

# Digital Transformation, Business Models and the 2020 Enterprise

HORIZON 2020



# The Future Enterprise

- The disappearing boundaries of the Enterprise
- Everybody is an Enterprise
- Sensing, The “*WhatYouSenselsWhatYouGet*” Enterprise
- A Knowledge Commons for Enterprises

# Qualities of Being of the Future Enterprise

- Humanistic
  - Inventive
  - Agile
  - Cognizant
  - Sensing
  - Community-oriented
  - Liquid
  - Glocal
- The Operational Dimension
- Invent
  - Plan
  - Build
  - Operate
  - Monitor and manage
  - dismiss

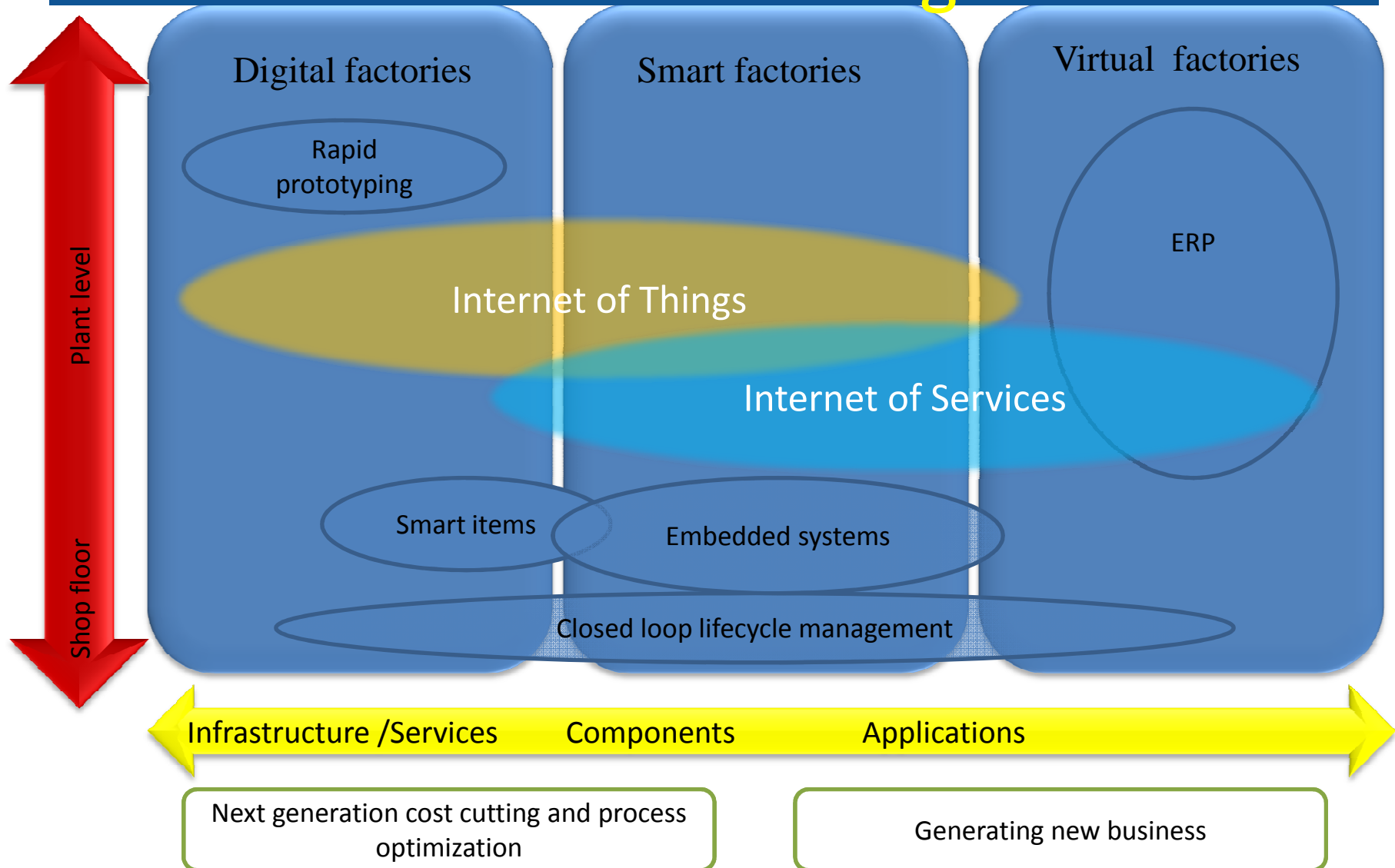
# ICT and the Future Enterprise

- Future Knowledge technologies
  - Diffused knowledge base (embedded in objects?)
  - From raw data to knowledge assets
  - Innovation-oriented knowledge assets
- Future Application technologies
  - Proactive and autonomic
  - From deterministic to fuzzy computing
  - Beyond system consistency
  - To-down problems definition and bottom-up systems aggregation
- Future Computation and Storage technologies
  - Distributing the bulk of computing & storage towards mini-, micro- and ultimately nano-modes
- Future Natural Interaction

# ICT and the Future Enterprise

- Future Internet
  - Integrating closely business and technology
- Web Entrepreneurship
  - Thriving on ideas, ambition, disruption and a 'change-the-world' commitment
- Sensing Enterprise
  - Exploiting interactions between people, their digital representations, and objects
- Digital Enterprise
  - Harnessing internal and external knowledge
- Collaborative Awareness Platforms
  - Fostering new forms of social and business innovation

# ICT: enabler of intelligent manufacturing



**Source:**

*Factories of the Future PPP: Strategic Multi-annual Roadmap (2010)*, [http://www.manufuture.org/manufacturing/wp-content/uploads/FoF\\_PPP\\_Roadmap\\_Final\\_Version.pdf](http://www.manufuture.org/manufacturing/wp-content/uploads/FoF_PPP_Roadmap_Final_Version.pdf)

# EUROPE 2020:

## A EU strategy for smart, sustainable and inclusive growth

- **Smart Growth:** knowledge and innovation economy
- **Sustainable growth:** greener and competitive economy
- **Inclusive growth:** high employment, knowledge, people, and social and territorial cohesion

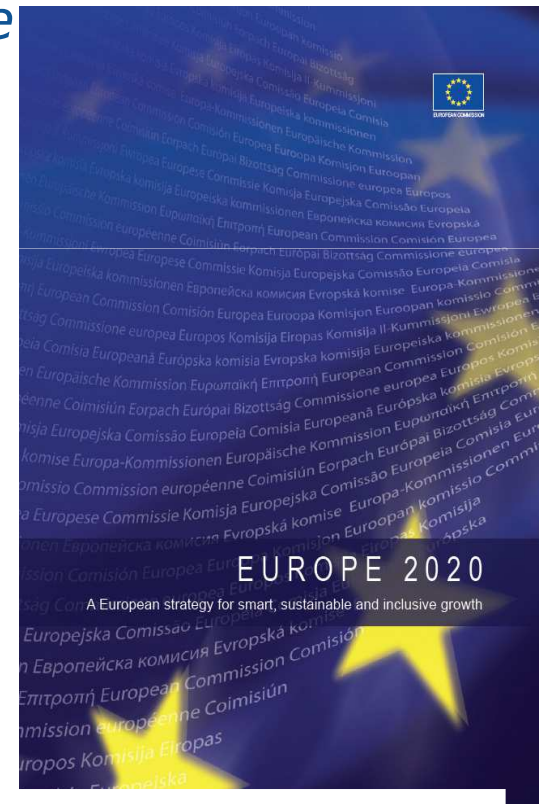


5 EU Targets – translated into national ones

7 Flagship initiatives – EU & national action

COMMUNICATION FROM THE COMMISSION COM(2010) 2020

<http://ec.europa.eu/eu2020/pdf/COMPLET%20EN%20BARROSO%20%20%20007%20-%20Europe%202020%20-%20EN%20version.pdf>



# 5 EU Headline Targets by 2020

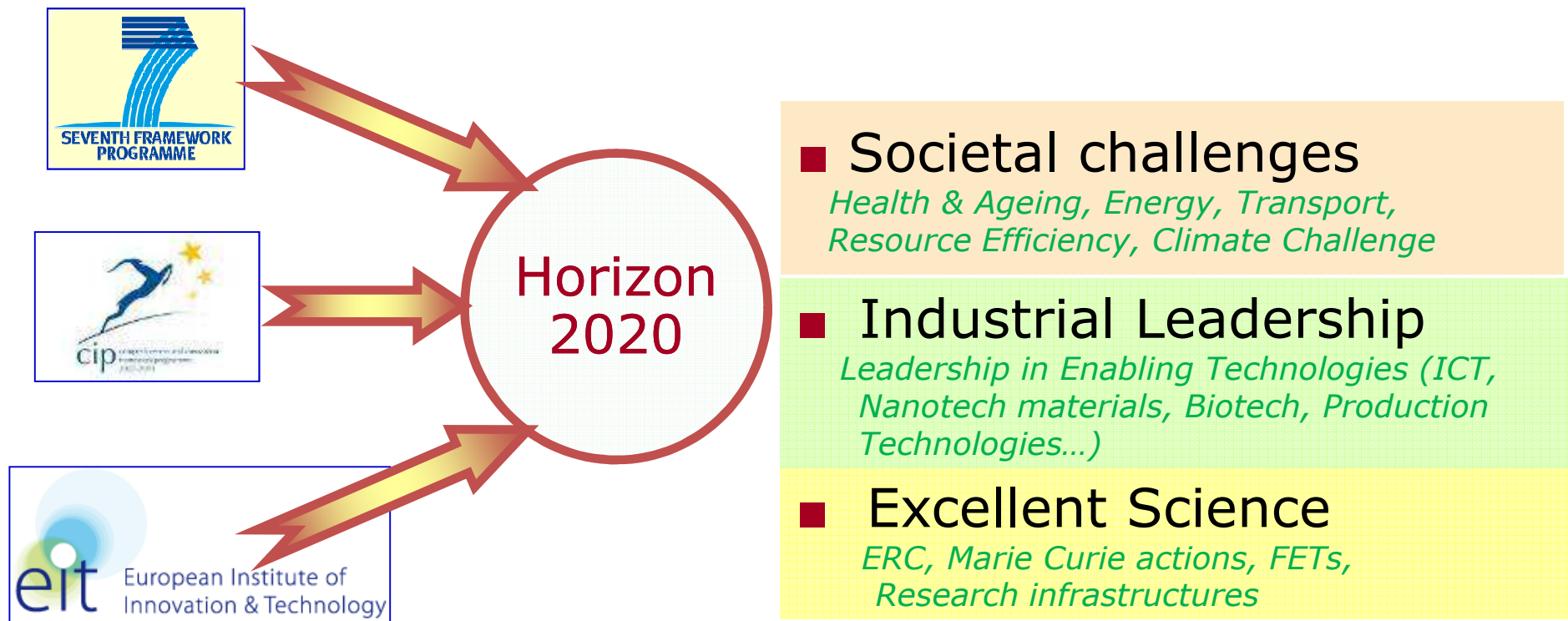
- 75 % (now 69) employment rate (% of population aged 20-64 years)
- 3% (now 1,8) Investment in R&D (% of EU's GDP)
- “20/20/20” climate/energy targets met (incl. 30% emissions reduction if conditions are right)
- < 10% (now 15) early school leavers & min. 40% (now 31) hold tertiary degree
- 20 million less people (now 80) should be at risk of poverty



# H2020

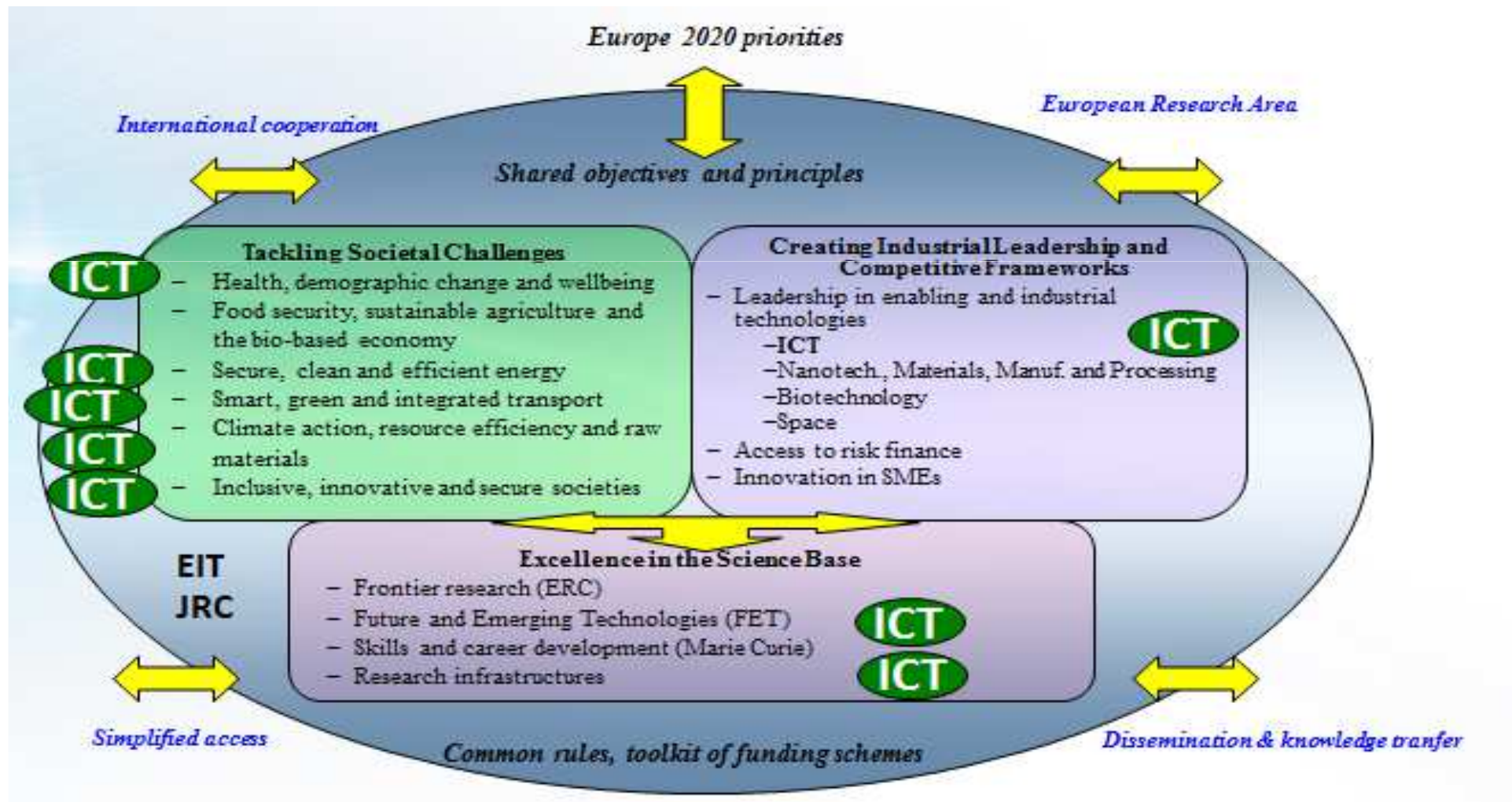
EC proposal: 77 B€

A Single Program: from ideas to the market



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

# Horizon 2020: the ICT Presence



# Contribution of ICT LEIT and ICT in Societal Challenges to Focus Areas

ICT in LEIT - Generic technologies *	ICT in Societal Challenges	Focus Areas
	ICT for self-management of <u>health</u> / in-silico medicine / ICT for active and independent living / Robotics for health and ageing care / application-specific hardware components	Personalising health and care
	ICT for end-to-end tracing of <u>food</u> / internet-enabled identifiers / data infrastructure for the food chain	Sustainable food security
	<u>Integration of ICT</u> for energy-efficient buildings, smart mobility, digital infrastructures and digital services	Smart cities and communities
	Smart grids, ICT for <u>renewable energy</u>	Low carbon economy
	<u>Energy-efficient buildings</u> / energy management tools / automation and control	Energy efficiency
	<u>Smart mobility</u> / smart vehicles / ICT for safe and efficient driving / connected vehicles / traffic management and information systems	Mobility
	ICT for <u>waste</u> management solutions	Waste
	ICT for <u>water</u> resources management	Water
	End to end <u>secure ICT systems</u> / technology for privacy and access control / risk management / critical infrastructure protection	Digital security

\* Generic ICT technologies supported in LEIT and contributing indirectly to Focus Areas

# H2020: innovation thinking embedded

- Strong support for high-tech SMEs
- More flexible instruments for RTD&I projects
  - e.g. open, light & fast, allowing for bottom-up disruptive research ideas, crowd-funding, Challenge Prizes, simpler SME contracts
- Serious, structured and strategic dialogue with Venture Capital
- Early upstream identification of projects with innovation potential

## H2020: stakeholder thinking embedded

- Principles: multi-stake-holder collaboration, sharing and empowerment
- Transparent setting of priorities
- 'Responsible Research & Innovation'; early upstream engagement
- More scope for experimentation

# Instruments in H2020

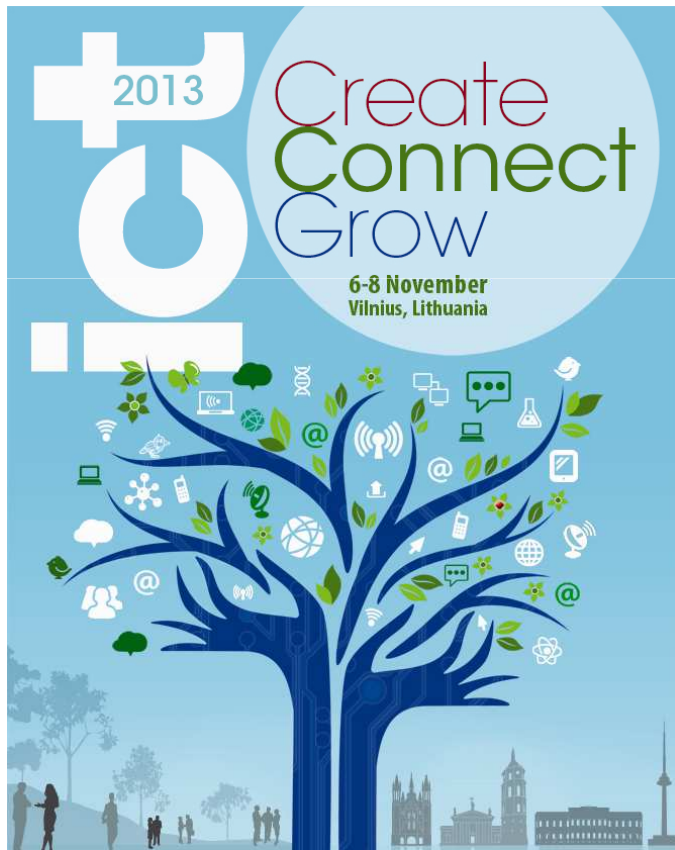
- Grants for Research and Development
  - 100% funding of all activities and participants
- Grants for Innovation
  - 70% funding of all activities and participants
- Support and Coordination Actions
- Programme Co-funding Actions
- SME-Instrument
  - Instrument to support specific SME activities in three phases
- Pre-Commercial Procurement (PCP)
  - Steer development to public sector needs
- Public Procurement of Innovative Solutions (PPI)
  - First buyer for innovative solutions
- Prizes
  - Support for two key categories of prizes (recognition and inducement)

# Framework conditions for competitiveness

- Digital Single Market
  - Fiscal regime, tax incentives and venture capital
  - IPR
  - Tackling fragmentation of EU commercial legislation
  - State Aid 2.0
- Coalition for ICT Skills
- Create stronger people networks in Europe
- Regional dimension

# ICT 2013 event

ICT 2013: Create, Connect, Grow  
6-8 November 2013, Vilnius



Aim of the event:

ICT in Horizon 2020 - the EU's Framework Programme for Research and Innovation for 2014-2020.

Structure of the event :

- conference,
- exhibition,
- networking.

Registration:

Open from the end of April 2013

<http://ec.europa.eu/ictevent>



# THANK YOU

😊 **And engage in an exciting future.** 😊



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