

Spreading excellence and widening participation in Horizon 2020 – Synergies with the Structural and Investment Funds 2014-20

Dimitri CORPAKIS

Head of Unit – B5

Directorate for *Innovation Union and the European Research Area*

DG Research and Innovation

European Commission

dimitri.corpakis@ec.europa.eu

How European regions invest in R&D

- ❑ Out of a total of 266 regions in the EU, only 35 had in 2009 an R&D intensity (R&D investment as a % of their GDP) above 3%
- ❑ Taken together these 35 regions accounted for 45% of all R&D expenditure in the EU
- ❑ 10 of the most R&D intensive regions in 2009 were located in the Nordic member States, totalising 9,3% of total R&D expenditure in the EU (source EUROSTAT regional yearbook 2012)

Investing in R&D and Innovation helps exiting the crisis faster

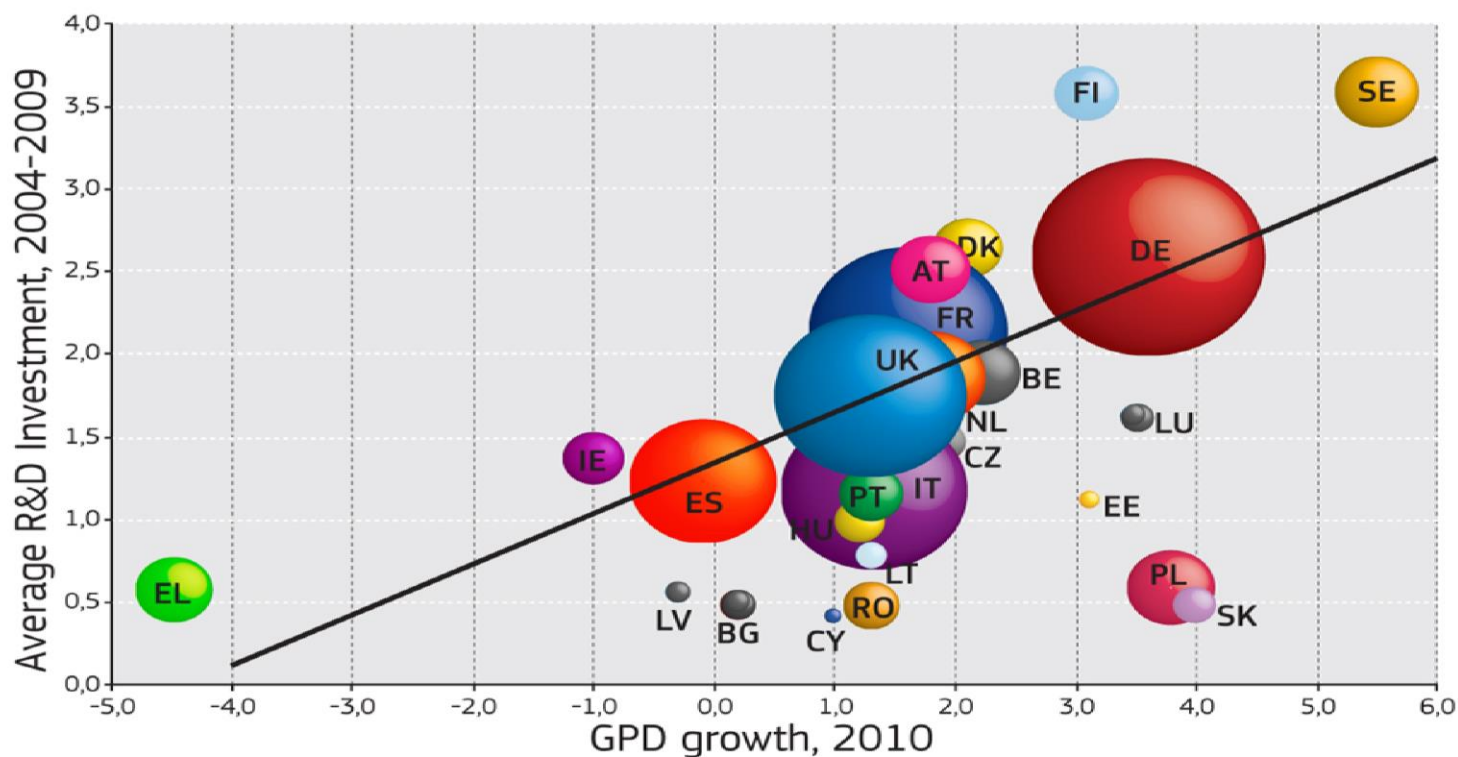
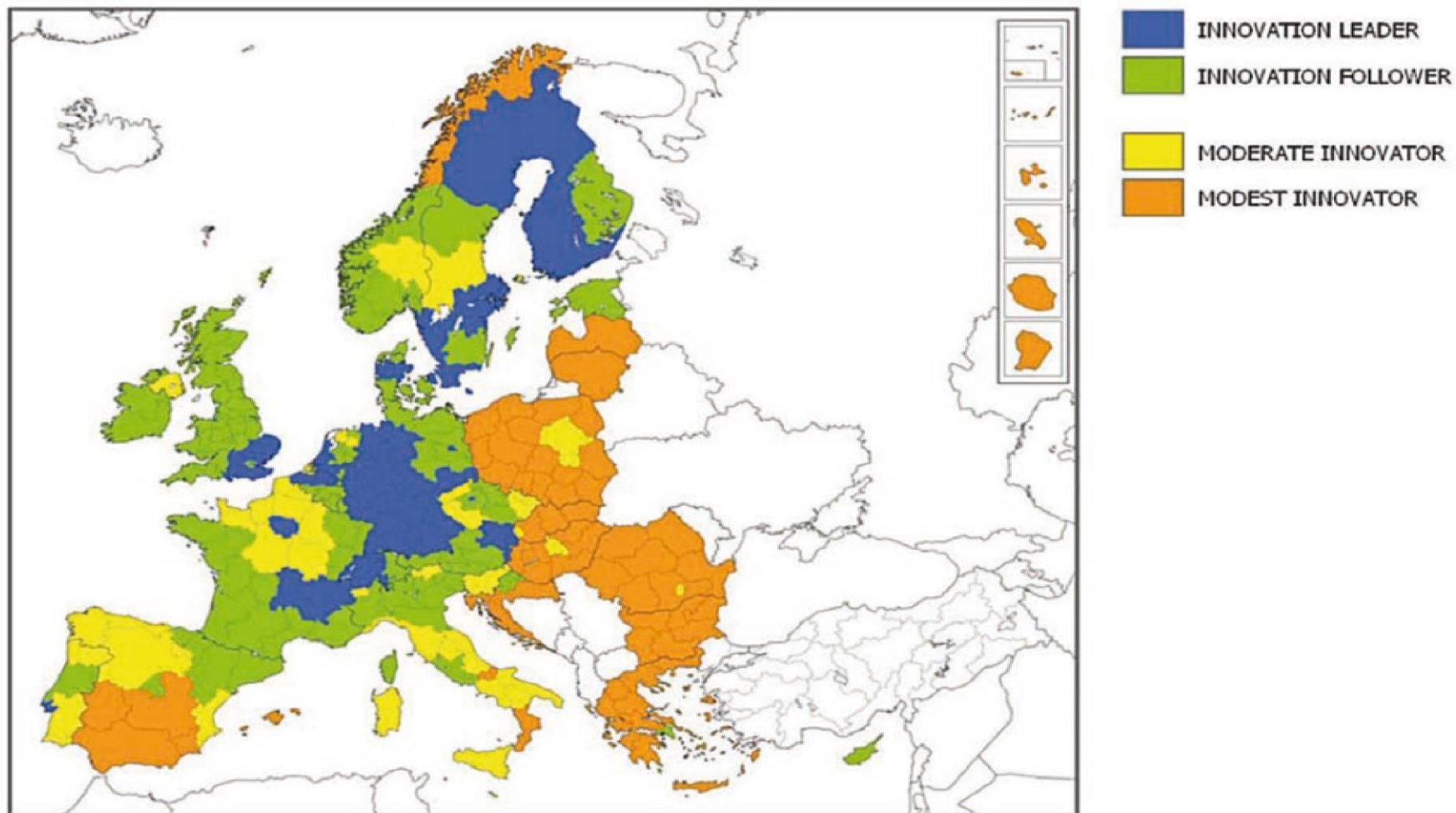


Figure 23: Regional performance groups



The EU Member States Cyprus, Estonia, Latvia, Lithuania, Luxembourg and Malta are not included in the RIS analysis. Group membership shown is that of the IUS. Map created with Region Map Generator.

Turning the European Union into an Innovation Union

- Innovation Union flagship initiative aims at creating the best conditions for Europe's researchers and entrepreneurs to innovate
- A broader approach to innovation: meshing research and technological development with
 - *Product innovation, service innovation, innovation in design etc., including process and organisational innovation*
 - *Social innovation, public sector innovation, eco-innovation etc.*
 - *Exploration of new business models > Both technological & non-technological > Both incremental & disruptive innovation*
- Improving framework conditions for innovation to flourish
- **34 commitments**: *Speeding up standardisation, Making better use of and 'modernising' public procurement procedures, Creating a real internal market for venture capital, Agreeing on a unified European patent, Completing the **European Research Area (ERA)***

The need for Synergies with the ESIF

EU R&D Policy – future Horizon 2020	EU Cohesion Policy
Differences	
non-territorial approach , no pre-defined geographical distribution of funding	place-based approach ; defined financial envelope for different eligible categories of regions
Based mainly on individual R&D Projects (to a certain extent also co-funding activities of programmes are supported) tackling the whole cycle of innovation from pre-competitive, leading edge basic research to demonstration projects, pilot activities, market replication as well as innovative public procurement and the award of prizes for the achievement of pre-specified targets.	Based on multiannual Programmes aiming at increased competitiveness through close to the market competitive R&D and innovation efforts
In general awarded directly to final beneficiaries like firms, public and private R&D centers, universities or research funding organisations (for ERA-net activities, Joint Programming etc.).	Awarded through shared management to national and regional public intermediaries
Mostly competitive calls addressed to international groupings (exception ERC and MC that also address individuals) through peer-review based on excellence criteria	Mostly non-competitive attribution addressed to regional players based on strategic planning negotiation (however increasingly competitive processes at national or regional level)
Complementarities	
Horizon 2020 will focus on tackling major societal challenges, maximising the competitiveness impact of research and innovation and raising and spreading levels of excellence in the research base	Cohesion policy will focus on galvanising smart specialisation that will act as a capacity building instrument, based on learning mechanisms and the creation of critical skills in regions and Member States. One of the expected results will be better ability to participate in Horizon 2020.

Keys to Synergies

- ✓ **Smart Specialisation
ex-ante conditionality**
- ✓ **Thematic Concentration**

The Synergies and Smart Specialisation Matrix

	STRUCTURAL FUNDS THEMATIC OBJECTIVE NO 1 ON STRENGTHENING RESEARCH, TECHNOLOGICAL DEVELOPMENT AND INNOVATION	
HORIZON 2020 TOP DOWN RESEARCH AND INNOVATION PRIORITIES INFLUENCING NATIONAL AND REGIONAL PRIORITIES	THEMATIC CONCENTRATION FOR MOST ADVANCED AND TRANSITION REGIONS FOR ALLOCATING 80% OF THE ERDF MONEY FOR 4 OBJECTIVES: R&I, ICT, SME COMPETITIVENESS AND LOW CARBON ECONOMY	THEMATIC CONCENTRATION FOR LESS ADVANCED REGIONS FOR ALLOCATING 50% OF THE ERDF MONEY FOR 4 OBJECTIVES: R&I, ICT, SME COMPETITIVENESS AND LOW CARBON ECONOMY
EXCELLENCE	SMART SPECIALISATION EX-ANTE CONDITIONALITY <i>based on a SWOT analysis to concentrate resources on a limited set of research and innovation priorities in compliance with the NRP; measures to stimulate private RTD investment; a monitoring and review system; a framework outlining available budgetary resources for research and innovation; a multi-annual plan for budgeting and prioritisation of investments linked to EU research infrastructure priorities (European Strategy Forum on Research Infrastructures - ESFRI)</i>	
INDUSTRIAL LEADERSHIP		
SOCIETAL CHALLENGES		

Funding synergies are also possible

- Specific articles foreseen in the Horizon 2020 Rules of Participation as well in the Common Provisions Regulation of ESIF
- However beware of not funding the same Cost Item twice (> **Rule of Thumb:** **distinct work-packages for distinct funding** > **but increased impact on the ground by the planned combined action**)

Horizon 2020 marks a departure in terms of support to regional innovation

- ❑ Focus is on institutions, companies and people, not on regions

However:

- ❑ Novelties such as new financial engineering instruments, the new SME instrument and the Fast Track to innovation pilot may have a strong and lasting effect at regional level

The promise of Horizon 2020

- Initial Commission proposal for a 80 billion euro research and innovation funding programme (2014-2020); now just over 70 billion euro;
- A core part of Europe 2020, Innovation Union & European Research Area:
 - **Responding to the economic crisis** to invest in future jobs and growth > **Addressing people's concerns** about their livelihoods, safety and environment > **Strengthening the EU's global position** in research, innovation and technology

Novelties

- A single programme bringing together three separate programmes/initiatives
- Coupling research to innovation – from research to retail, all forms of innovation
- Focus on societal challenges facing EU society, e.g. health, clean energy and transport
- Continuation of investment in frontier research
- Simplified access, for all companies, universities, institutes in all EU countries and beyond.

Three priorities



Horizon 2020 and partnering

Public private partnerships:

- Through Joint Technology Initiatives or other formal structures (Art. 187)
- Through contractual agreements, which provide inputs for work programmes
- Only when criteria met, e.g. clear commitments from private partners

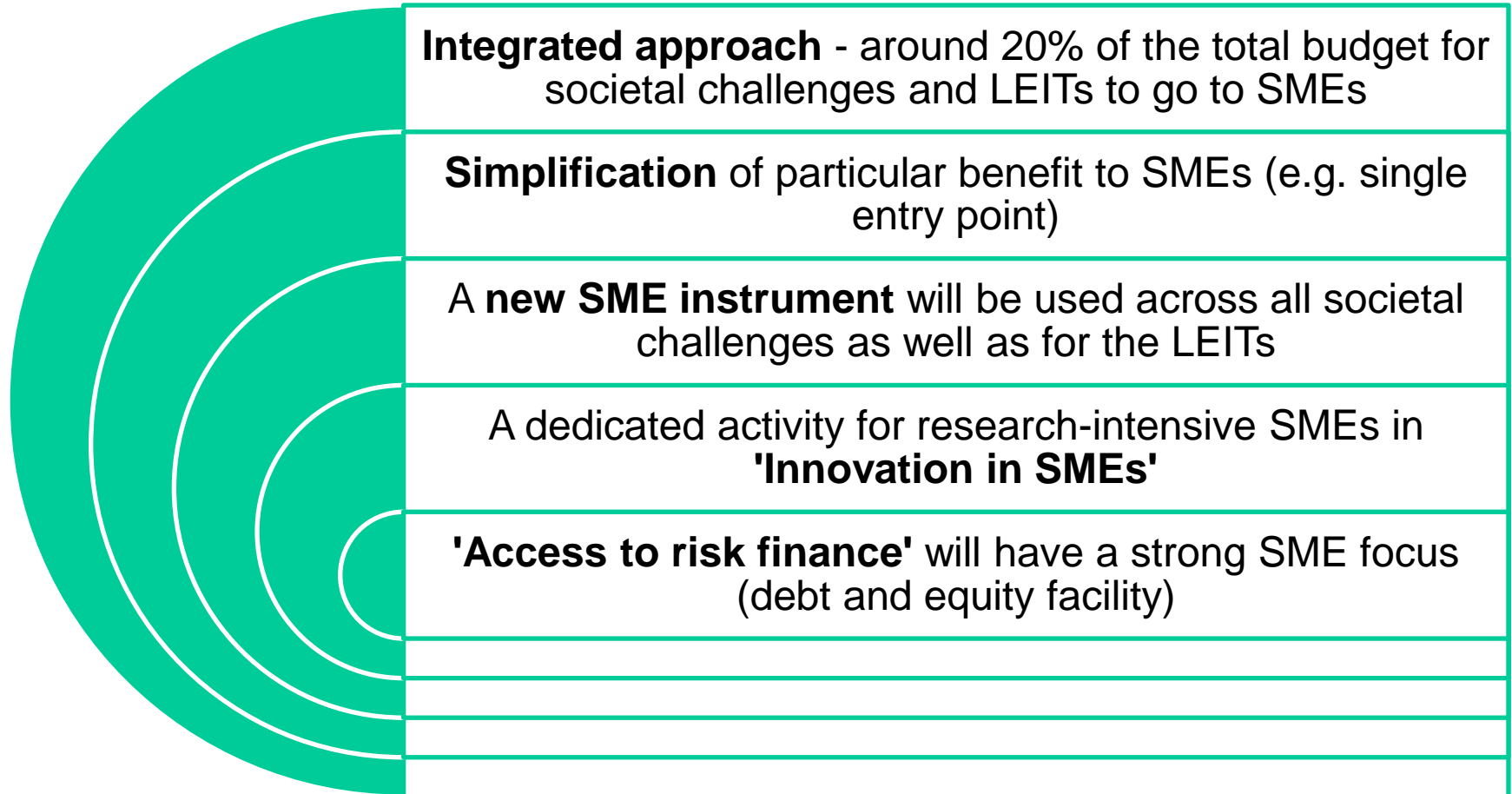
Public public partnerships:

- Through « ERA-Nets » for topping up individual calls/actions (replacing current ERA-Net, ERA-Net Plus, Inco-Net, Inno-net)
- Through participation in joint programmes between Member States (Art. 185)
- Supporting agendas of Joint Programming Initiatives when in line with Horizon 2020
- Only when criteria met, e.g. financial commitments of participating countries

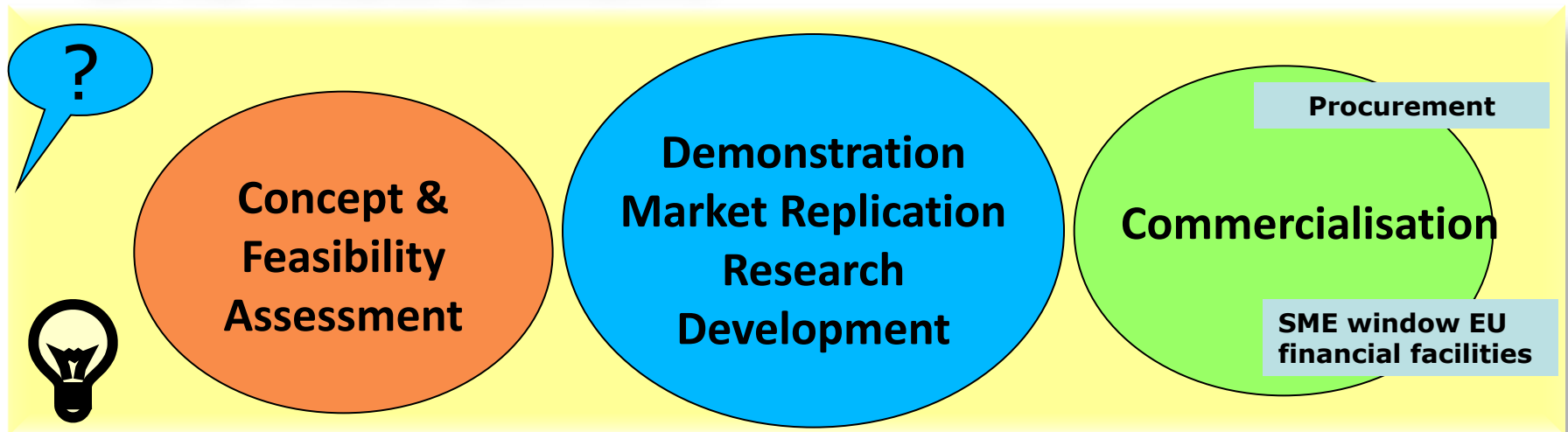
European Innovation Partnerships:

- Not funding instruments, but for coordination with broader policies and programmes

Strong participation by SMEs



SME instrument



IDEA

business coaching throughout the project

MARKET

Fast Track to Innovation Pilot

- *A Fast Track to Innovation pilot is to be launched in 2015, with the following features:*
 - ❑ Aimed at 'innovation actions' with a maximum of 5 partners and a maximum of EUR 3 million per project
 - ❑ Bottom-up driven logic
 - ❑ Continuously open call with three cut-off dates per year
 - ❑ Time to grant not exceeding 6 months
 - ❑ Projects will not require Programme Committee approval
 - ❑ Covering all fields across LEITs and Societal Challenges
- *The Fast Track to innovation will be part of the interim evaluation of Horizon 2020. The further implementation of the Fast Track to innovation will be determined on the basis of the evaluation results.*

Following an intensive political debate on widening participation in the Framework Programme, a new set of activities was introduced in Horizon 2020, first under Challenge 6 (inclusive, innovative and reflexive societies). It was moved later on to become a separate Part of the FP

Background

- Currently national / regional disparities in research excellence and innovation performance, hamper competitiveness, business growth and employment creation. Simultaneously, a number of countries are experiencing low participation in the EU FP; Wide political debate during Horizon 2020 negotiation process.
- **Disparities due to structural issues, such as:** insufficient national RTDI investment, insufficient capacities and reduced access to international networks.
- **Problems need to be primarily addressed at national and regional level** and through other instruments, **such as Cohesion Policy funding.**
- **However Horizon 2020 will also take relevant action under the separate specific objective "Spreading Excellence and Widening Participation" (WIDESPREAD)**

Spreading excellence and widening participation through Horizon 2020

- New **Part III-a** in Horizon 2020 (budget circa EUR 800M)
- Main actions on **Teaming** (Centres of Excellence), **Twinning** (institutional networking), **ERA Chairs** (bringing excellence to institutions); also **Policy Support Facility** and a special action from **COST on Widening actions**

Teaming for excellence

- ❑ **Teaming of excellent research institutions and low performing RDI regions:** Teaming aims at the creation of new (or significant upgrade of existing) **centres of excellence in low performing RDI Member States and regions.**
- ❑ It will focus on the preparatory phase for setting up or upgrading and modernising such an institution facilitated by a teaming process with a leading counterpart in Europe, including supporting the development of a business plan.
- ❑ Proposals have to fit with the overall Smart Specialisation Strategy of the host
- ❑ A commitment of the recipient region or Member State (e.g. support via Cohesion Policy Funds) is expected. Subject to the quality of the business plan, the Commission may provide further seed financial support for the first steps of implementation of the centre.
- ❑ Building links with innovative clusters and recognising excellence in low performing RDI Member States and regions, including through peer reviews and awarding labels of excellence to those institutions that meet international standards, will be considered.

Twinning

- ❑ **Twinning of research institutions:** Twinning aims at significantly strengthening a defined field of research in an emerging institution through links with at least two internationally-leading institutions in a defined field. A comprehensive set of measures underpinning this linkage would be supported (e.g. staff exchanges, expert visits, short-term on-site or virtual trainings, workshops; conference attendance; organisation of joint summer school type activities; dissemination and outreach activities).
- ❑ Twinning proposals are also encouraged to explain their links with the Smart Specialisation Strategy of the host location of the applicant institution

ERA Chairs

- Establishing 'ERA Chairs' to attract outstanding academics to institutions with a clear potential for research excellence, in order to help these institutions fully unlock this potential and hereby create a level playing field for research and innovation in the European Research Area.
 - *This will include institutional support for creating a competitive research environment and the framework conditions necessary for attracting, retaining and developing top research talent within these institutions.*

Establishing a Policy Support Facility

- **Policy Support Facility (PSF)** : This will aim to improve the design, implementation and evaluation of **national/regional research and innovation policies**. It will offer **expert advice to public authorities at national or regional level** on a voluntary basis, covering the needs to access the relevant body of knowledge, to benefit from the insight of international experts, to use state of the art methodologies and tools, to receive tailor-made advice.

Stimulating cross-border science networks

- COST, a bottom-up, open networking mechanism, encourages international exchanges and co-operation of researchers within Europe and beyond. Joint activities such as conferences, short-term scientific exchanges and publications are supported.
- Within Horizon 2020, COST should further bring together "pockets of excellence" and play a mobilising role not only for the less participating countries but also for the enlargement countries and the European neighbourhood policy countries.
- COST could make a significant contribution to the development of a 'staircase to excellence' for research organisations across Europe.

Measures to improve information, communication and support

- Improving information networks on European research and innovation would greatly facilitate further participation in the Framework Programme.
- Improving information on the Framework Programme needs, will aim to significantly improve and monitor NCP performance in qualitative and quantitative terms, including training efforts and enhanced access to electronic information.

Overview of measures under **WIDESPREAD in H2020**

Actions subject to calls for proposals:

- Teaming (Call: WIDESPREAD 1-2014)
- Twinning (Call: TWINN-2015)
- Transnational cooperation of NCPs (Call: WIDESPREAD 3-2014)
- ERA Chairs (Call: WIDESPREAD 2-2014)

Other actions:

- Policy Support Facility
- COST (Widening Part)

Total Budget for WIDESPREAD in H2020 ~ € 800 million

WIDESPREAD 1-2014: Teaming

Scope: Aims at the creation of new (or significant upgrade of existing) Centres of Excellence located in Member States/regions (*that are identified as low performers in terms of research and innovation*) through **a teaming process** with a leading research intensive institution in Europe (or a consortium of research intensive institutions).

2 parties in each Teaming project:

(1)an institution of research and innovation excellence (public or private) or a consortium of such institutions;

(2)and the participant organisation from a low performing Member State (typically a research agency at national or regional level, or a regional authority).

WIDESPREAD 1-2014:Teaming (2)

Project funding in 2 distinct stages:

Stage 1: proposals need to demonstrate the long-term science and innovation strategy of the future Centre based on a SWOT analysis. **A strong and demonstrable link of the teaming activity with the relevant national or regional Smart Specialisation Strategy is necessary.** The project deliverable of this stage 1 will be a **Business Plan** for the Centre. A clear commitment of the region/state to roll-out the Centre (e.g. via ESIF co-financing) should be part of this. **Successful proposals, entering Stage 1, will sign a Framework Partnership Agreement with the Commission.**

Stage 2: All Business Plans produced by all funded projects from Stage 1 will undergo an in-depth evaluation by an international high-level expert panel): as a result a very limited number of them will then receive substantial financial support by Horizon 2020, to set up and operate the Centre (in Stage 2) However no infrastructure or large equipment costs will be funded from H2020.



WIDESPREAD 1-2014:Teaming (3)

Call 2014 ("Stage 1"): Successful proposals will enter a Framework Partnership Agreement with the Commission

Budget: € 11.85M

Call deadline: 17 September 2014

Project Size: €200.000 - €500.000 per proposal

Project Duration: 12 months

Deliverable: Business Plan for a Centre of Excellence (CoE)

2016: ("Stage 2") Implementation of the Centre

Budget: ~ € 80-90 M

Project Size: €15-20M per "proposal"

Project Duration: 5-7 years

Funding for: Substantial support for the implementation phase of the CoE

Implementation: Specific Grant Agreement established under a Framework Partnership Agreement
(Coordination and Support Action)

Call for Twinning - 2015

- **SCOPE:** Aims at significantly strengthening a defined field of research in an knowledge institution through linking with at least two internationally-leading counterparts in Europe.
- **SCHEME DESCRIPTION:** Proposals will have to outline the scientific strategy for stepping up and stimulating scientific excellence and innovation capacity in a defined area of research as well as the scientific quality of the partners involved in the twinning exercise. A link of the twinning activity with the national or regional Smart Specialisation Strategy where the contracting institution is located is desirable.
- Only the institution located in the Low Performing country/region is expected to sign the Grant Agreement with the Commission with a minimum participation of two additional partners from two different Member States or Associated Countries (a Consortium agreement will be required from all parties involved).

Call for Twinning – 2015 (2)

Budget: ~ € 64 M

Call publication date: 2 July 2014

Call deadline: 2 December 2014

Project Size: €1 M per proposal

Project Duration: 3 years

Funding for: short term staff exchanges; expert visits and short-term on-site or virtual training; workshops; conference attendance; organisation of joint summer school type activities; dissemination and outreach activities

Type of action: Coordination and Support Action

Next Call in 2018 with budget ~ € 47 M

Total Budget for Twinning in H2020: ~ € 100 M

Call for Twinning – 2015 (3)

Examples from FP7-Research Potential (REGPOT)

- **OPENGENE (REGPOT-2009-1-245536):** the Estonian Genome centre of Tartu (Estonia) built successful networking with key partnering organisations on genomics from UK, the Netherlands, Finland and Germany.
- **STRONGER (REGPOT-2011-1-285837):** the Pasteur Institute of French Guiana strengthened trans disciplinary research on infectious diseases. Partnerships with France, UK, USA, Brazil.

Criteria retained for Widening actions

- The Composite Indicator of Research Excellence

Why this indicator?

- ✓ Excellence is a key factor for performance for the whole R&I system
- ✓ Only indicator that can measure excellence embedding several dimensions
- ✓ Parameters normalised to eliminate size and population biases
- ✓ Innovation taken into account also through the patent applications variable
- ✓ Strong correlation between the Excellence indicator and the FP7 Budget share per country

Composite Research Excellence Indicator at National level

Origin: Developed by DG RTD & JRC, part of the IU progress at country level 2013 publication & will be included in the ***IU Competitiveness Report 2013*** to be published in November.

Definition: "A composite indicator developed to measure the research excellence in Europe, meaning the effects of the European and national policies on the modernisation of research institutions, the vitality of the research environment and the quality of research outputs in both basic and applied research."

Methodology:

Composite indicator of four variables:

1. Highly cited **publications** of a country as a share of the top 10% most cited publications normalised by GDP
2. Number of world class **universities** and public research institutes in a country normalised by population in the world top 250 universities and research institutes
3. **Patent** applications per million population
4. Total value of **ERC grants** received divided by public R&D performed by the higher education and government sectors

Threshold: MS below 70% of the EU average

Resulting eligible MS: Latvia, Croatia, Lithuania, Malta, Slovakia, Romania, Luxembourg, Poland, Bulgaria, Estonia, Portugal, Slovenia, Cyprus, Czech Republic and Hungary

	Composite indicator of research excellence 2010
EU27 average	47,9
EU27 70% threshold	33,5
Member States below 70% of the EU27 value	
Latvia	11,5
Croatia	12,2
Lithuania	13,9
Malta	17,5
Slovakia	17,7
Romania	17,8
Luxembourg	19,8
Poland	20,5
Bulgaria	24,7
Estonia	25,9
Portugal	26,5
Slovenia	27,5
Cyprus	27,8
Czech Republic	29,9
Hungary	31,9
Member States above 70% of the EU27 value	
Greece	35,3
Spain	36,6
Ireland	38,1
Italy	43,1
France	48,2
Austria	50,5
United Kingdom	56,1
Belgium	59,9
Germany	62,8
Finland	62,9
Sweden	77,2
Denmark	77,7
Netherlands	78,9

Source: DG Research and Innovation - Economic Analysis Unit

Data: Eurostat, DG JRC - ISPR

Bottom Line:

- ❑ A significant effort for knowledge transfer
- ❑ Not a cohesion but a performance oriented approach
- ❑ Focus is on institution building
- ❑ Marked importance of Smart Specialisation!
- ❑ ESIF actions can be coupled to Teaming and Twinning initiatives
- ❑ Big expectations – big risks; but maybe also huge gains

Learn more:

http://ec.europa.eu/research/horizon2020/index_en.cfm

http://ec.europa.eu/regional_policy/what/future/index_en.cfm



Thanks a lot for
your attention