

**VANGUARD INITIATIVE**

New growth through smart specialisation

# Instruments supporting Collaboration in Manufacturing

a perspective by the Vanguard Initiative

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Innovation & Manufacturing Brokerage Event – Santiago de Compostela 6/11/19

Wim De Kinderen, South Netherlands – TG VPM Chair

# Vanguard Initiative ?!

## a short intro.

**Regional  
Cooperation**

**S3 Smart  
Specialisation**

**Industrial Innovation**

**Political  
Commitment**

**Entrepreneurship**

■ **two presumptions :**

1. our **Smart Specialisation Strategy (S3)** is the result of a real **Entrepreneurial Discovery Process (EDP)**.
2. our companies have a **positive attitude towards 'Internationalisation'**, and it is even a priority for their business.

# VI Members

## Members (35)

Asturias, Auvergne-Rhône-Alpes, Baden-Württemberg, Basque Country, Cantabria, Catalonia, East Netherlands, East & West Slovenia, Emilia Romagna, Flanders, Galicia, Gävleborg, Lombardy, Lower Austria, Malopolska, Navarra, North Rhine-Westphalia, Norte, Pays de la Loire, Piemonte, Randstad, Region Dalarna, Region Skåne, Region Värmland, Region Örebro County, Saxony, Saxony Anhalt, Scotland, South Netherlands, South Tyrol, Tampere, Trento, Upper Austria, Wales, Wallonia

## Observers (2)

Aragon and PACA Sud

## Associate Members (6)

AFIL, Lombardy Green Cluster, Brainport Development, Skåne European office, SPRI, Scottish Enterprise

# VI : a network of many regions



Political  
commitment :  
access to  
regional funds;  
VI's USP

Triple helix  
involved and  
organized

Action focused  
network,  
influence by  
results

Content driven

- region
- industry based S3
- ambition
- political commitment (Milan Declaration)
- mobilizing and organizing stakeholders in the region
- active participation in the network structure
- active participation in core activities

# Vanguard Initiative's Pilot Projects a short intro.

# VI Pilot Projects

- **Interregional cooperation projects between companies and knowledge institutes in a specific technology field or application domain**
  - demonstration projects, no research (> TRL 5 – post prototyping)
  - industrial commitment (to participate/lead/co-invest)
  - European dimension : added value of joint demonstration
  - expected significant impact (economic, social and environmental returns)
- **European Networks of Demonstrators**
- **no “one off” projects / building of new industrial value chains through a pipeline of investment projects**

**in order to :**

- **accelerate market development**
- **global competitiveness**

# VI Pilot Projects and Democases

## 3D-printing

3D printed hybrid components

Additive Subtractive Platform High Precision & High Finish Production

3D printed automotive components for large, medium, and small complex parts

Machinery, tooling and complex shapes

3D-Printed Customized Components for Orthosis, Exoskeleton and Exoprosthesis

## ADMA for Energy-Related Applications in Harsh Environments

Corrosion on Offshore and Subsea Infrastructure

Sensing and Remote Monitoring Technologies

## Efficient and Sustainable Manufacturing

De- and Remanufacturing

Functional materials for polymer based products

Digital Transformation

Energy-flexible and resource-efficient factory operation - FEFEO

## Bioeconomy

Lignocellulose biorefinery

Bio-aromatics

Liquified BioMethane

## New Nano-enabled Products

Nanowires for ICT and energy applications

Nano enabled Micro System for Bio Analysis (NeMs4Bio)

Nano Enabled Printed Electronics

## Photonics

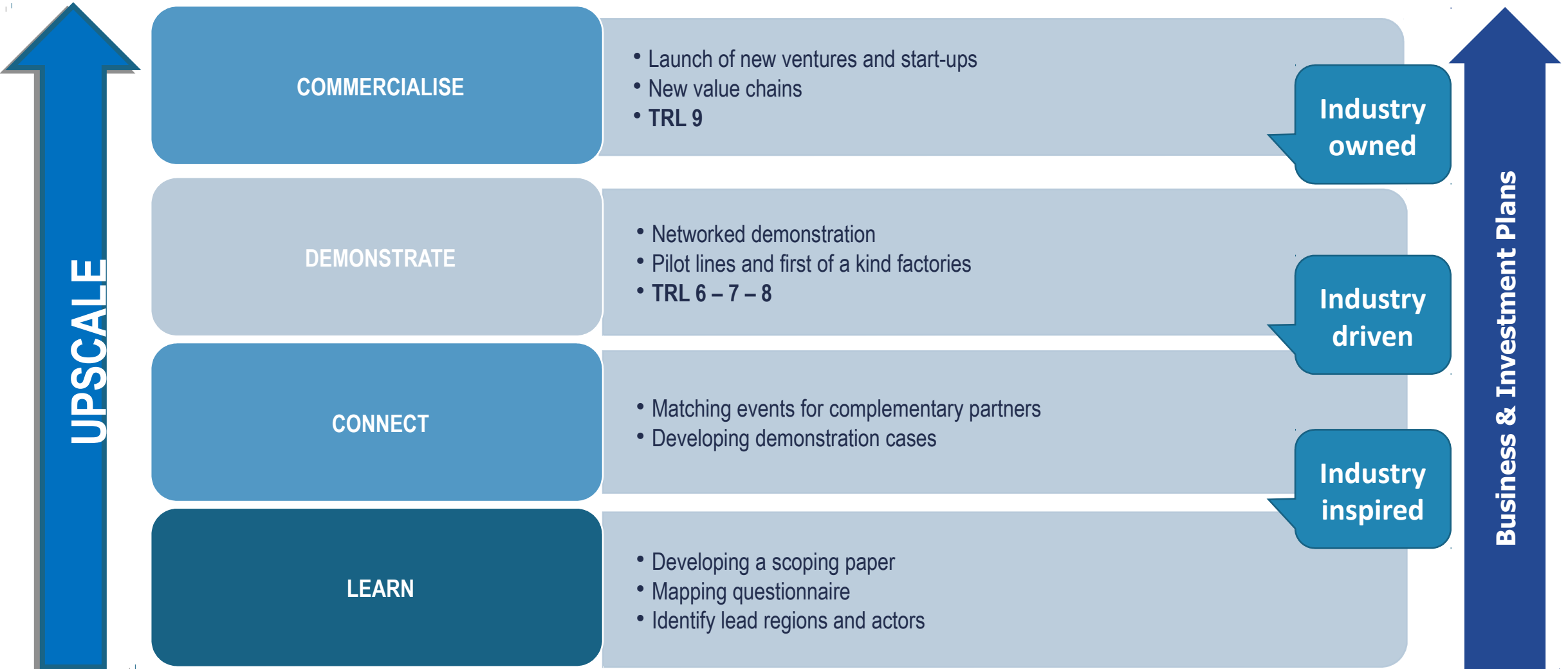
NEW



# VI democases

- **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 and upscale (hence market uptake)
- **each democase =**
  - combination of complementary demonstration facilities
  - group(s) of companies accessing infrastructure (TRL 6-8)
  - Industrial replication and upscale (if the above is successful) (TRL 8-9)
- **3 types of democases**
  - challenge driven or technology driven
  - connecting existing infrastructure
  - building brand new infrastructure
  - connect and upgrade existing infrastructure (hybrid format)

# VI Methodology



LEARN

CONNECT

DEMONSTRATE

COMMERCIALISE



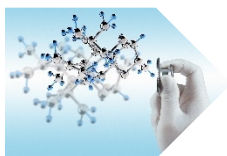
3D-printing



Bio-economy



ADMA-Energy

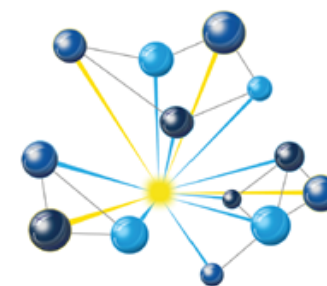


Nano-technology



Efficient and sustainable  
manufacturing

UPSCALE



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**VI Pilot Projects' funding and investment needs**  
**will the new MFF instruments respond to them?**

**(and why should they?)**

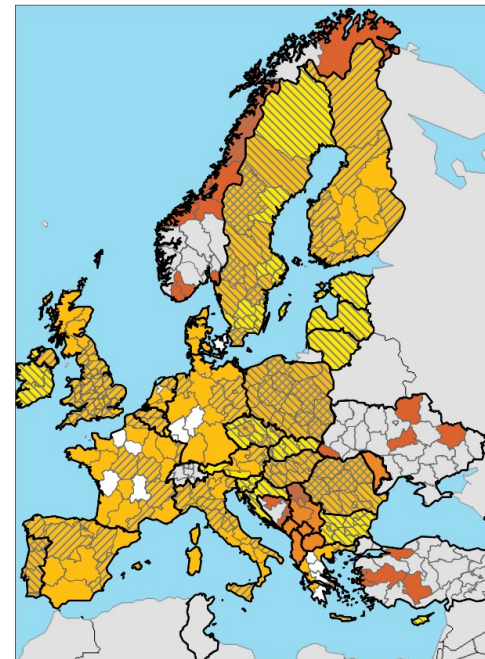
**(and we are ready to help)**

## VI inspires

happy with the EU copy paste



- 3 Thematic S3 Platforms (Industry Modernisation, Agrofood, Energy)
- 30+ S3 Partnerships
  - high tech, low tech, non tech
- +180 EU regions involved
- support by DGs REGIO, JRC, GROW, RTD, Connect, Agri, ENER, MARE,...



# VI lobbies for the collective work



**The Vanguard Initiative<sup>1</sup> welcomes the MFF package as an ambitious renewed agenda for EU industrial and innovation policies**  
*Position paper*

*The Vanguard Initiative welcomes the MFF package as an ambitious renewed agenda for smart specialisation principles. It offers clear and concrete modalities for supporting value chains, on the basis of smart*



**Supporting Key EC Proposals for New Instruments  
Offering Real Possibilities of EU Funds Synergies**

On 29 May 2018, the European Commission adopted the provisions for the European territorial cooperation a **new INTERREG Component 5 on Innovation** worth €1 billion, representing 11,5% of the total interregional innovation investments that would take on board the work already in



*Working Document*

**Interregional Innovation Investments  
European Territorial Cooperation – Component 5**

this is a good proposal to contribute substantially to the strengthening of the competitiveness of the EU and all of its regions

about?

European region is strong in one or more particular areas, but hardly any of them is strong enough to face and lead worldwide competition. Collaboration across regions is therefore essential. Moreover the needed exercise in this context is to bring innovation faster to the market, through public investments that form the basis of later follow-up public-private and private initiatives. When working together across borders, these investments can be better coordinated and aligned.



Dear Members of the SME Intergroup,

The SME Intergroup cordially invites you to a breakfast discussion hosted by



on the topic of

**Supporting interregional S3 cooperation  
along industrial value chains**

*How component 5 in Interreg strengthens interregional cooperation*

Tuesday, 6 November 2018  
08:00 – 09:00 am, MEP Salon  
European Parliament, Brussels

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# CATAPULT

Offshore Renewable Energy



Fraunhofer IWES

Fraunhofer Institute for Wind Energy and Energy System Technology

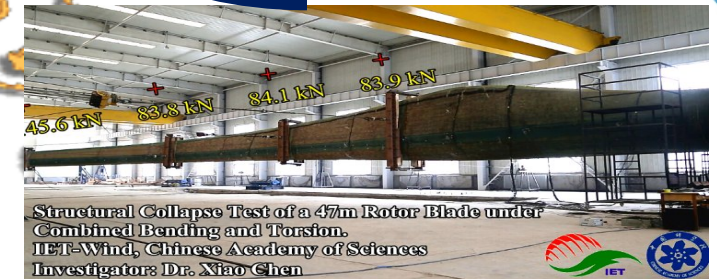
ABOUT US TEST CENTERS AND MEASUREMENTS

## Validation of wind energy systems

The institute offers turbine manufacturers, suppliers, wind farm operators and power authorities industry



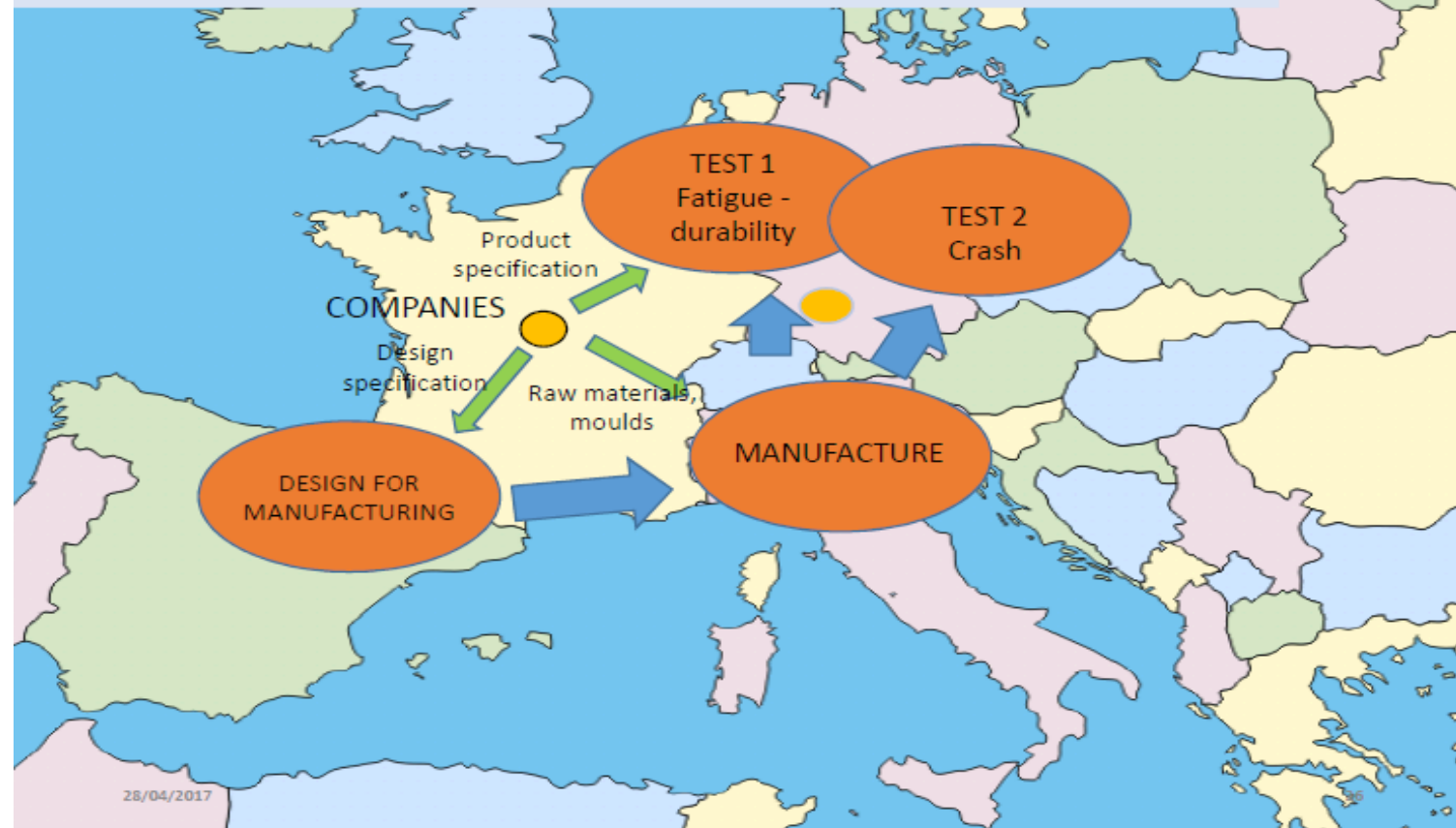
CWD Center for Wind Power Drive RWTH AACHEN UNIVERSITY



Structural Collapse Test of a 47m Rotor Blade under Combined Bending and Torsion.  
IET-Wind, Chinese Academy of Sciences  
Investigator: Dr. Xiao Chen

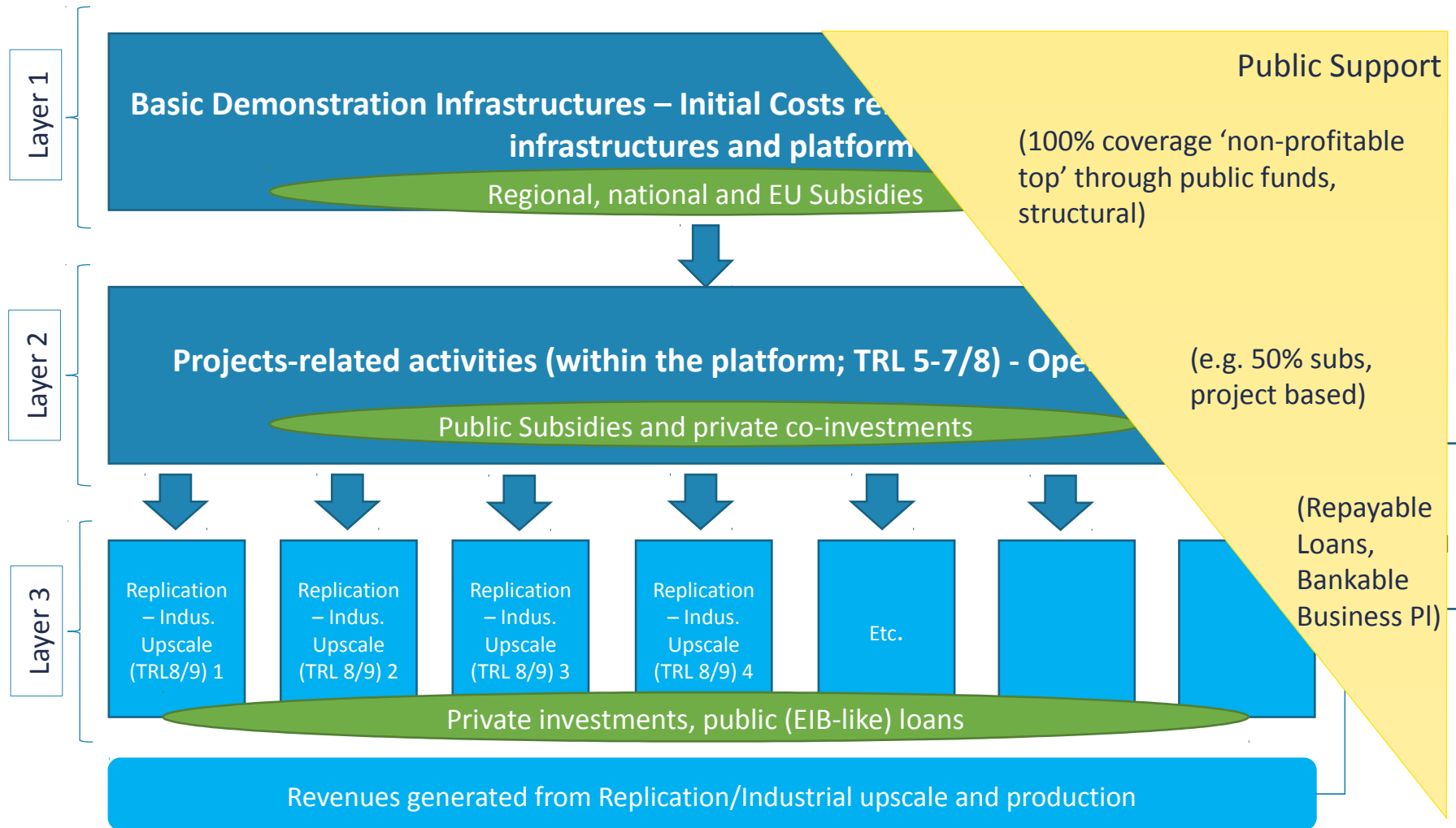


### 3DP Case: 'Reducing weight in automotive, machinery and aerospace applications' via 3D-Printed hybrid components





# 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 !

**advocating a strong  
budget and a  
continuous structural  
support system for a  
pipeline of investments**  
no more “lucky one shots”

#### **EU MFF**

- DIH potential opening to layer 1 costs
- will Pilot Lines and Open Testbeds follow?
- Technology (and Innovation?) Infrastructures
  - “distributed ESFRI for Innovation”
- Innovation Ecosystems
- Interregional Innovation Investments
- InvestEU
- aligned calls / collaboration with Partnerships

#### **Vanguard Initiative regions ready to contribute**

- principle agreement for a centrally managed Joint Demonstration Fund
- VI is a mature, organised partner for collaboration

Questions ?



## THANK YOU

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