
H2020 Theme Oriented Training on ICT

H2020 Overview

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Dr. Thies Wittig

- PhD in Computer Science
- 12 years in industrial research department (signal processing, artificial intelligence)
- In 1995 creation of own company IT Consult GmbH, Germany
- Since 1986 involved in international collaborative research projects, as researcher, manager, coordinator ...
- Long experience as EC proposal evaluator and project reviewer
- Until today involved in around 25 projects in Europe, Middle East, Far East and Balkan countries

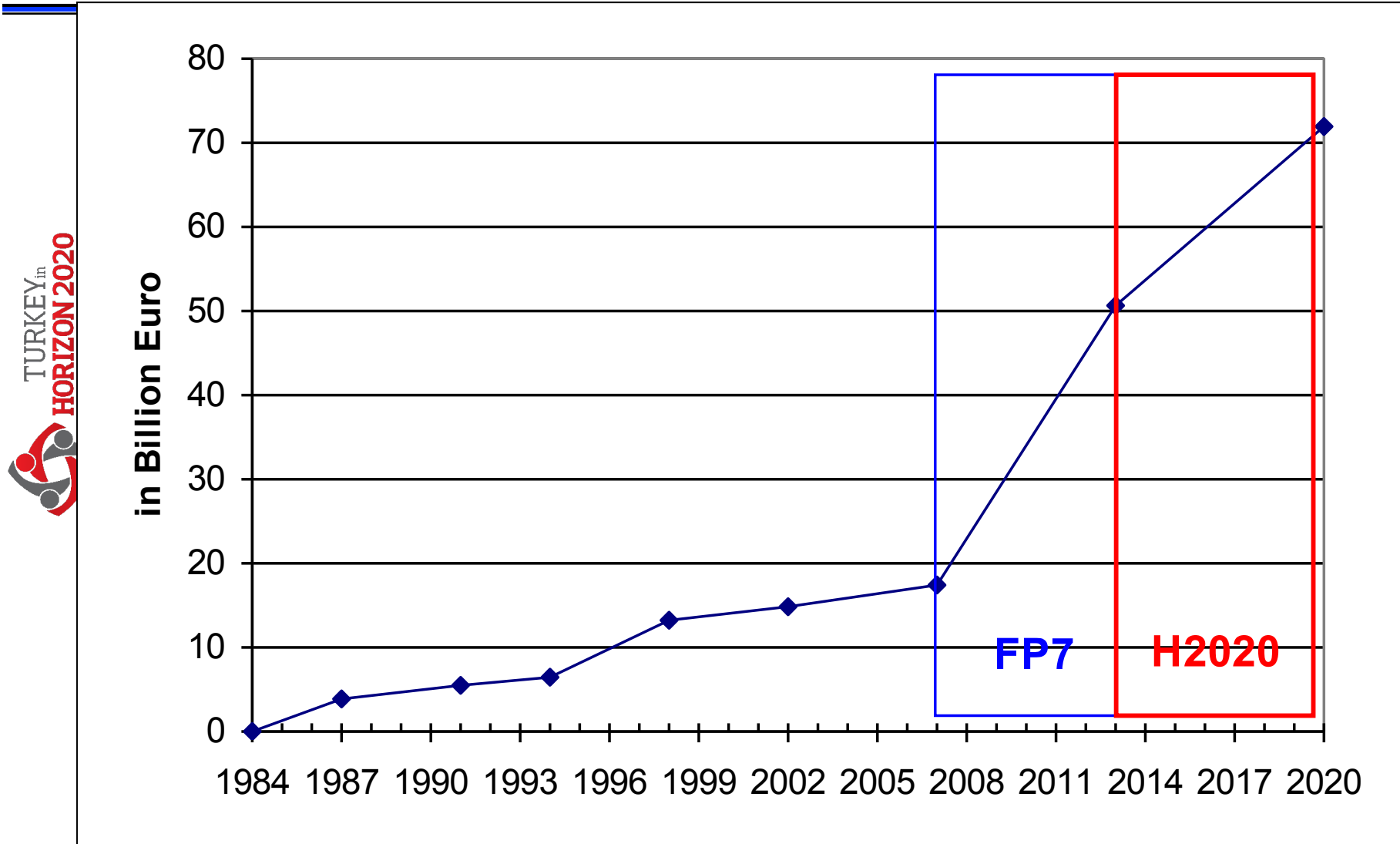
Overview

EC funding for research, development, innovation:

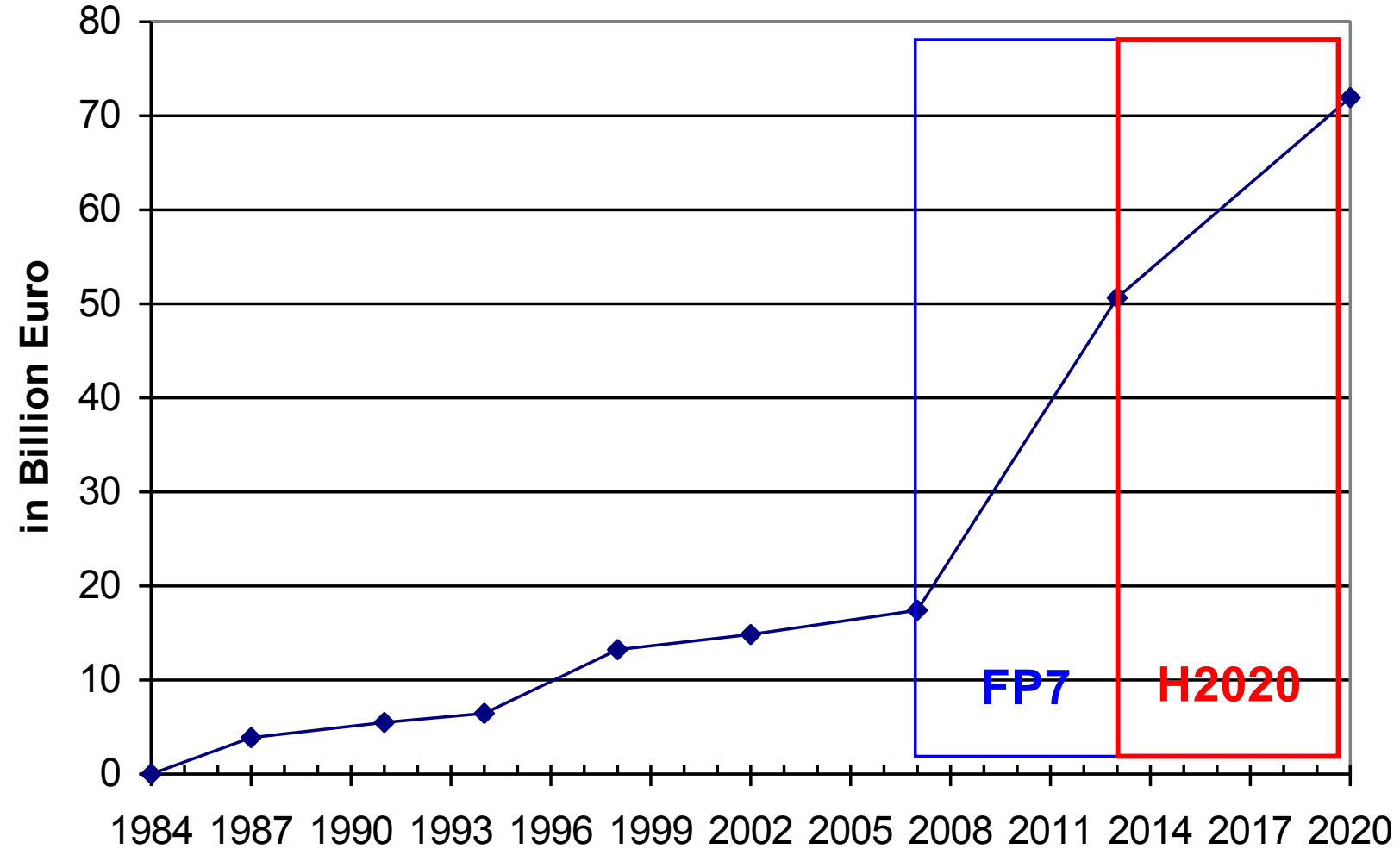
- It started in the 80ies with a small funding programme
- Strong European economies had their large national funding programmes for R&D – smaller countries did not
- Gradual move for national funding to European funding:
 - Avoiding overlaps in R&D
 - Tying in smaller countries



FP Budget Development



in Billion Euro

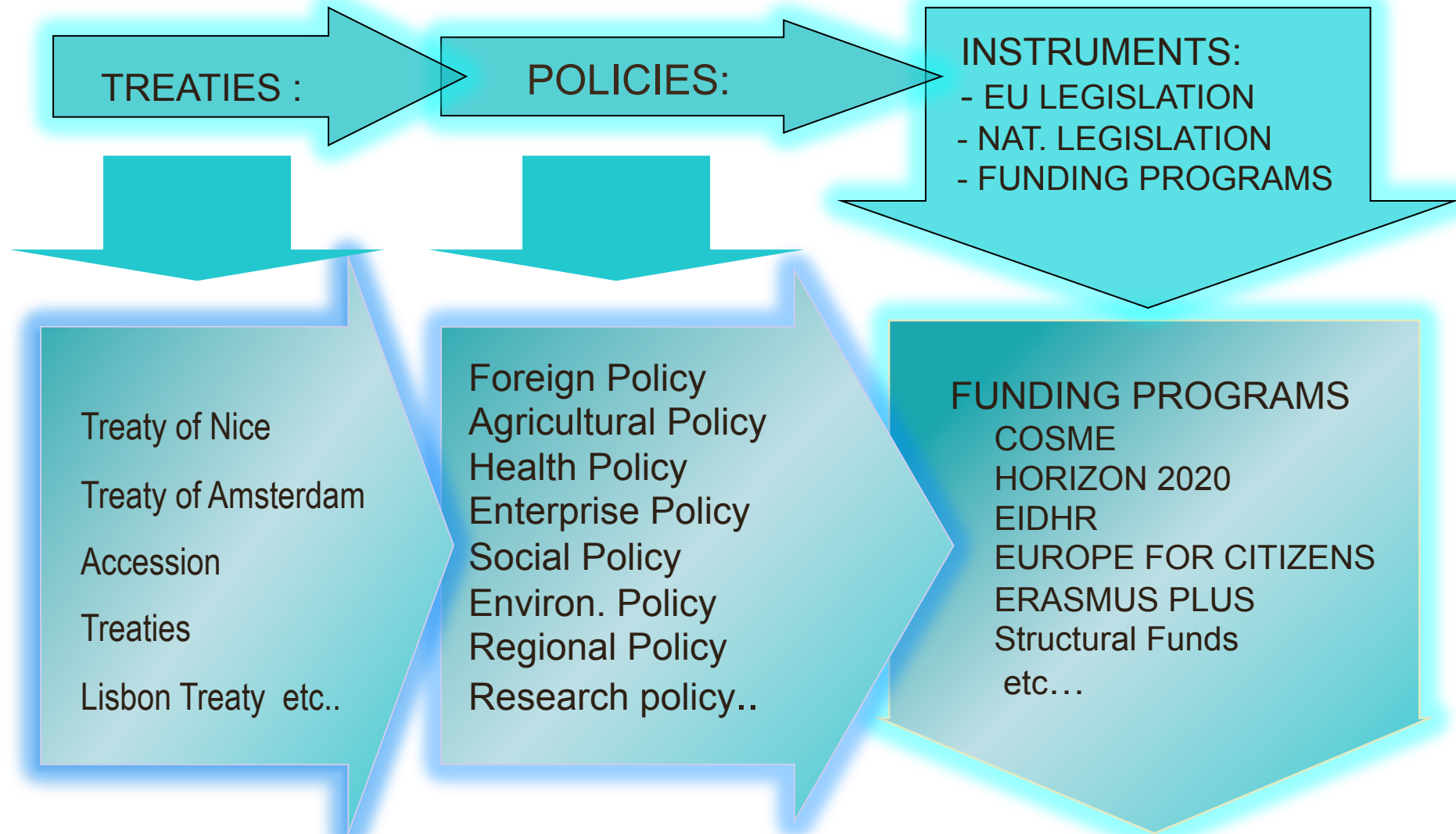


Principles of EU R&D&I Activities



- Transnational collaboration (min. 3 partners/3 countries)
- Open to all: Industry, SMEs, Universities,...)
- Consortia selected via Calls for Proposals and evaluation procedures involving a set of multiple criteria and independent experts
- Strategic objectives - programme oriented
- Innovative, based on science & technology excellence
- Competitive - competition of the best teams in EU
- RTD results are the property of the participants

How EU funding programmes work



... before we start

What is a proposal and what is a project ?

Assume that a number of organisations want work together to achieve a certain goal.

- They write a **Proposal**: a document that describes in detail what they want to do, how and why.
- It covers the scientific/technical aspects, a concrete management/work plan and describes how the results will be used after the end of the project (exploitation) and what the long-term impacts are.



... before we start

If this proposal is accepted, then it becomes a Project.

- A **Project** consists of a consortium that agreed to to work together to achieve a given goal, funded by the EC.
- This goal and the steps needed to achieve it are described in the "Description of Work", the **DoW**. This becomes part of the contract with the EC and is legally binding.



THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020



What is HORIZON 2020

Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020).

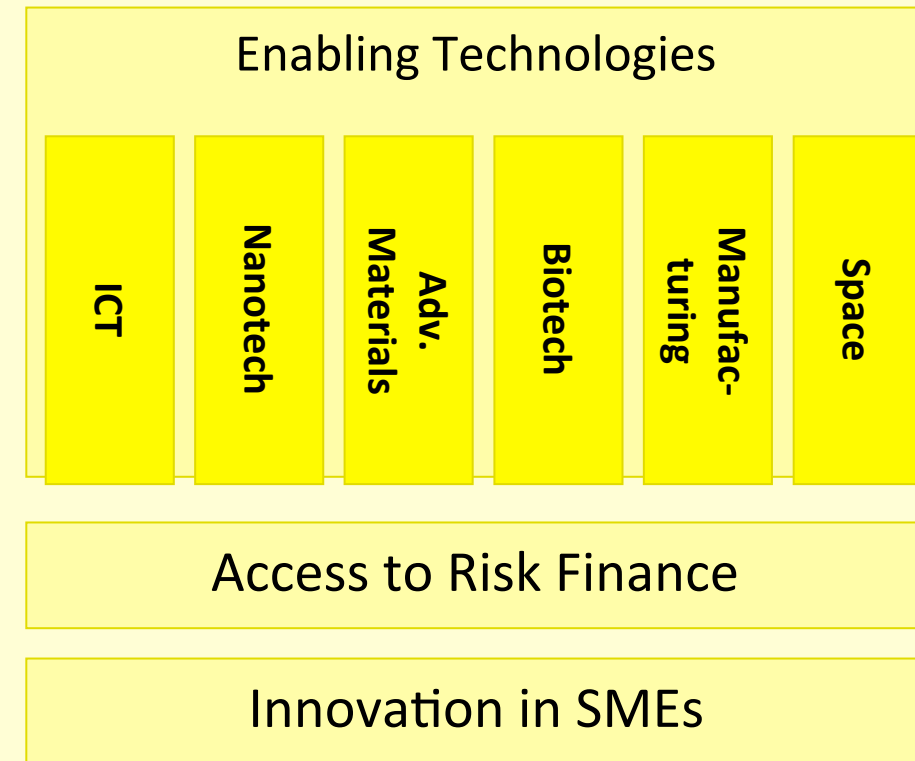


It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market.

Let us first look at the structure and content of H2020 and then at the practical side of how to best get in.

The H2020 Structure – 3 Pillars

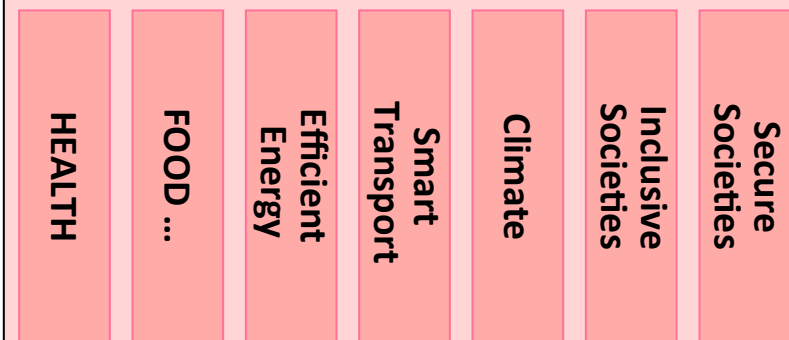
Leadership in Enabling and Industrial Technologies - LEIT 24%



Excellent Science 33%

- European Research Council
- FET
- Marie Curie
- Research Infrastructures

Societal Challenges 43%



Major changes compared to FP7 ?

So the first conclusion is that everything is there again in H2020 !

Naturally, topic areas change as well as the overall focus.

So everything seems to be pretty similar to FP7, **but ...**



FP7 was called the
Framework Programme for Research and
Development



H2020 is called the
Framework Programme for Research and
Innovation

What is Innovation ?

- Innovation is the process and outcome of creating something new, which is also of value.
- Innovation involves the whole process from opportunity identification, research or invention to development, prototyping, production marketing and sales.

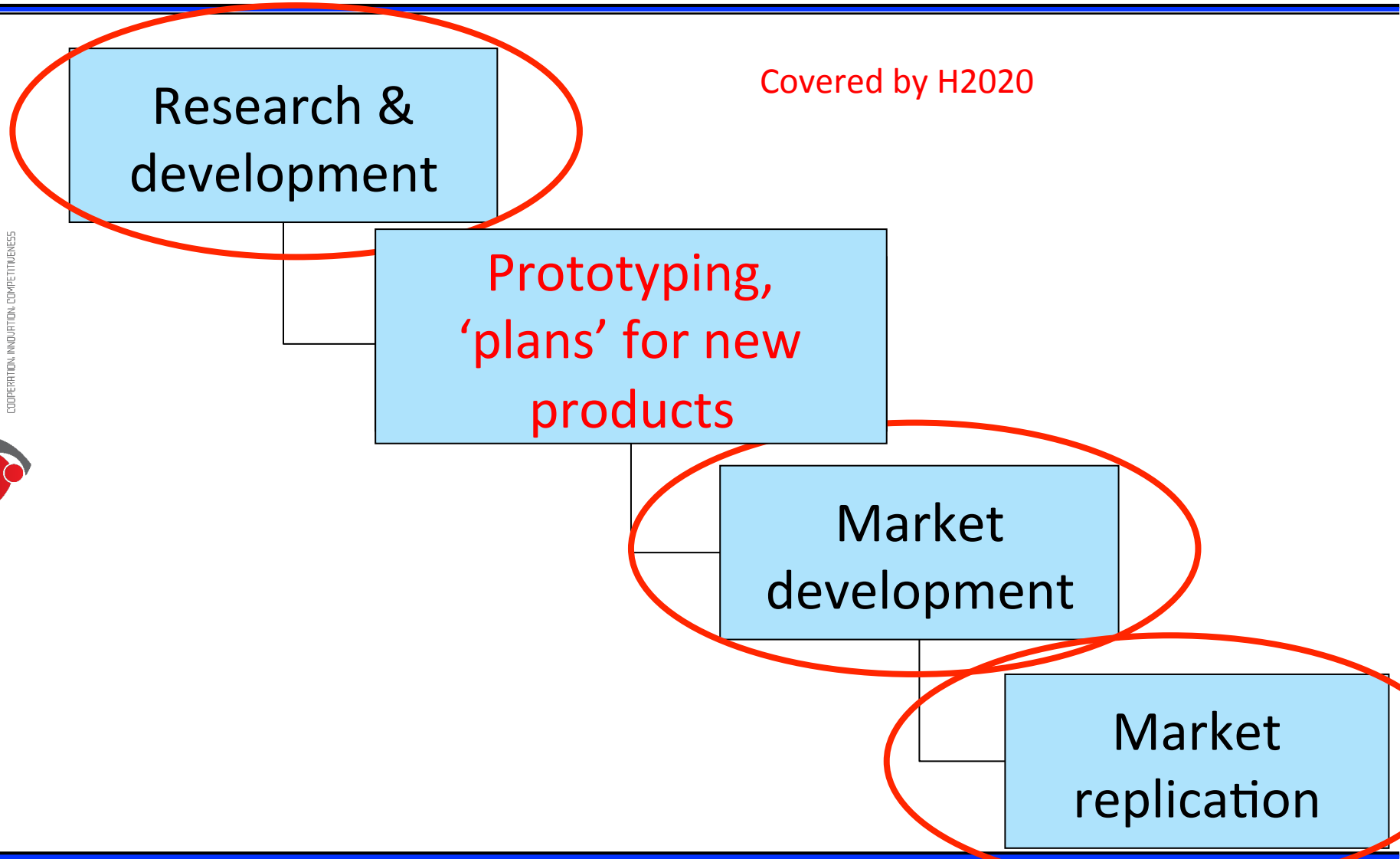


What is Innovation ?

- Innovation = Invention (research) + exploitation
- A new way of doing things, which is commercialized. Traditionally the focus has been on new products or processes, but recently new **business models** come into focus.
- Adoption of ideas that are new to the adopting organization.



The Innovation Chain



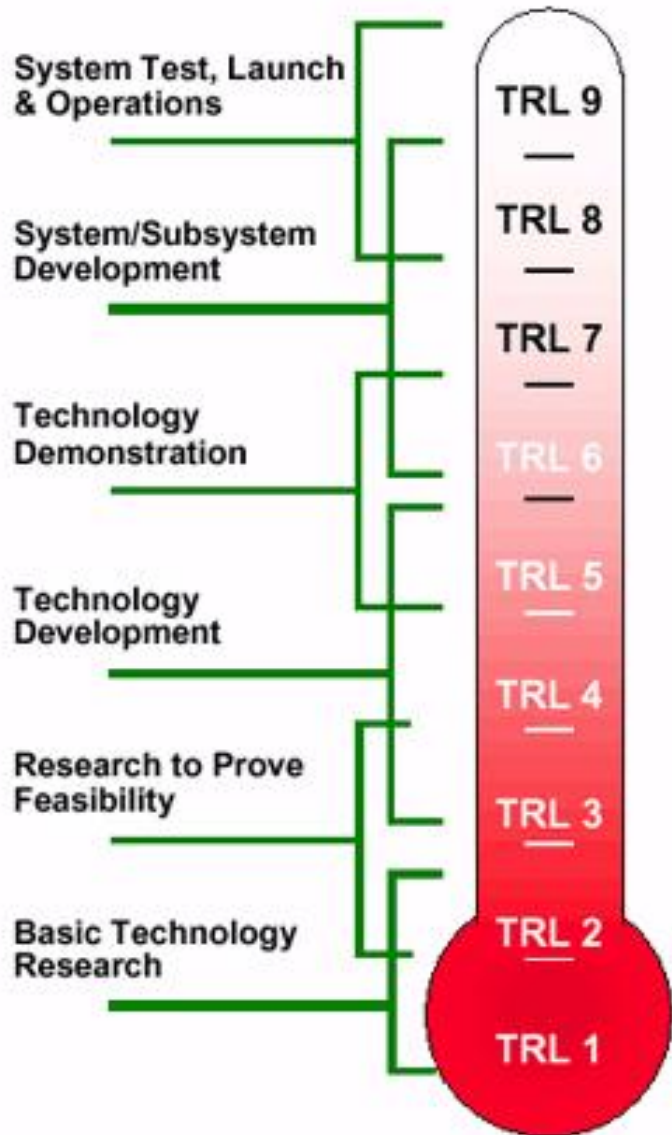
Measuring Technology Maturity ?

Technology Readiness Levels (TRLs)

- The use of TRLs as a measurement of the maturity level of particular technologies is a new development in Horizon 2020.
- This measurement system provides a common understanding of technology status and addresses the entire innovation chain. By evaluating a technology project against the parameters for each Technology Readiness Level (see below), one can assign a TRL rating to the project based on its stage of progress.
- Many of the call topics have a defined TRL at which the implementation of the proposal is intended to start. For example a project has to start at TRL 1-3 and end at TRL 4-5.



A measurement of the maturity level of technologies: a new development in H2020



TRL9 – actual system proven in operational environment

TRL8 – system complete and qualified

TRL7 – system prototype demonstration in operational environment

TRL6 – technology demonstrated in relevant environment

TRL5 - technology validated in relevant environment

TRL4 – technology validated in LAB

TRL3 – experimental proof of concept

TRL2 – Technology concept formulated

TRL1 - Basic principles observed

Innovation and the Private Sector

To ensure that innovation is happening in H2020



SME participation become obligatory in most projects. Around 20% of the total budget for Societal Challenges and LEITs must go to SMEs.

This is good news for SMEs, of course !

It is also an important message for universities: purely academic consortia are out !

Opportunities for SMEs

A specific SME instrument comes under the H2020 objective of ‘smart, sustainable and inclusive growth, however with a small budget!





THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

The practical side



How easy will it be to get H2020 funding ?

The competition is even higher as in FP7, with an average success rate going down to 12%.

But also, as before, excellent proposals that are fully in line with the objectives of a call stand a realistic chance to win.

The promises are that procedures will be simplified and processes faster.



Types of actions supported by grants

- **Research and Innovation Actions**
- **Innovation Actions**
- **Coordination and Support Actions**
- **SME instrument**
- ERANET Co-fund
- Pre-commercial procurement Co-fund
- Public procurement of innovative solutions Co-fund



Research and innovation actions



- Actions primarily consisting of activities aiming to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service or solution.
- For this purpose they may include basic and applied research, technology development and integration, testing and validation on a small-scale prototype in a laboratory or simulated environment.

Innovation actions

- Actions primarily consisting of activities directly aiming at producing plans and arrangements or designs for new, altered or improved products, processes or services. Often specific TRL levels are required as a starting point.
- For this purpose they may include prototyping, testing, demonstrating, piloting, large-scale product validation and market replication.



Coordination and support actions

Actions consisting primarily of **accompanying measures** such as standardisation, dissemination, awareness-raising and communication, networking, coordination or support services, policy dialogues and mutual learning exercises and studies, including design studies for new infrastructure and may also include complementary activities of networking and coordination between programmes in different countries.



Work Programmes

What are these Work Programmes and what do they contain?



Where to find them:

http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html

An example:



HORIZON 2020

WORK PROGRAMME 2014 – 2015

8. Health, demographic change and wellbeing

Rules of Participation

Minimum conditions

- For standard collaborative actions
 - At least, 3 legal entities, each established in different MS/AC
- For SME Instrument, programme co-fund, CSA
 - 1 legal entity established in a MS/AC

Additional conditions

- To be set out in the Work Programme (i.e. number of participants, type of participants, etc.)



Evaluation of proposals

Award criteria

- Excellence
- Impact
 - *Higher weighting for innovation actions*
- Quality and efficiency in the implementation
- Details, weightings and thresholds be laid down in WP
- Evaluation carried out by independent experts
- Possibility of a 2 stage submission procedure



Simplified Funding Model

One reimbursement rate by action

The same rate for all beneficiaries and all activities:

- Up to 100% for Research and Innovation actions
- Up to 70% for innovation (non-profit entities up to 100%)
- Up to 70% for PCP co-fund, 33% for ERANET co-fund, 20% for PPI co-fund



Simplified Funding Model

A single method for calculation of indirect costs:

- Flat rate of 25% of total direct costs, excluding subcontracting, costs of third parties and financial support to third parties



Eligible costs

Main cost categories:

- Personnel costs
- Costs of subcontracting
- Other direct costs
 - Travel costs and subsistence allowances
 - Depreciation costs of equipment
 - Costs of other goods and services (including non-deductible VAT)

