



Horizon 2020

New ways of funding research & innovation

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**European Economic and Social
Committee (CESE)**
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HORIZON 2020



FP7 Health Cooperation programme

Key figures

6.1 € billion invested

1,050 projects

11,000 teams

3,500 organisations

130 countries

First outcomes

(on 370 closed projects)

230 patent applications

34 spin-offs

12,500 publications

8 average publication IF



At the forefront



2003

EDCTP – 1st “Article 169 initiative”

2008

IMI1 – 1st “Article 171 initiative” in DG Research

2009

1st Joint Programming initiative - Alzheimer’s/NDD

2010

1st Innovation Partnerships on Active & Healthy Ageing (EIP AHA)

2010/11

Large-scale international research initiatives on epigenome, rare diseases, global alliance on chronic diseases...

2012

1st SME targeted initiative - “SMEs for Innovation” & 1st Innovation inducement prize

2014

1st use of emergency measures for research purposes - Ebola emergency call / GLoPID-R

2015

1st financial instrument for infectious diseases (IFID)

1st comprehensive strategy for personalised medicine



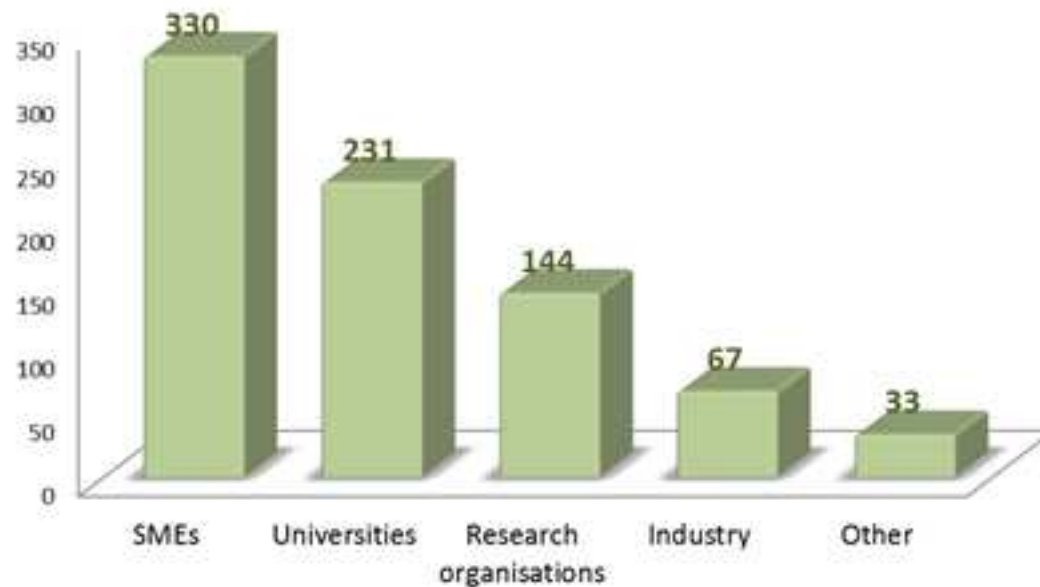
Biomedical Engineering

- **Key sector for European competitiveness**
- **~ 100 billion € market size (world market estimated to amount to \$ 514 billion by 2020)**
- **25,000 companies, thereof 90% SMEs**
- **575,000 jobs**
- **Favourable European legislative framework**
 - **#1 sector in patent applications: 10.412 in 2012**
 - **Short Product lifecycle (~ 18 months)**

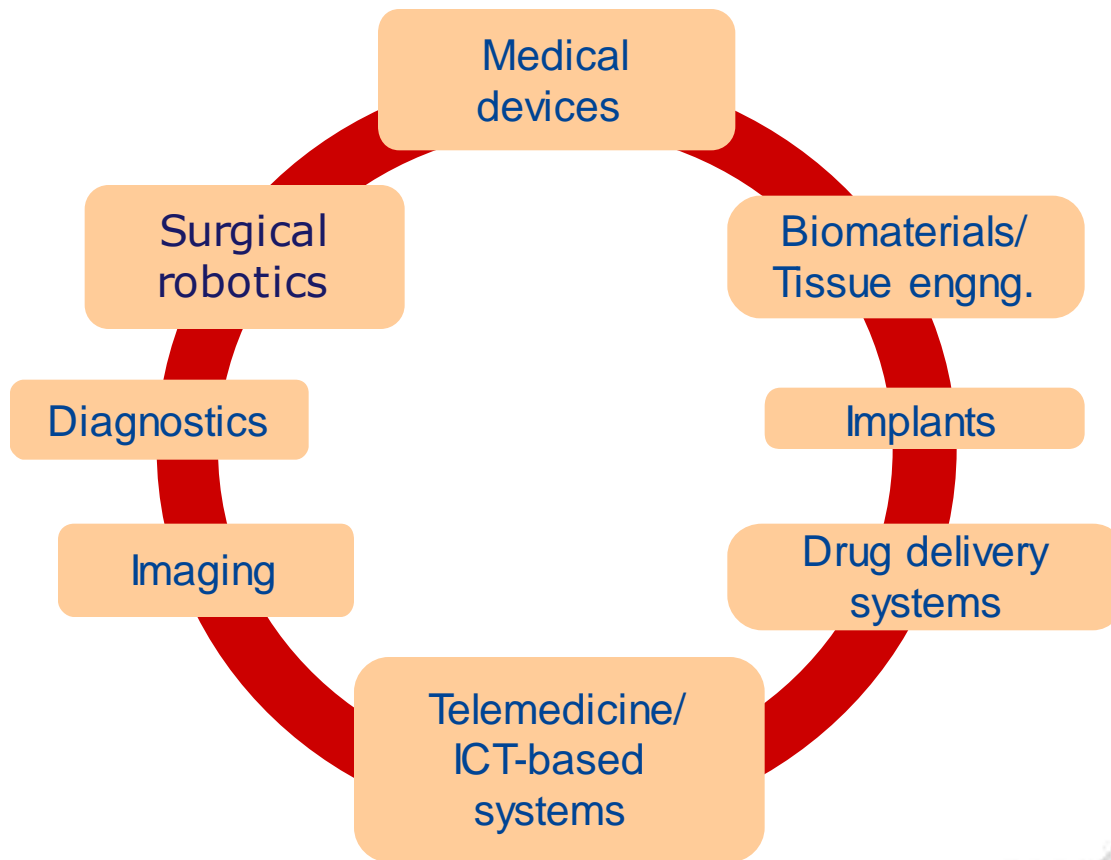
Biomedical Engineering projects in FP7 Health programme



- **137** projects
- **805** participants
- **652 million €** in EC contribution



Biomedical Engineering: Technology examples



What is Horizon 2020?



The EU's 2014-20 programme
for research & innovation

80 billion euros over 7 years

~ 8 billion euros for health research

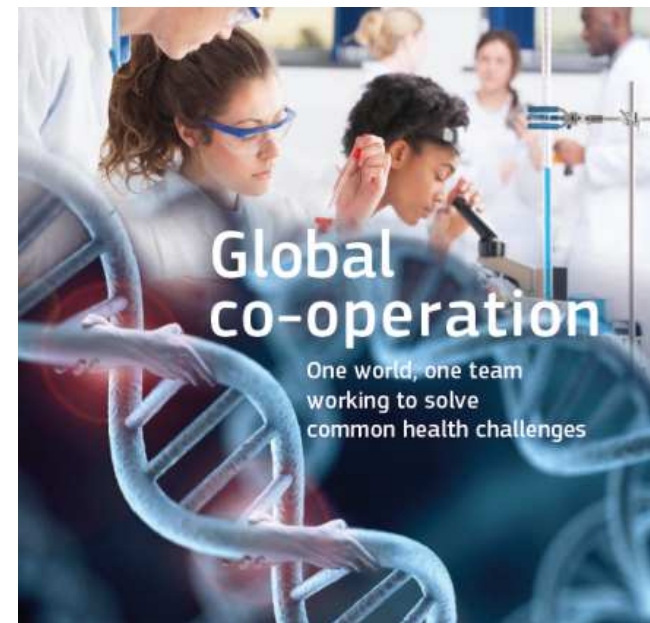
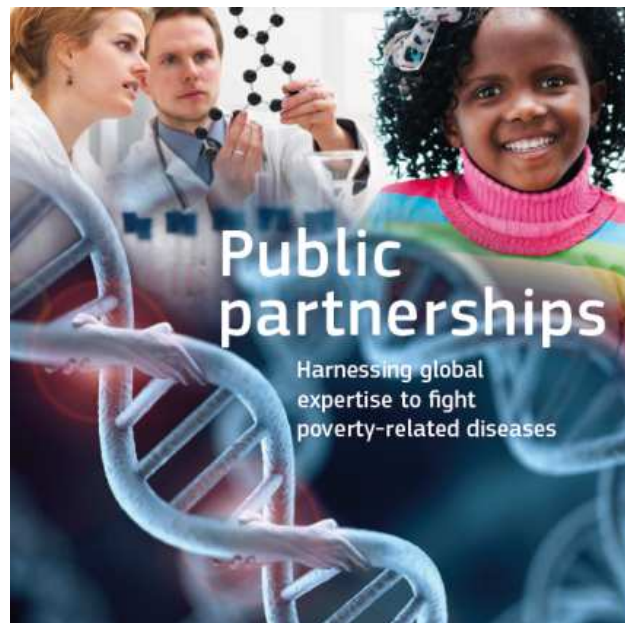
- Responding to the economic crisis to invest in future jobs and growth
- Addressing people's concerns about their livelihoods, safety and environment
- Strengthening the EU's global position in research, innovation and technology

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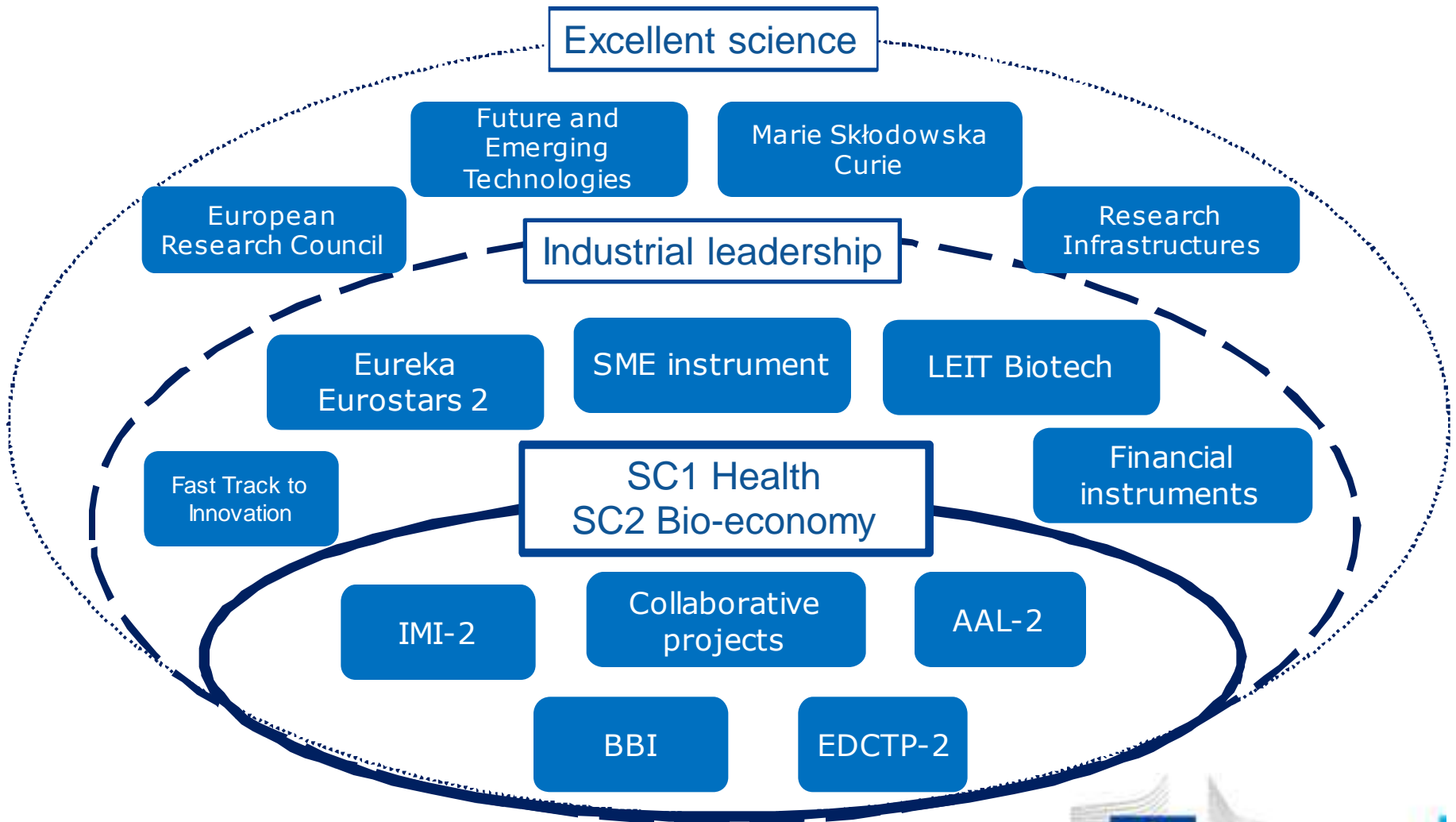
<http://ec.europa.eu/research/horizon2020>



EU-level collaboration for innovative solutions



Funding for Health/Biotech in H2020



Health main challenges



Ageing population

Increased disease burden: chronic diseases

Health & care sector unsustainable: under pressure to reform

Health industry under pressure for innovative solution

State of art of the Health Societal Challenge



- ✓ Calls of 11 March and 15 April 2014:
 - ✓ 1681 proposal received
 - ✓ 0,58 billion euro
 - ✓ Projects started Nov/Dec. 2014
 - ✓ **18 Projects Biomedical Engineering projects funded so far**
- ✓ Calls 2015 published end 2014
- ✓ Next workprogramme: 2016-2017 (under preparation)

More @ <http://ec.europa.eu/programmes/horizon2020/en/h2020-section/health-demographic-change-and-wellbeing>

H2020 collaborative projects – Societal Challenge 1: Health, demographic change and wellbeing – **Biomedical Engineering Topics**

Topic	Funded projects	Allocated budget € million
PHC 10 – 2014: Development of new diagnostic tools and technologies: <i>in vitro</i> devices, assays and platforms	9	48.0
PHC 11 – 2015: Development of new diagnostic tools and technologies: <i>in vivo</i> medical imaging technologies	tbc	49.0
PHC-16-2015: Tools and technologies for advanced therapies	tbc	36.0
PHC-25-2015: Advanced ICT systems and services for integrated care	tbc	20.0

Development of new diagnostic tools and technologies: *in vitro* devices, assays and platforms: Project examples

- DIACHEMO
Development of point-of-care device for quantification of drugs in small body fluids by highly selective nanoparticle extraction and liquid crystal detection incorporated in microfluidic lab-on-chip device allowing real-time drug monitoring
- PoC-ID
Development of new micro- and nanoelectronic-based sensing and integration concepts for advanced miniaturised *in vitro* diagnostics. The platform technology can easily be adapted to a variety of diagnostic or biosensing purposes, such as in health/environmental monitoring or food quality testing

Horizon 2020: **New SME instrument**

H2020: ~€3 billion
SC1 Health: ~€500m

Inspired by the **US Small Business Innovation Research (SBIR)**

Single company support possible

Target group: Innovative SMEs

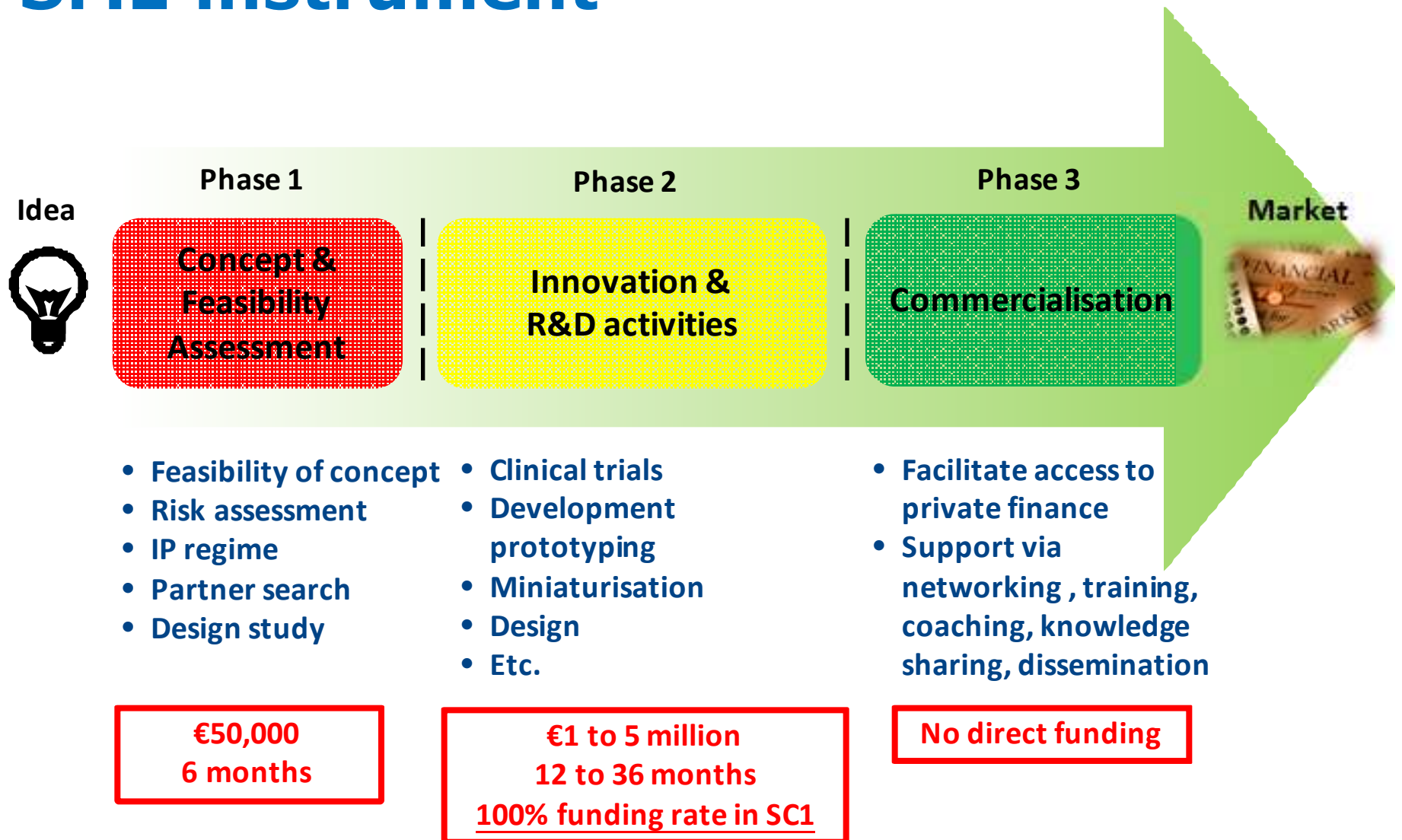
Only EU SMEs allowed to apply for funding

Competitive, market-oriented, EU dimension

Health topic for 2014/15: PHC-12: **Clinical validation of biomarkers and/or diagnostic medical devices**

- **Next cut-off date: 18/03/2015**

SME instrument



PHC 12 (2014-2015)– SME instrument Phase 2 projects - domains covered

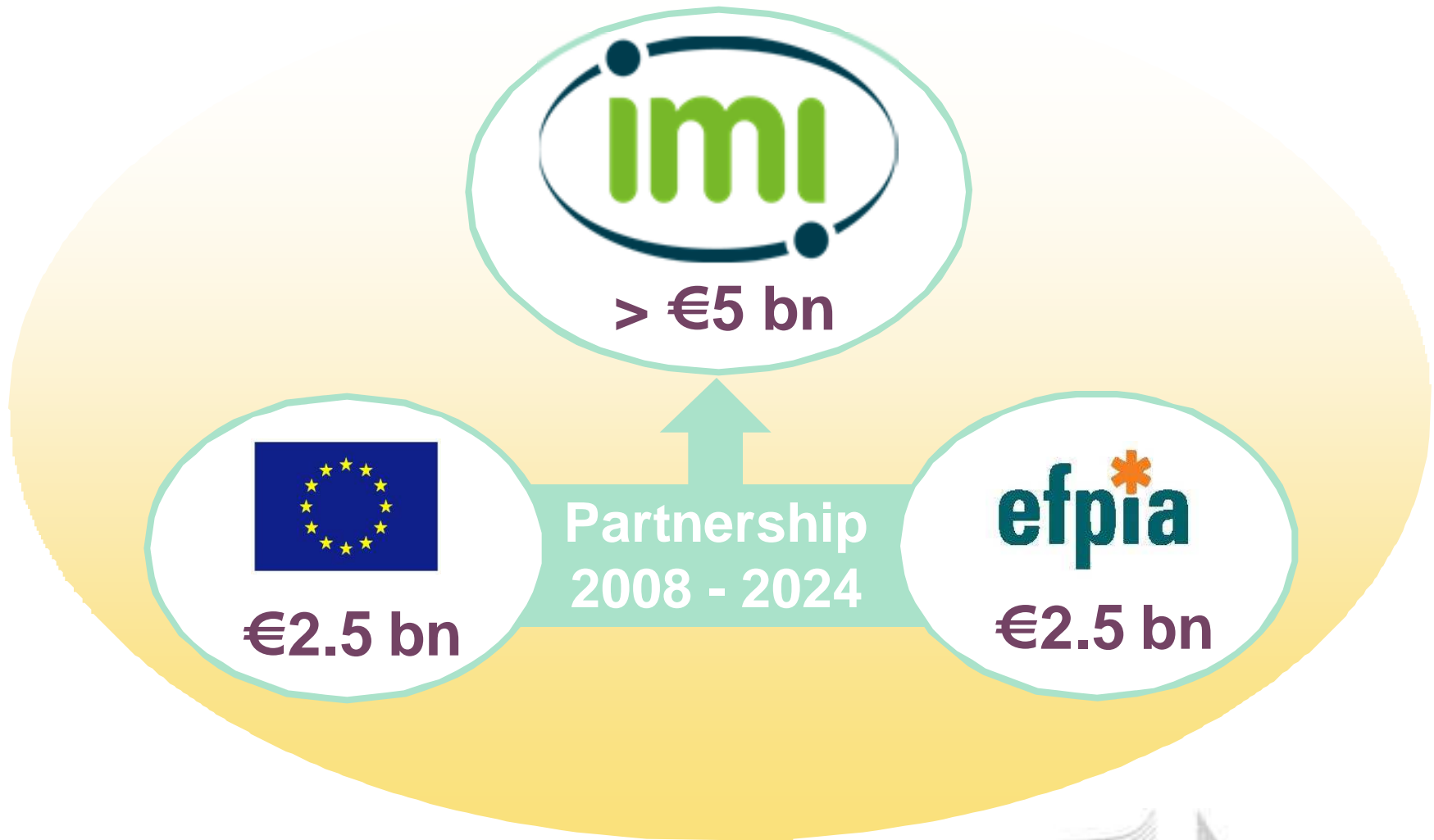
- Dental care
- Respiratory
- Heart disease - Myocardial Infarction
- Cancer (2 projects: cervical, colorectal)
- Diabetes
- Arthritis
- Infections - septic shock
- Infectious diseases (2 projects: TB, ID self-testing platform)

PHC-12 project examples

Phase 2:

- Validation of clinical performance and pre-commercial development of a novel diagnostic for dental caries assessment
- Development of a digital diagnostics rapid Lung Maturity Test (LMT) for premature infants, to assist neonatologists in the diagnosis of Respiratory Distress Syndrome at birth
- Validation of a point-of-care H-FABP test for a rapid exclusion of Acute Myocardial Infarction in patients with cardiac complaints.
- Moving to Efficient Diabetes care: Multimode Integrated CO-morbidity diagnostics platform

IMI – Europe’s partnership for health



IMI – key concepts

- Focus on unmet needs
- Non-competitive collaborative research
- Competitive calls for proposals
- Open collaboration in public-private consortia
 - Data sharing, dissemination of results...
- Industry contribution is mainly in kind



IMI 2 priorities

Priority Themes

1. Neuro-degeneration
2. Immuno-inflammation
3. Metabolic disorders
4. Infection control
5. Translational Safety

Support Technologies

1. Imaging
2. ICT
3. Medical devices....

Enablers

Patient access to innovative solutions (MAPPs):

- Target validation
- Stratified medicine, precision medicine
- Innovative trials
- Data generation and interpretation
- Prevention, disease interception
- Patient adherence
- Health disease management
- Regulatory framework
- Reimbursement/patient access

Financial instruments

H2020 budget:
~€2.8 billion

- **InnovFin Large Projects**

Loans from €7.5 m to €300 m; delivered directly by EIB

- **InnovFin MidCap Growth Finance**

Loans from €7.5 m to €25 m; delivered directly by EIB

- **InnovFin MidCap Guarantee**

Guarantees to financial intermediaries (banks, etc.)

Loans from €7.5 m to €25 m; implemented by EIB

- **InnovFin SME Guarantee**

Guarantees / counter-guarantees to financial intermediaries

Loans from €25,000 to €7.5 m; implemented by EIF

- **InnovFin Advisory**

Improve 'bankability' of large projects

Fast Track to Innovation (FTI)

FTI (2015-16):
€200 million

- **Pilot call: €100 million in 2015 ; €100 million in 2016**
 - Expected impact: Fast development, commercial take-up and/or wide deployment of sustainable innovative solutions
 - Time to initial market take-up no later than 3 years after the start of the project.
 - Fully bottom-up, close-to-market activities, 70% funding rate
 - Restricted to MS and AC, minimum 3, maximum 5 partners, maximum €3 m EU contribution per project
 - Eligibility: 60% of the overall project budget allocated to industry participants in the consortium or majority of industry participants
 - **Next deadline: 29 April 2015**

Participant Portal – a one-stop shop

- Call topics
- Keyword search
- NCPs !
- Expert registration
- Documents
- FAQs
- Rules for participation
- Upload project reports
- Etc.

The screenshot shows the top section of the Participant Portal website. At the top right, there are links for '(A-Z) Sitemap', 'About this site', 'Contact', 'Legal Notice', 'Search', and 'English'. The main header features the European Commission logo and the text 'RESEARCH & INNOVATION Participant Portal'. Below this is a navigation bar with links for 'HOME', 'FUNDING OPPORTUNITIES', 'HOW TO PARTICIPATE', 'EXPERTS', and 'SUPPORT'. A search bar and 'LOGIN'/'REGISTER' buttons are also present. The main content area has a banner for 'Horizon 2020 Funding Starting from 1/1/2014'. Below the banner, it states: 'On this site you can find and secure funding for research & innovation projects under the following EU programmes:'. It lists two programmes: '2014-2020 Horizon 2020 - research and innovation framework programme' and '2007-2013 7th research framework programme (FP7) and Competitiveness & Innovation Programme (CIP)'. There are two columns of user actions: 'Non-registered users' (search for funding, read the H2020 Online Manual, check if an organisation is already registered, contact support services) and 'Registered users' (submit your proposal, sign the grant, manage your project). At the bottom, there are six icons representing different portal sections: 'WHAT'S NEW?', 'FUNDING OPPORTUNITIES', 'HOW TO PARTICIPATE', 'WORK AS AN EXPERT', 'MY PERSONAL AREA', and 'INFORMATION AND SUPPORT'. The footer includes 'HORIZON 2020', 'RESEARCH ON EUROPA', 'CORDIS', 'OLAF', and '© European Communities'.

<http://ec.europa.eu/research/participants/portal>

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Thank you !

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