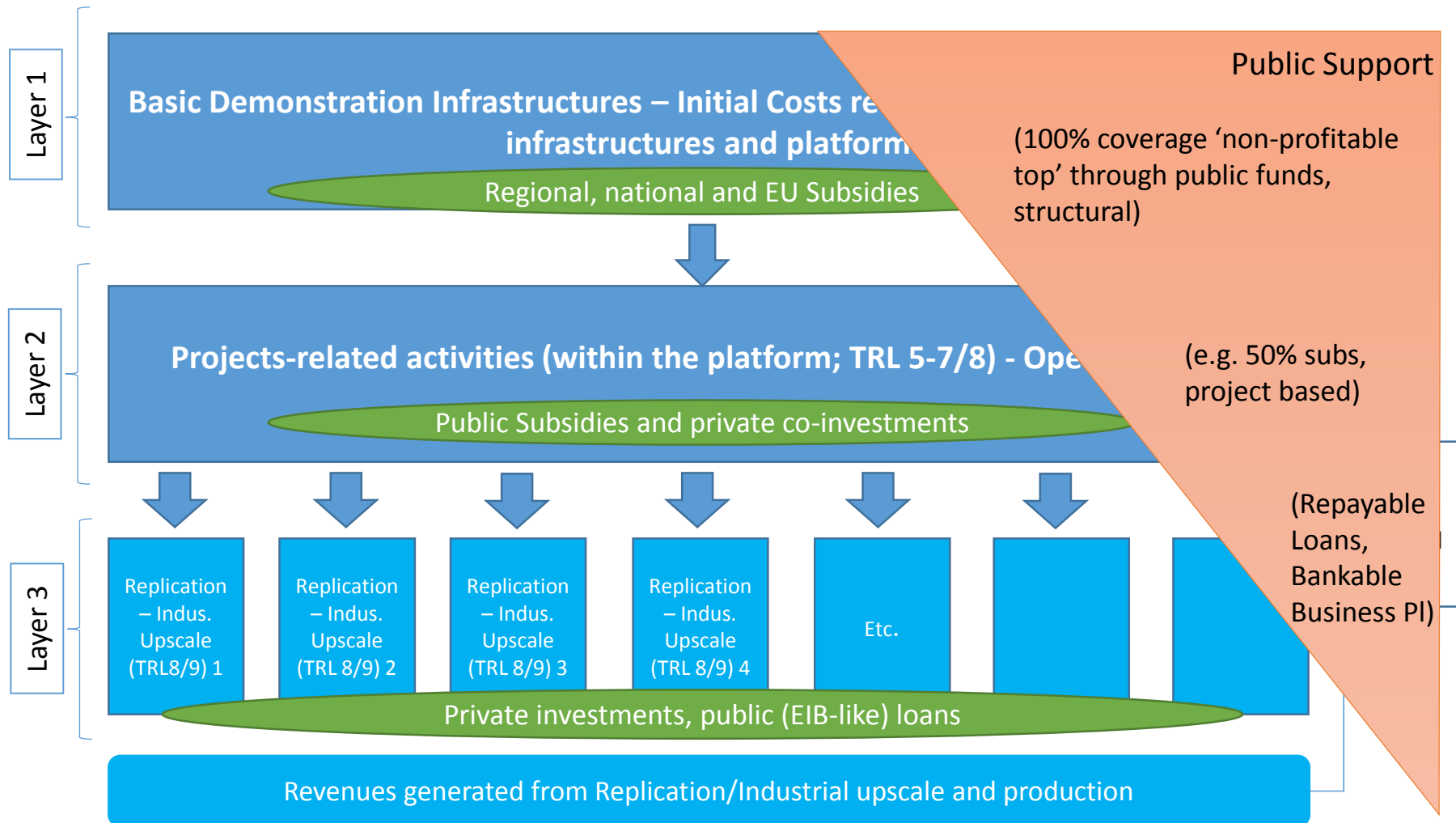
Bottleneck: Funding & Investment

- VI DemoCases common objectives
 - establish shared facilities for demonstration of new technologies
 - facilitate access to shared facilities
 - lower technology uncertainty, risks and costs
 - stimulate industrial replication & upscale (hence market uptake)
- each DemoCase =
 - combination of complementary demonstration facilities
 - group(s) of companies accessing infrastructure (TRL6-8)
 - industrial replication & upscale (if the above is successful) (TRL8-9)
- 3 types of DemoCases
 - connecting existing infrastructures
 - building brand new demonstration infrastructure
 - connect & upgrade existing infrastructure (hybrid format)

Different Investment Needs



General Financial Structure – three layers



Notes:

- Layer 1 (to some extent Layer 2 as well) contains « non-profitable top » (hence the subsidies)
- Layers 2 & 3 can't be functioning if « top » not financially secured (➔ no bankable plan !)
- Layers inter-dependent; smooth flow between them key !



Crossing Investment Needs and 3-Layers' Funding Model

	Category 1 "Connecting the existing"	Category 3 "Connecting & Upgrading"	Category 2 "Building brand new demo facilities"	Blending of different solutions
Layer 1 Initial costs – establishing the demo infrastructure	LOW	MEDIUM	HIGH	<u>No suitable instrument so far in cross-regional, pan-European setting.</u> <u>New solutions needed</u>
Layer 2 operating costs of the interregional demonstration platform	HIGH	HIGH	HIGH	<u>Some EU solutions in place (I4MS, ActPhast, INNOSUP, Interreg NEW BloBase NWE etc) but with uncertain access; no structural solution</u>
Layer 3 industrial replication	MEDIUM	MEDIUM	HIGH	New instruments (e.g. Energy Demo Pilot under InnovFin) available but more <u>convergence</u> needed



Funding & Investment Needs

- VI demo-cases face common problems in accessing centrally-managed EU funding to support their ambitions: Lack of relevant calls, Highly competitive, Complexity and uncertainty.

Work in progress / New avenues to explore:

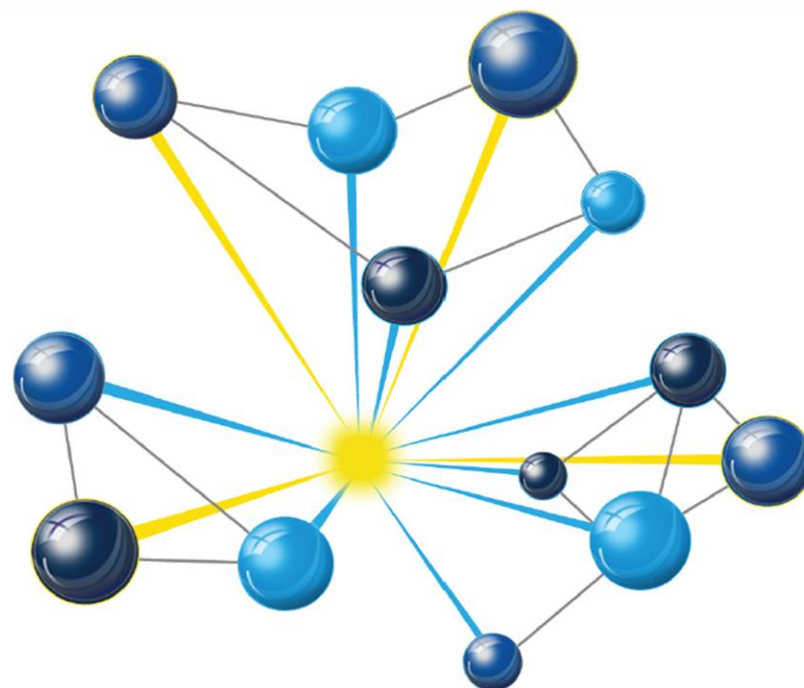
- Vanguard Initiative Fund for inter-regional demonstration.
- Voucher system for SME's engaged in Vanguard pilots
- Thematic extension of the InnovFin Energy Demo Projects to cover broader industrial modernisation activities.
- An Interreg Programme for the EU-28.

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Layer 1 Initial costs – establishing the demo infrastructure	LOW	<div>Public Investment Fund (multi-regional fund or centrally managed EU fund)</div> <div>Vouchers</div>		<u>No suitable instrument so far in cross-regional, pan-European setting.</u> <u>New solutions needed</u>
Layer 2 operating costs of the interregional demonstration platform				<u>Some EU solutions in place (I4MS, ActPhast, INNOSUP, Interreg NEW BloBase NWE etc) but with uncertain access; no structural solution</u>
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		<div>Expanded InnovFin, EFSI</div>		

Conclusions

- **VI is a clear example of the power of interregional cooperation and of the added value that can be achieved if regional innovation ecosystems are connected together.**
- **Developing co-investment projects requires a new design of projects, combining a regional development perspective with a collaborative one, combining the development of regional assets with openness and collaboration with European partners.**
- **New management rules must be developed to allow mixed funding of innovative projects from different sources (public, private, EU, national, regional)**
- **EC should support the implementation of the S3 strategies anchored in the regions but linked to EU priorities and deployed across Europe. This will require breaking down the traditional silos.**



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@VI_Brussels #Vanguardinitiative

www.s3vanguardinitiative.eu



Thank you for your attention!

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