Vanguard Initiative
A good practice to boost innovation in Macro Regions

JRC – Macro-Regional Innovation Week
Knowledge and Technology Transfer in Macro-Regions
Focus on S&T Knowledge for Policy Support and Collaboration with JRC

Ispra, 24-26 Jan 2018
What is the Vanguard Initiative?

Industrial Innovation initiative

Network (ASBL) of 33 EU regions striving for stronger competitiveness, innovation and internationalisation of European industry

Inspired by the Industrial Renaissance Communication (2014)
How Vanguard Works

Multilevel Funding Synergies

Pipeline of Investment Projects

Political Commitment

S3 Platform on Industrial Modernisation

TRL > 5

Innovation ecosystems

Bottom-up Industry involvement, Cluster facilitation, Role of RTOs

Market uptake

PPP

TTT

EU institutions

Operational Level

Political Level

Regional representatives in Brussels

Pilots

Project

Project

Project
Vanguard Initiative methodology

**LEARN**
- Developing a scoping paper
- Mapping questionnaire
- Identify lead regions and actors
- Collecting information of demonstration facilities

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**DEMONSTRATE**
- Networked demonstrators
- Joint demonstration projects
- Pilot lines and first of a kind factories
- TRL 6 – 7 – 8

**COMMERCIALISE or INDUSTRIAL UPTAKE**
- Launch of new ventures and start-ups
- New value chains
- TRL 9

Mainstreaming in Industrial Modernisation Platforms

Business & Investment Plans

Industry Owned
- Industry Owned

Industry Driven
- Industry Driven

Industry Driven
- Industry Driven

Industry Inspired
- Industry Inspired
Implementing S3: Vanguard methodology tested in 5 Thematic Pilots

Advanced Manufacturing for Energy applications

3D Printing

Efficient & Sustainable Manufacturing

Bio economy

Nano Enabled Products

Challenge driven or Technology Driven pilots
Different Investment Needs emerged

Demonstration / upscaling through:

- Connecting and upgrading existing facilities
- Creating / building new inno facilities

Category 1 Demo-Cases
« Connecting what already exists »
Ca. 50% of VI demo-cases

0,5-10€ Mio

Category 2 Demo-Cases
10% to 20% of VI demo-cases

Category 3 Demo-Cases
« Connecting & upgrading what already exists »
30% to 40% of VI demo-cases

0,5-10€ Mio

+/ - 10-50€ Mio

+/ - 50-200€ Mio (poss. even higher ...)

Investment size
Basic Demonstration Infrastructures – Initial Costs related to the setting up of the infrastructures and platforms

Projects-related activities (within the platform; TRL 5-7/8)

Operating costs

Public subsidies and private co-investments

Replication
Industrial Upscale (TRL 8/9)

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Etc. 2

Etc. 3

Etc. 4

Etc. 5

Etc. 6

Etc. 7

Private investments, public (EFSI /EIB-like) loans

Revenues generated from Replication/Industrial upscale and production

General Financial Structure – three layers model

Layer 1 (to some extent Layer 2 as well) contains « non-profitable top » (hence needs subsidies)

Layers 2 & 3 cannot work if « layer 1 » is not financially secured (no bankable plan !)

Layers inter-dependent; smooth flow between them is key !
Priority should be put on supporting pilot plants and industrial demonstrators

“Pilot plants should act as the framework where new value chains are created (cf. the emerging Vanguard model).”

“industry commons are about demand led initiatives and facilities which can be combined with a stronger investment-oriented agenda.”

Quotes: Prof. Slavo Radosevic UCL, Special Advisor to DG Regio Commissioner
Smart Regions Conference in Brussels held on June 1-2 2016

www.s3vanguardinitiative.eu
Vanguard mentioned as best practice in EU official documents and events

- Council Competitiveness and Growth Working party (Sept 2017)
- EC Communication on future industrial policy COM (2017) 376 final (July 2017)
- Press release announcing interregional innovation partnerships supported by EU funds and inspired by Vanguard initiative (July 2017)
- President Juncker, Cohesion Forum (May 2017)
- Harnessing Globalization reflection paper
  Part of the debate opened by the White Paper on the future of Europe (May 2017)

WIRE conference 2016
Lessons learned for Macro-Regions

- Vanguard represents an exchange platform of innovation best practices, knowledge tools and methods between innovation practitioners and policy makers.

- Knowledge and Technology Transfer in Macro-Regions can be inspired by Vanguard methodology.

- Vanguard identified the key role of research and innovation infrastructure to speed up the uptake of innovative technologies.

  - Vanguard represents an example of collaboration with JRC (S3 Thematic Platforms and S&T Knowledge for Policy Support).
Vanguard recommendations for future EU policies
Cohesion, industrial & innovation policy

Regional Innovation ecosystems as pillars of Industrial development (framework conditions)

Reinforce Human Capital, Skills and Cluster policy for Industrial development

Focus on Industrial uptake of Enabling Technologies, invest in TTT, pilot plants & demonstrators

Use the “challenge/mission approach” to combine industrial development and sustainability

www.s3vanguardinitiative.eu
Support Transnational Technology Transfer & valorisation of Research Results in Macro-Regions

Conclusions:

1) Importance of Regional and Local Innovation Ecosystems

2) Smart Specialisation (coordination principle for interregional cooperation)

3) TTT to reinforce EU globally competitive value chains

4) Importance of Public-Private Partnerships in the industry transformation

5) Need to open, connect and network Innovation Infrastructure

6) Need to support pilot plants and demonstrators

7) Important role that JRC can play (IPTS but also other JRC departments)