

# **Factories of the Future Horizon 2020: LEIT – ICT WP2016-17**

## **FoF-12-2017: ICT Innovation for Manufacturing SMEs (I4MS)**

**Francesca Flamigni**

**Unit A3 - Complex Systems and Advanced Computing**

**Directorate general for Communication Networks, Content and  
Technology**



# FoF PPP in Work Programme 2016-2017

**FoF-11-2016: Digital automation**

**FoF-12-2017: ICT Innovation for  
Manufacturing SMEs (I4MS)**

[Francesca.Flamigni@ec.europa.eu](mailto:Francesca.Flamigni@ec.europa.eu)

[Danuta.Seredynska@ec.europa.eu](mailto:Danuta.Seredynska@ec.europa.eu)

[Clemens.Zielonka@ec.europa.eu](mailto:Clemens.Zielonka@ec.europa.eu)

**FoF-13-2016: Photonics Laser based  
production**

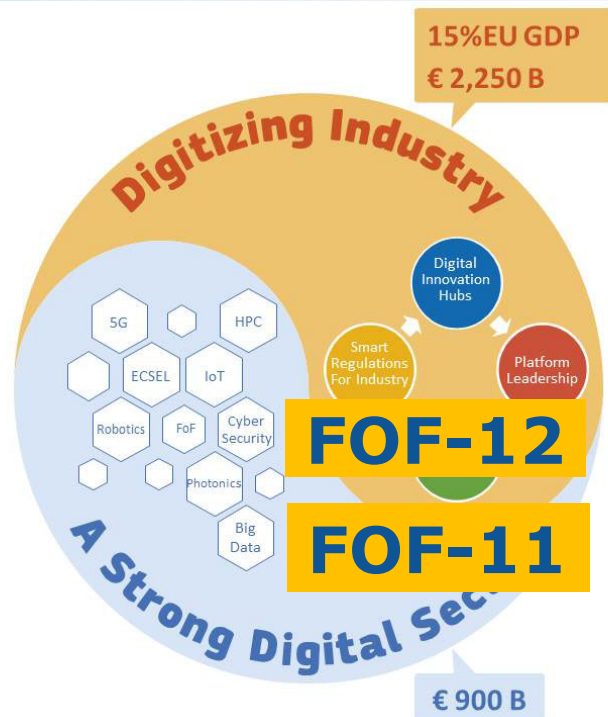
[Christoph.helmrath@ec.europa.eu](mailto:Christoph.helmrath@ec.europa.eu)

[CNECT-FOF@ec.europa.eu](mailto:CNECT-FOF@ec.europa.eu)

Direct Contribution to FoF PPP (driven by EFFRA Roadmap)  
Indirect Contribution to SPIRE PPP



# Towards a Digitising European Industry strategy



Commissioner Oettinger

1. Develop Digital Innovation Hubs
2. Leadership in digital platforms for industry
3. Closing the digital skills gap
4. Framework conditions for smart industry

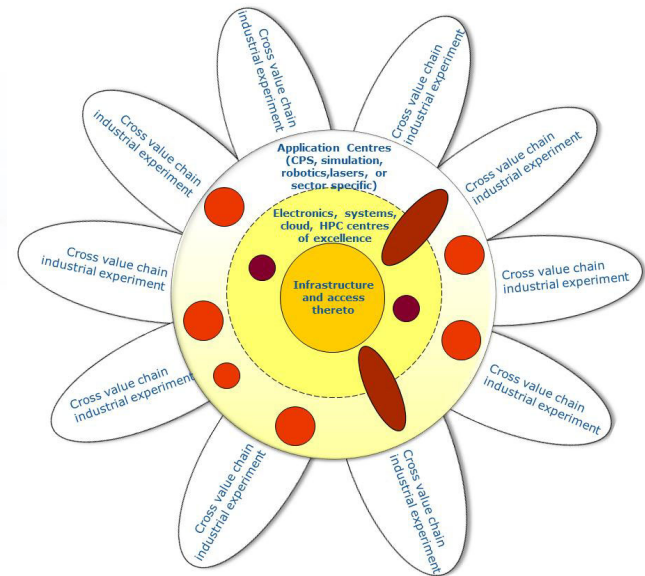
<http://ec.europa.eu/digital-agenda/en/digitising-european-industry>

# FOF 12 - ICT Innovation for Manufacturing SMEs (I4MS) – Phase 3

## Scope:

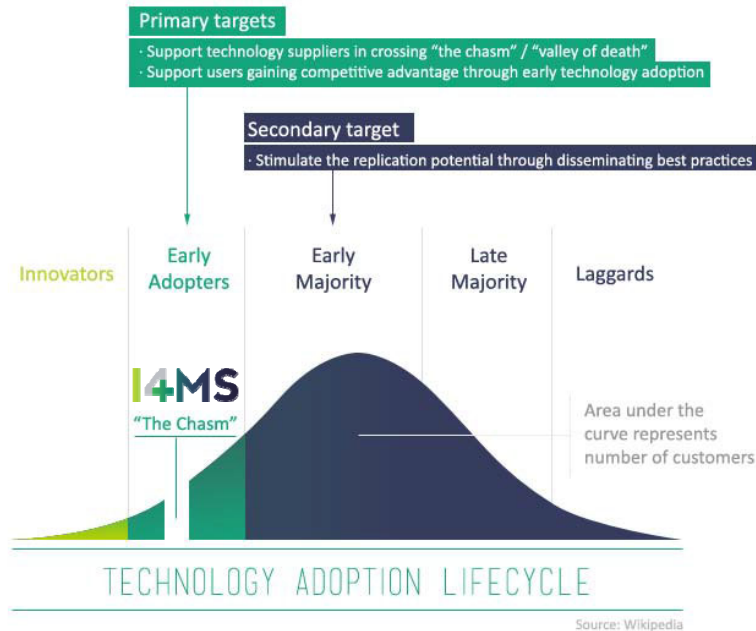
- To take-up advances in ICT in manufacturing
- Strengthen SMEs by adopting new business models and/or service model
- Call deadline: 19 January 2017

[www.i4ms.eu](http://www.i4ms.eu)



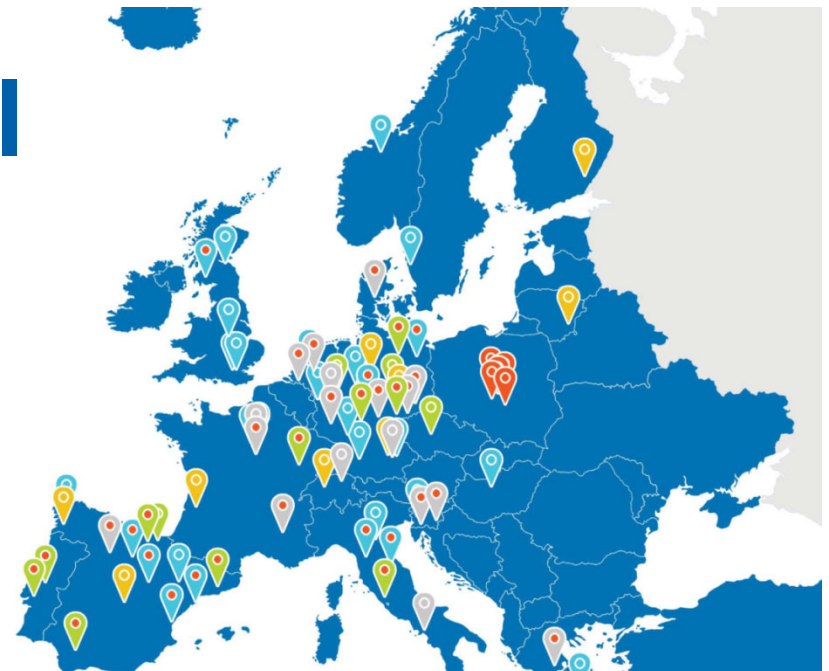


# I4MS in a nutshell



## Objective:

Enhancing digital transformation in Manufacturing SMEs and mid-caps



- ☐ Phase 1 + 2: 75 + 35 M€ of EU funding
- ☐ 7 + 4 large projects
- ☐ 40 + 30 competence centres
- ☐ 140 + 80 experiments
- ☐ 22 Members States and Ass. Countries
- ☐ Focus on 4 areas of ICT adoption in the FoF:
  - HPC cloud-based modelling, simulation and analytics services
  - Industrial robotics systems
  - Laser-based manufacturing
  - Smart sensors systems, CPS and IoT

I4MS is part of the Factories of the Future PPP

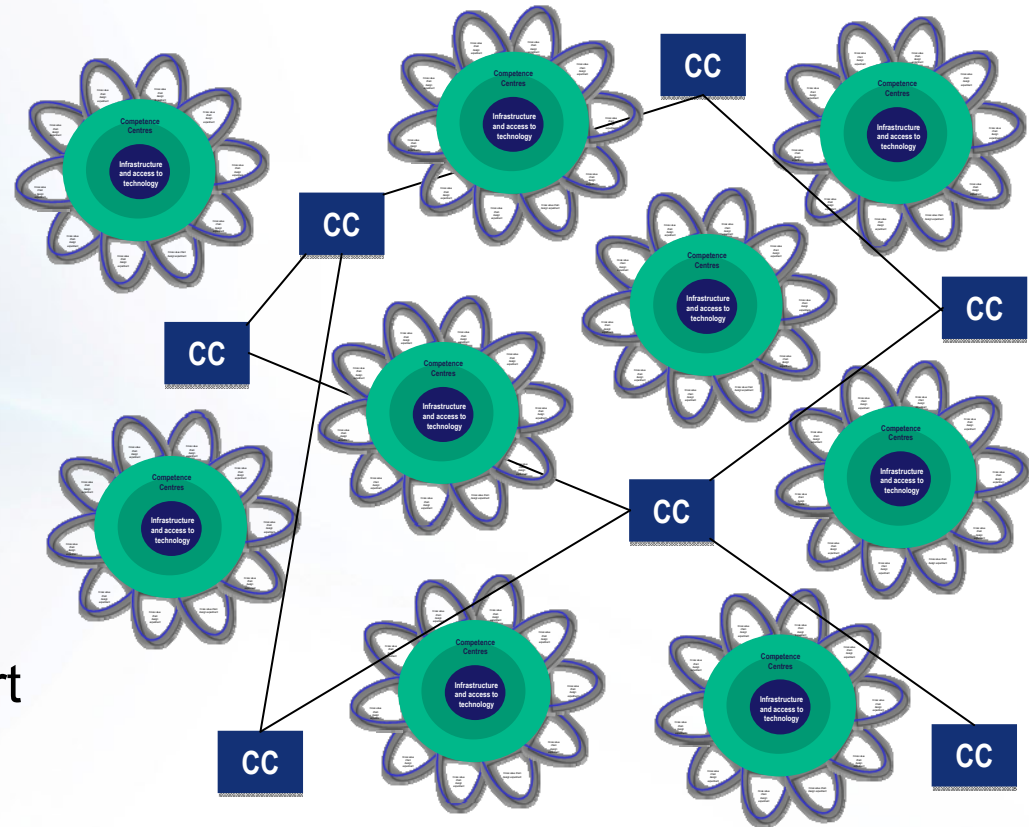
# EU-wide network of Competence Centres

## Acting as the heart of Digital Innovation Hubs

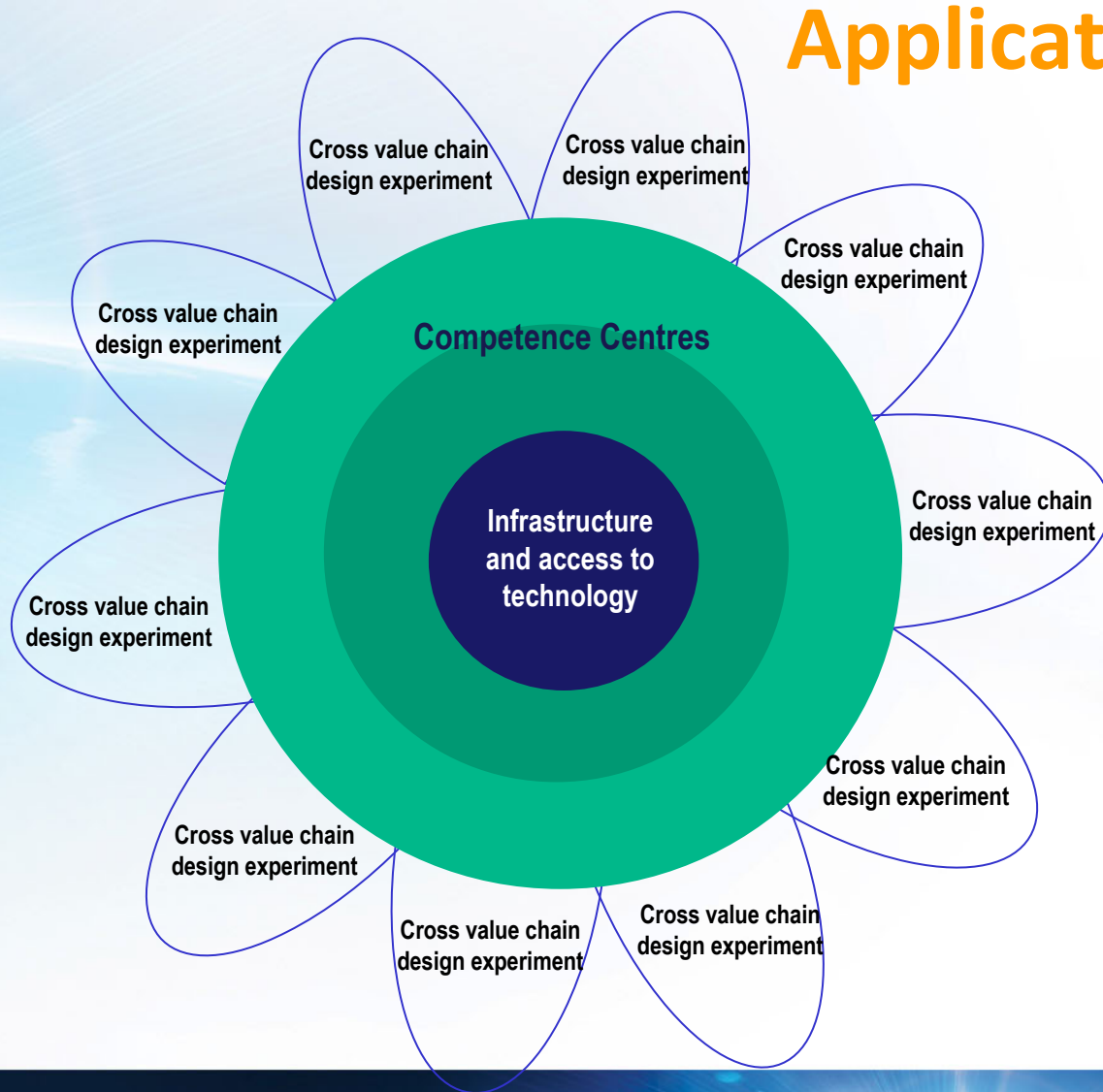
### Competence Centres

- Access to technology through marketplaces
- Service for developing products
- Brokers between suppliers and users

- Builds on regional strengths/smart specialisation
- Flexible and scalable
- H2020 funding can be augmented with
  - regional/structural funds, e.g. ESIF



# Critical Mass of Cross-Border Application Experiments



- **Develop novel products or services with digital technologies.**
- **Bring together actors along value chain.**
- **Suppliers to assist new users in customising and applying digital technologies in their environment.**
- **Financial support to third parties may be used for flexibility**

# FOF 12 – I4MS - Scope Innovation Actions

Innovation Action Proposals should address 3 aspects

1. Establish a **network of competence centres** offering **marketplaces for companies** that want to experiment with digital technologies in manufacturing of discrete or continuous goods. Link with regional innovation hubs.
2. Carrying out a critical mass of **cross-border experiments** bringing together key actors across the full value chain to customise the technologies according to the requirements of new users.
3. Activities to achieve **long-term sustainability** of one-stop shop/market place services by competence centres and the eco-system. Investors should be attracted to support business development of SMEs and mid-caps.

- ✓ collaborate on reinforcing I4MS ecosystem,
- ✓ establish links to related activities, e.g. in the IoT Focus Area, ECSEL, SPARC, Big Data PPPs.



# Dynamic and organic growth of Europe-wide innovation ecosystems

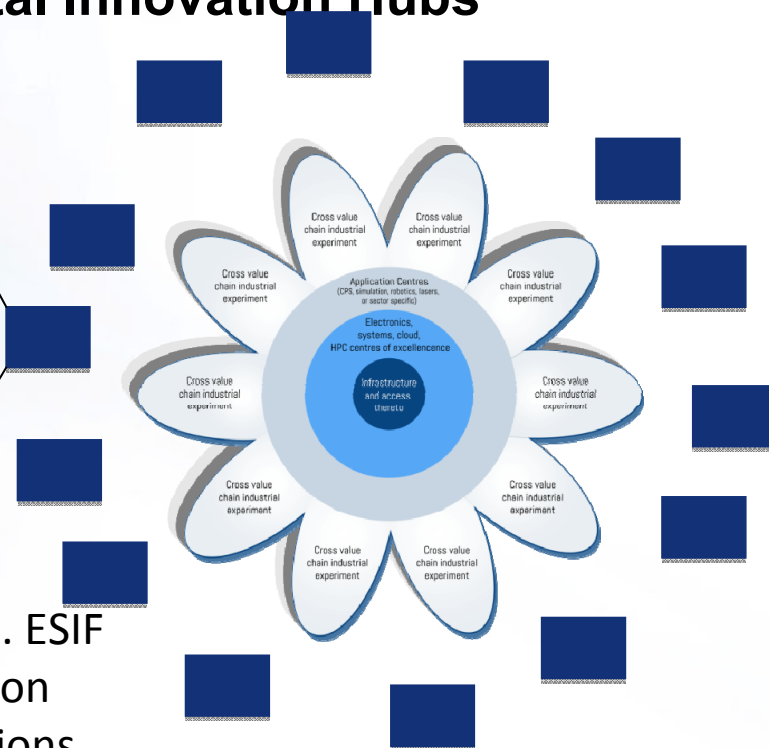
Existing and emerging EU networks of competence centres  
**can be complemented by**

## Satellite Nodes / Digital Innovation Hubs

### Regional Satellite Nodes/Projects

- Feasibility studies
- Best practice experiments
- Local dissemination
- Skills development
- Infrastructure provisioning

- Funded through regional/structural funds, e.g. ESIF
- Focus on regional strengths/smart specialisation
- Support actions complementary to H2020 actions
- Flexibility/little synchronisation needs



# Mechanism used in I4MS

- ❑ Bootstrap innovation hubs in "non-I4MS regions"

- **RTOs, academia**

- ❑ Mechanisms:

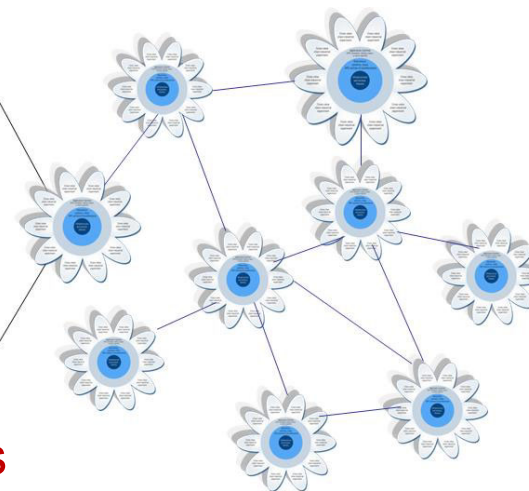
1. **Call for expression of interest (Eoi) for new hubs**
2. **I4MS competence centres as **mentors** each launch 5 **sponsoring** contracts (30-50k€)**

- ❑ Role of Mentoring & Sponsorship actions

- **Investigate digital needs of regional smart specialisation**
  - **Link needs to I4MS projects and competences**
  - **3 feasibility studies for Best Practice experiments**
  - **Establish links with local funding bodies**

## Regional Nodes/Projects

- Feasibility studies
- Best practice experiments
- Local dissemination
- Skills development
- Infrastructure provisioning



# Open call: Part K of the General Annexes & Article 15 of MGA

Proposals shall clearly detail the objectives and results to be obtained from the financial support to third parties, and include at least:

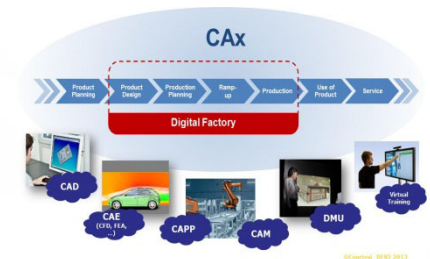
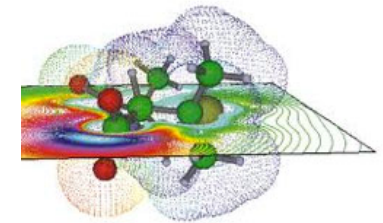
- A closed list of the different types of activities supported
- Persons or categories of persons supported
- Criteria for award of support
- How to calculate the exact amount of support (for instance 70% of total costs)
- Maximum amount of support for each party (typically 20-100K€ per party. If more than 60K€ is necessary, this needs to be explained in the proposal).

**Winners of the open call will become third parties, and not beneficiaries of the project!**

# What we ask for : Innovation Actions in one or more of the following areas of technologies

IA  
70%

1. Integration of **CPS and IoT concepts** in smart production environments
2. **Robotics systems** cost effective at lower lot sizes
3. **HPC Cloud-based** modelling, simulation and analytics services focusing on sustained service models and real-time support
4. **Digital design for additive Manufacturing** focusing on link between design tools and production



Large projects (5-8 M€)

Budget  
32 M€

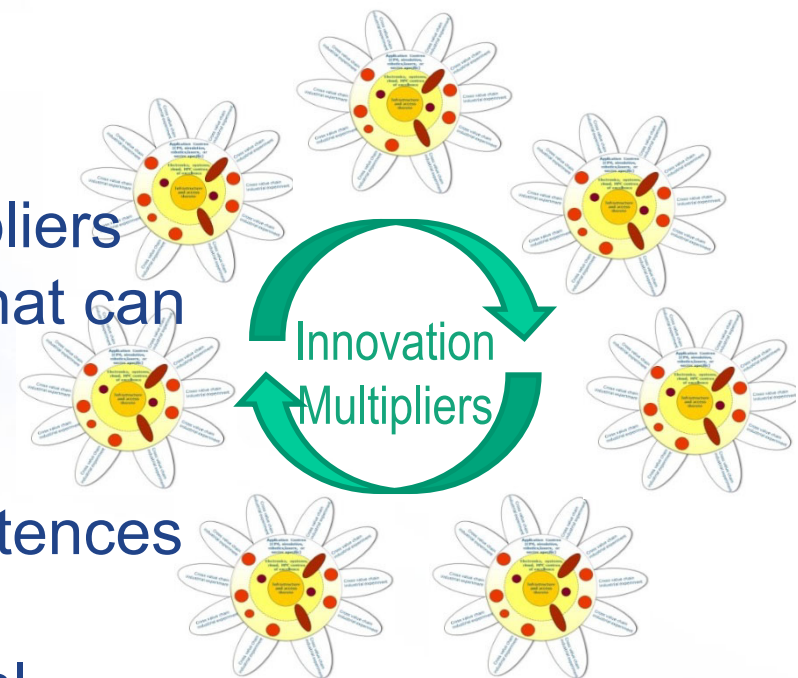


# What we ask for : Coordination and Support Action

Scope: To advance the I4MS Ecosystem

- Single portal for newcomers
- Sharing of best practices
- Dissemination
- Brokering between users and suppliers
- Identifying new ICT technologies that can benefit from I4MS scheme
- Levering further investment
  - mapping and matching competences in and between regions
  - linking up with regional/national initiatives

Budget  
1 M€



Close cooperation with  
European Factories of the  
Future Association (EFFRA)

## Expected Impacts:

Address **all** of the following impact criteria **providing metrics to measure success** when appropriate

- Exploration of new application areas for advanced ICT in manufacturing at large, a significant number of new users, in particular SMEs and Mid-caps
- More innovative and competitive technology suppliers, in particular SMEs
- More competitive European service providers through provisioning of new types of services and strengthening the presence on local markets
- Creation of a self-sustainable ecosystem of competence centers, users and suppliers covering a large number of regions and their smart specialisation
- A critical mass of pan European experiments covering the whole value chain to demonstrate innovative and sustainable business models

# THANK YOU!

Digitising European Industry:

<http://ec.europa.eu/digital-agenda/en/digitising-european-industry>

Horizon 2020 on the web:

[http://ec.europa.eu/research/horizon2020/index\\_en.cfm](http://ec.europa.eu/research/horizon2020/index_en.cfm)

Factories of the Future (FoF) on the web:

<https://ec.europa.eu/digital-agenda/en/factories-future>

ICT Innovation for Manufacturing SMEs: [i4ms.eu](http://i4ms.eu)

Structural Funds 2014-2020 and Smart Specialisation:

[http://ec.europa.eu/regional\\_policy/index\\_en.cfm](http://ec.europa.eu/regional_policy/index_en.cfm)



HORIZON 2020

