



Innovation in H2020

"Research is the transformation of money into knowledge. Innovation is the transformation of knowledge into money."

Geoffrey Nicholson, inventor of the Post-It™

A balanced use of linear and non-linear actions

Linear model

Research & Innovation actions (Collaborative projects with emphasis on innovation including Pilots)

SME Instrument (in form of 'top-up' support for SMEs emerging from successful collaborative projects committed to bring results to market)

PCP-PPI

Non-Linear model

Inducement Prizes

SME Instrument (for innovators motivated to deliver innovation based on existing research results)

Open Disruptive Innovation



Innovation in research and research and innovation projects

Research and innovation projects

- *Quadruple helix*
- *Real world prototyping and experimentation*
- *Societal challenges + technology integration*

- *Industry driven initiatives*
- *EIP (European Innovation Partnerships)*
- *PPP (Public Private Partnerships)*

Innovation Activities	Instrument
Pilots (prototyping, pilot lines, demonstration, testing)	Research and Innovation action
Pre-commercial procurement	PCP
Public procurement of innovation	PPI
Result based award	Inducement prizes
Targetting SME	SME
Non prescriptive, open, light and fast	ODI
Road-map based, critical mass	Contractual PPP (using all instruments)
Targetting societal challenge	All + CEF, Smart specialization, COSME, EIP
Clustering, bridge to accelerators, incubators	Coordination and Support action

Open Disruptive Innovation

WHAT: The **DISRUPTIVE INNOVATION** scheme

- **Focus**

*Disruptive innovation encompasses **any** innovative concept, product and service that create new markets by applying new sets of rules, values and models which ultimately **disrupt** and/or overtake existing **markets** by displacing earlier **technologies** and **alliances***

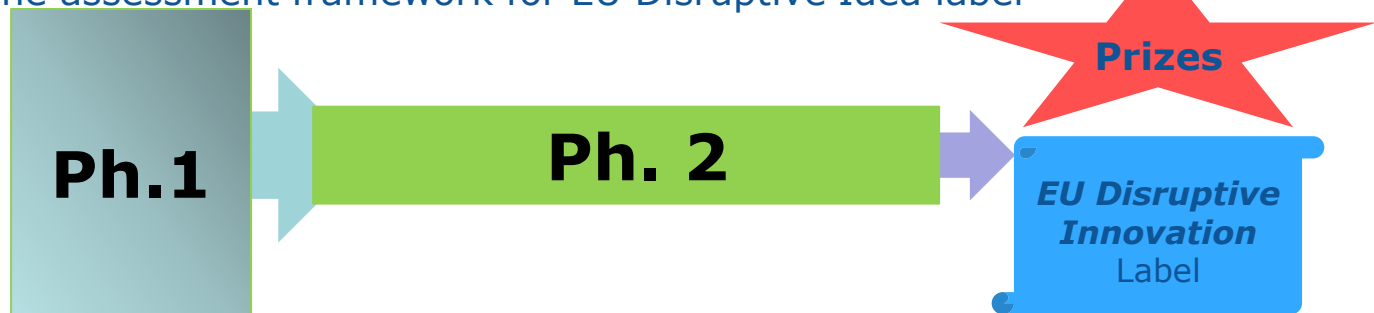
Cross-sectoral solutions

high risk But high *societal impact* & commercial return

Budget = 5% of ICT for LEIT in H2020 = **~ 57M€ y**

HOW: STRUCTURE of the ODI scheme

- **Mixture of complementary H2020 Instruments**
- **R&D and Innovation grants**
 - Ph1: Technical market feasibility and prototyping = 150K lump-sum x 3-9 months
 - Ph2: Validation & piloting of scalable solutions = grant max costs 2m€ x 12-18 m
- **Prizes**
 - Successful projects reaching end of Ph2 included in candidate lists for Prizes
 - offered EU Disruptive Innovation Label
- **CSA**
 - Exposure on dedicated platforms (e.g. crowd-funding and V.C. seeds)
 - On-line assessment framework for EU Disruptive Idea label



On-line assessment *EU Disruptive Idea Label* & Exposure on
EU Dedicated Platforms & events etc.



WHO: MANAGEMENT of the ODI scheme

Continuous, open calls w/3-4 cut-off dates

Evaluation criteria = focus on degree of potential disruptive **Impact**
Success criteria = focus on degree of **Scalability** & wider deployment

Yearly Target #s: 100 Ph. 1 Proposals = ~ 15M€
20 Ph.2 Proposals = ~ 40M€ (~2M€ each)
2m€ will be available for CSAs and Prizes

WHY: ??? & What's in it for me?

Main open issues:

- *% Funding rate EC contribution for R&D grants*
- *Management of the evaluations*
- ***Mapping of :***
 - ✓ *Degree of **applicability***
 - ✓ *& Extent of **exploitation** of the scheme within your area*
 - ✓ *Room for **improvement***

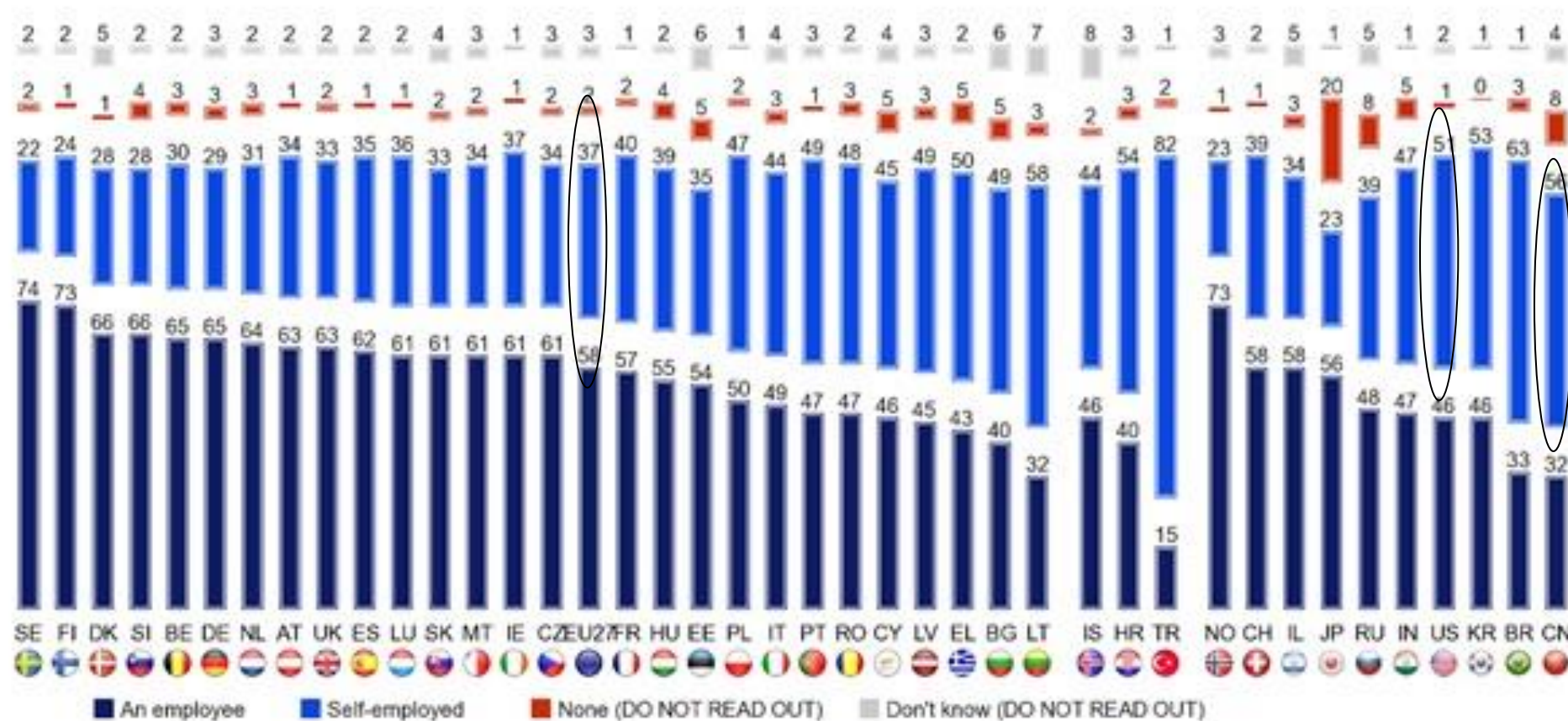
SME Instrument



European Commission

How to encourage (ICT) entrepreneurship in Europe?

Q1. If you could choose between different kinds of jobs, would you prefer to be... ?



The SME Instrument

SEAMLESS BUSINESS INNOVATION SUPPORT FROM IDEA TO MARKET...

PHASE I

Grant of € 50,000 (lump sum) + coaching support

Concept & Feasibility Assessment
Idea to Concept

10% success



Idea > Business Plan

10% budget

PHASE II

Grant of € 0.5 Million to € 2.5 Million (70% of funding)* + coaching support

*as a general rule

Demonstration Market Replication R&D
Concept to Market-Maturity

30-50% success



Elaborated Business Plan

Commercialisable Output

PHASE III

Risk Finance (Private/Public)

Commercialisation
Market-Maturity to Market Launch

2% budget



Market Success

...YOUR HIGHWAY TO DELIVER INNOVATION ON THE MARKET!

Apply at any time!

6 months

88% budget

12-24 months

ACTIVITIES SUPPORTED

PROOF OF CONCEPT

- ✓ Prove Technical and Commercial Viability
- ✓ Explore IP Regime
- ✓ Design Study
- ✓ Develop Pilot Application
- ✓ Risk Assessment

DEMONSTRATION OF COMMERCIAL POTENTIAL via

- ✓ Prototyping
- ✓ Testing
- ✓ Piloting
- ✓ Miniaturization
- ✓ Scaling-up
- ✓ Application Development

GO-TO-MARKET

- ✓ EU Quality Label (Promotion & Networking with Financiers/Clients)
- ✓ Investment Readiness Training
- ✓ SME window in the EU Financial Facilities (debt & equity backed by EIB/EIF)
- ✓ Link to Public Procurement Networks

SME instrument main features

- *Targeted at all types of innovative SMEs (new actors / FP7)*
- *Company-focused (only SMEs allowed to apply for funding; single company support possible)*
- *Competitive, market-oriented*
- *EU dimension*
- *Open/bottom-up (while addressing Societal challenges and leading industrial technologies)*
- *Central implementation or in domains (tbd)*
- *Simple rules and procedures*
- *Continuously open call; central entry point*
- *Quality of evaluation will be essential*

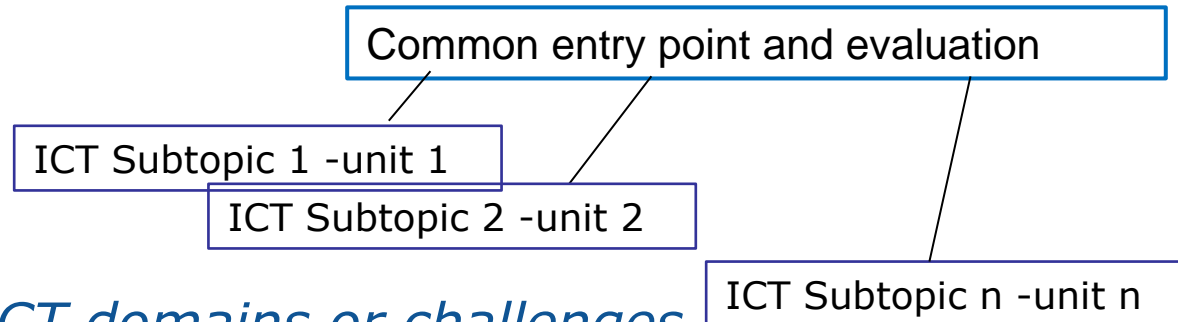


1. Fully centralized implementation

- *ICT contributing only to the budget for the SME instrument; implemented through an Executive Agency (EACI?)*
- *Risk: ICT not be optimally addressed and ICT support not visible enough*

2. ICT central implementation

- *Specific ICT theme, budget identified, ICT context for evaluation*
- *Implemented through EA or CONNECT*



3. Implementation in ICT domains or challenges

- *Risk: insignificant (lack of critical mass); fragmentation of the approach*

4. options 2 + 3 => more budget

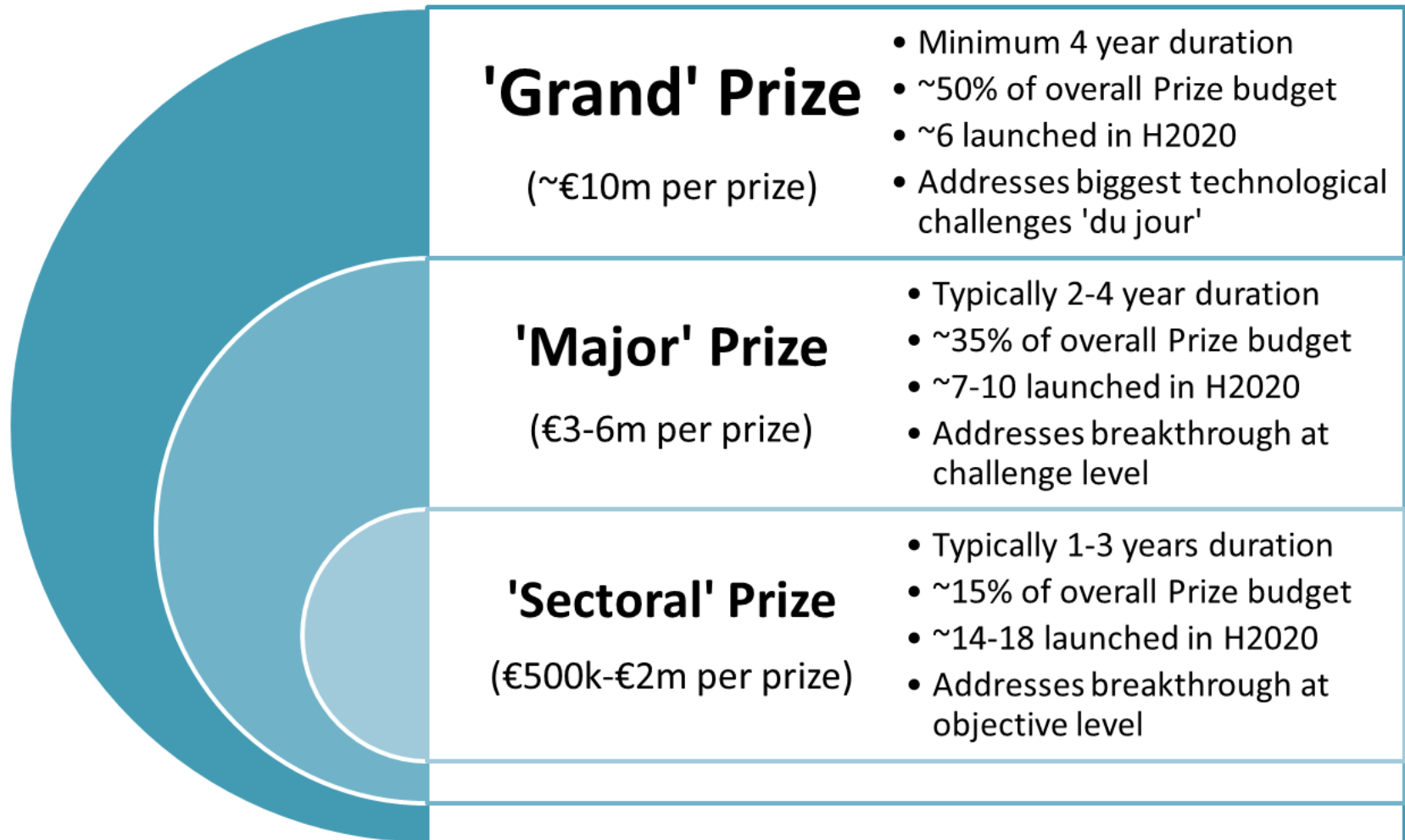
The Prizes Instrument

Why Inducement Prizes under H2020?

PRIZES CAN...

- *Mobilise R&I investments*
 - **\$10m ANSARI X-Prize mobilised \$100m R&I investments.**
- *Deliver real products & services*
 - **being often application-oriented**
- *Create new industries*
 - **Commercial aviation industry (Ortieg prize, 1920s)**
 - **Space "tourism" (Ansari X-Prize).**
- *Expand the "DNA pool"*
 - **Attract maverick outsiders, new innovators, new approaches**
- *Generate positive PR & excitement*

Hierarchy of Prize schemes for ICT in H2020



Leverage Inducement Prizes in H2020 Strategic Programming

- *Appropriate for research themes that have faced challenges in delivering high impact in market despite the existence of high quality research results*
- *Prizes can play a catalytic role in overcoming such an impasse.*



Pre-Commercial Procurement (PCP)

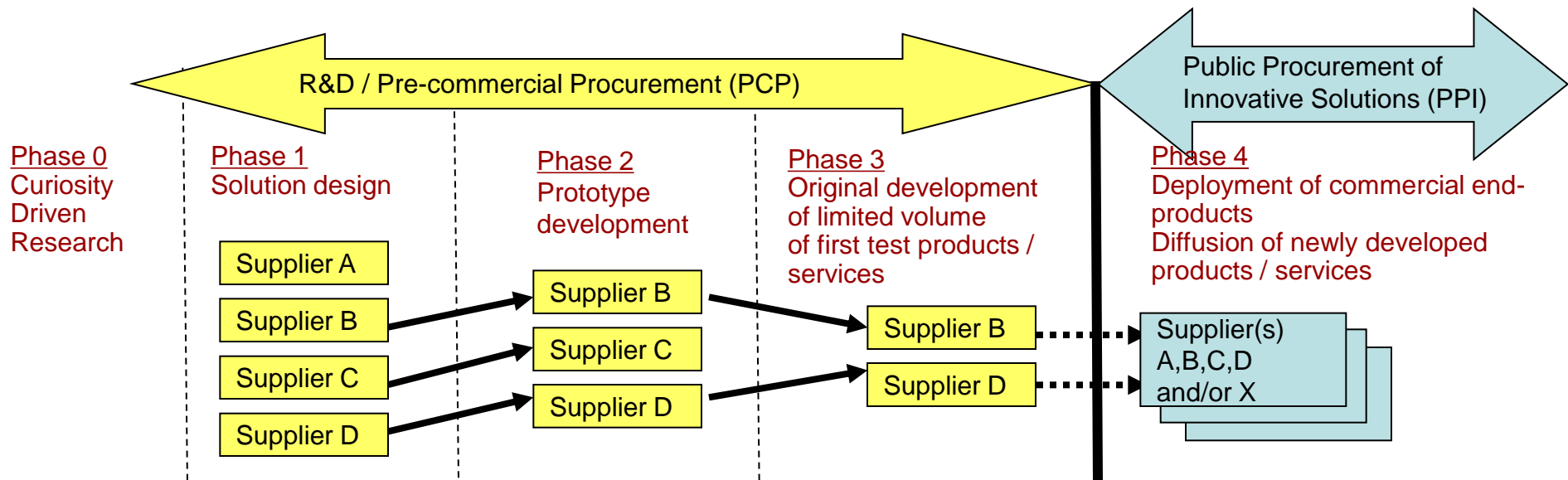
and

**Public Procurement of Innovative
Solutions (PPI)**

PCP and PPI complementary



- ❑ PCP to steer the development of solutions towards concrete public sector needs, whilst comparing/validating alternative solution approaches from various vendors
- ❑ PPI to act as launching customer / early adopter / first buyer of innovative commercial end-solutions newly arriving on the market



- ❑ Two possibilities in H2020 (for PCP/PPI) & CEF (for PPI)
 - EC can co-finance PCPs/PPIs carried out by grant beneficiaries
 - EC or EU agencies can carry out PCPs/PPIs on their own behalf or jointly with Member States

Rationale



Normally functioning market (e.g. in US, Asia):
2,5% of 'innovator' type customers (PCP)

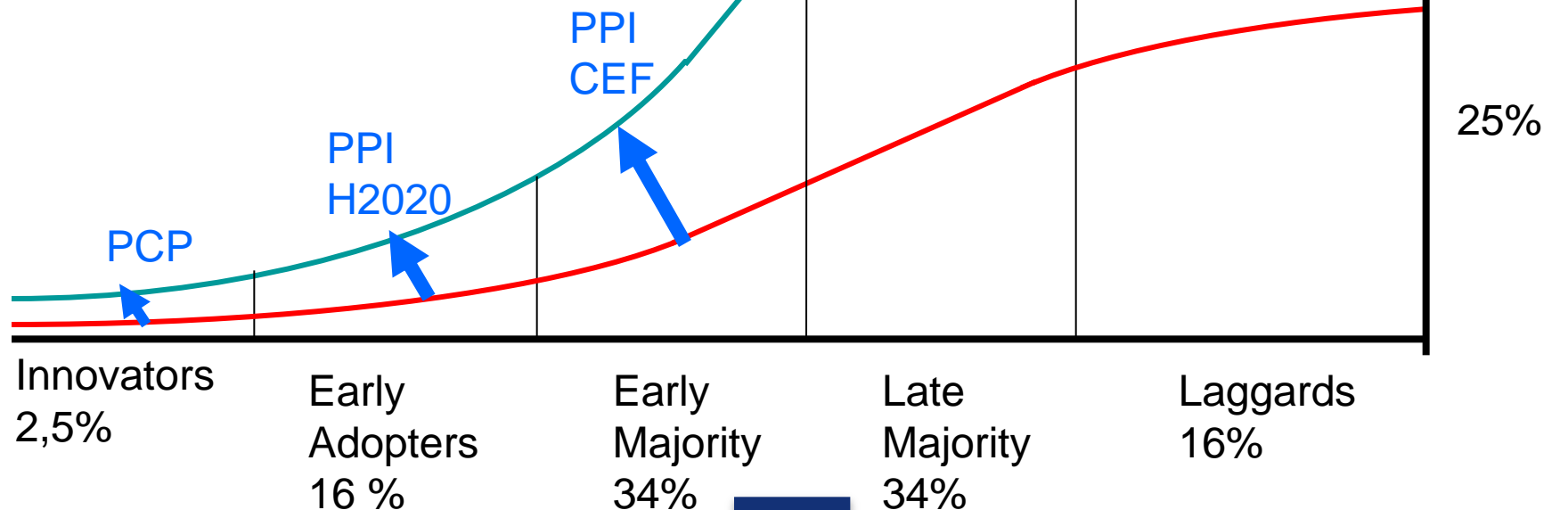
Who invest in R&D with suppliers

16% of 'early adopters' (PPI)

ICT public procurement market in Europe:

0,5% of 'innovator' customers (PCP)

5% of 'early adopters' of
new tech in e-gov (PPI)





European
Commission

Pilots

Pilots for ICT in H2020

- To allow seamless integration of R&D and Innovation, any time
 - **Take into account the non-linear nature of innovation**
- Pilots embedded in H2020 (No separate CIP)
- We are not starting from scratch
 - **CIP ICT PSP Pilots**
 - **FP 7 Prototypes, Take up actions, Demonstration, Pilot lines**
- Implementation
 - **Consortium with key players of the whole value chain, including SMEs**
 - **Size of consortium/ short time to market / impact?**
 - **Research and innovation grant max 70% funded**

Integrating R and I

	Infrastructures and skills	Strategic, Roadmap based	Open, agile	User-driven testing, piloting
Societal challenges	e.g. Living labs	e.g. support to EIPs	Light WP Any time	Pilots
Industrial leadership	e.g. Clean rooms, HPC access	e.g. PPPs	Small size SMEs specific	Pilots
Excellence in science	eInfrastruct.	FET flagships	FET open ERC	

❑ In Societal Challenges

- Building on initiatives in MS/AC with interoperability of services as central theme (eg. CIP Pilot A)
- Validating, demonstrating and stimulating innovative use of ICT for addressing societal challenges (eg. CIP pilot B)

❑ In Leadership in Enabling and Industrial Technologies

- Validating, demonstrating and stimulating innovative ICT and use of ICT in public & private sector (e.g. CIP pilot B in biophotonics/SSL/RFID...)
- Support to KET: pilot lines, prototypes, first-in-kind equipment and facilities and demonstrator activities (High level group report on KET)
- Involving suppliers (e.g. SMEs) for delivering products/services/applications related to platforms (e.g. FI PPP phase 3)

Leverage Pilots in H2020 Strategic Programming

- *How do you plan to use of Pilots in ICT theme specific H2020 programming*
- *Share of best practices of CIP Pilot A/B, Pilot lines, Prototypes, Large scale testing, Demonstrators, Open Platforms*