FIREweek
Barcelona
2010

FIRE and the way forward

Per Blixt
Head of Unit
European Commission - DG INFSO
New Paradigms and Experimental Facilities
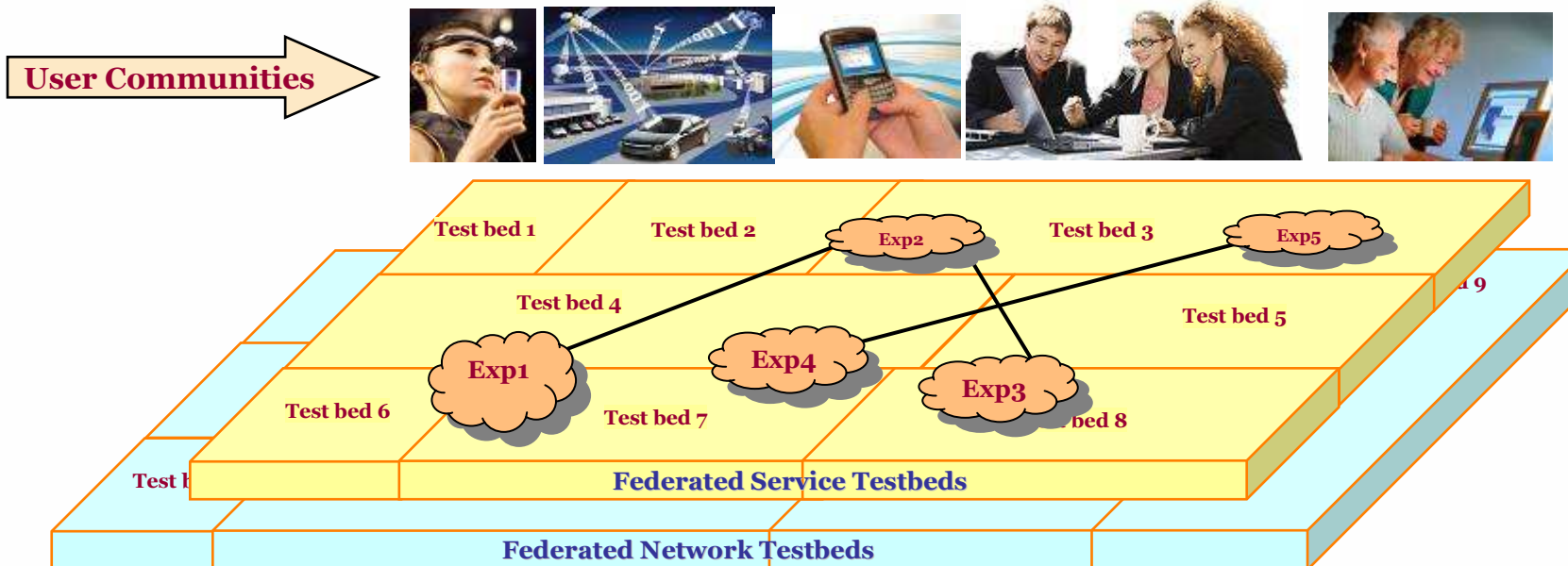
FIRE
Future Internet Research & Experimentation

- Supporting research and innovation on new network and service architectures
- Predict behaviour and assess non-technical impact: economic, societal, energy, environmental

FIRE Research

validation

Research — Large Scale Experiment.

requirements

FIRE Experimental Facility

User Communities

Test bed 1   Test bed 2   Exp2   Test bed 3   Exp5

Test bed 4   Test bed 5

Exp1   Exp4   Exp3

Test bed 6   Test bed 7   bed 8

Federated Service Testbeds

Federated Network Testbeds

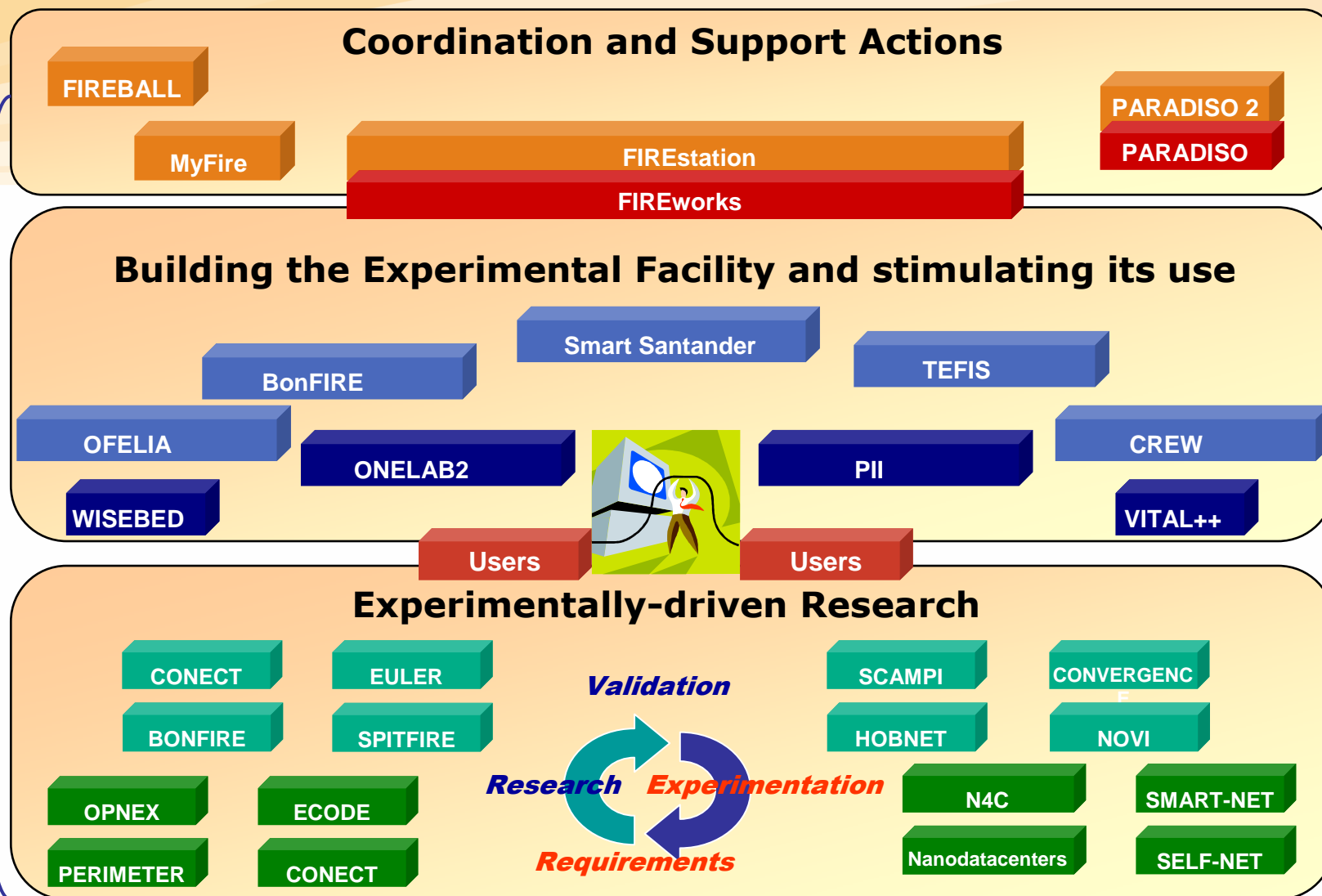## Onelab2, Federica, PII, and Wisebed are offering their prototype services

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FIRE projects

17 new projects, 50 M€ - Call 5 (tentative)

14 projects, 40 M€ - Call 2

Coordination and Support Actions

FIREBALL

MyFire

FIREstation

FIREworks

PARADISO 2

PARADISO

Building the Experimental Facility and stimulating its use

Smart Santander

BonFIRE

TEFIS

OFELIA

ONELAB2

PII

CREW

WISEBED

VITAL++

Users

Users

Experimentally-driven Research

CONECT

EULER

SCAMPI

CONVERGENCE

BONFIRE

SPITFIRE

HOBNET

NOVI

OPNEX

ECODE

N4C

SMART-NET

PERIMETER

CONECT

Nanodatacenters

SELF-NET

Validation

Research *Experimentation*

Requirements

Facility Projects IPs Call 5	Focused project Call 5 STREPs	Coordination & support actions Call 5
Facility projects IPs&STREPs Call 2	Facility projects Call 2 STREPs	Coordination & support actions Call 2

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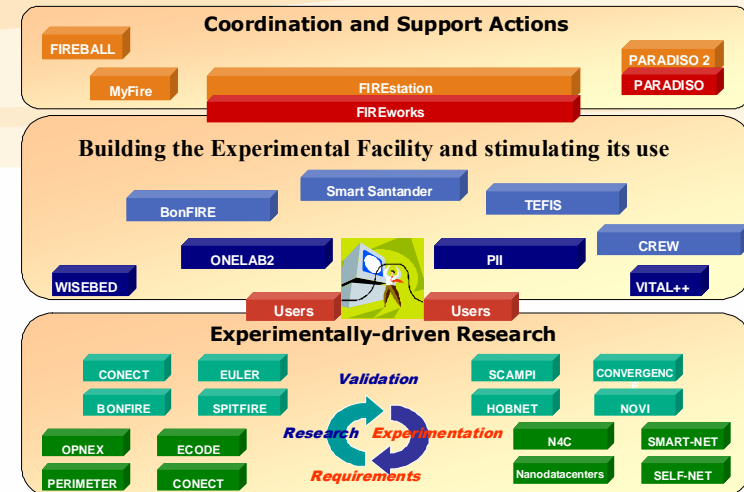Information Society and Media

Information on Call 5 is tentative – contracts are under negotiation, tentative start in summer 2010
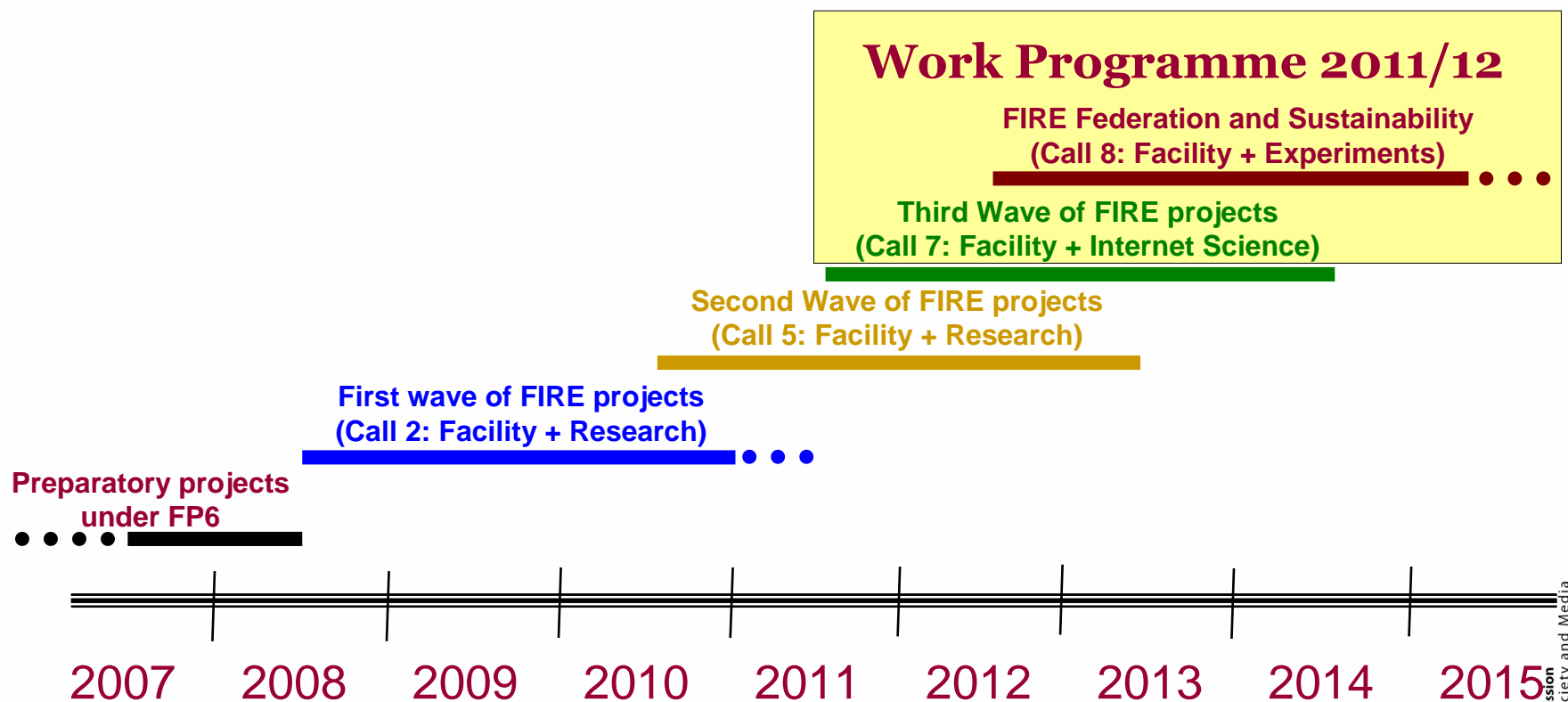
What is new with the 2nd wave of FIRE projects?

- Expanded scope related to networking and far beyond:
  - Service architectures and clouds
  - Sensor Networks
  - Networking: cognitive radio, open flow
- Increased emphasis on system level
  - Selected FIRE research projects focus on system-level testing
  - System-level testing is considered the Grand Challenge
- Support for demand-driven open federation of facilities
  - Joint architecture board moderated by FIREstation
- Improved user friendliness
  - Joint portal for first level experimenter support
  - Joint working group on issues such as user friendliness, etc.
- Massive stimulation of users/experimenters:
  - 20% of the budget in each new facility projects reserved for innovative experiments Calls by projects – mostly in 2011

Coordination and Support Actions

FIREBALL   MyFire   FIREstation   FIREworks   PARADISO 2   PARADISO

Building the Experimental Facility and stimulating its use

BonFIRE   Smart Santander   TEFIS   ONELAB2   PII   CREW   WISEBED   VITAL++   Users   Users

Experimentally-driven Research

CONECT   EULER   Validation   SCAMPI   CONVERGENC   BONFIRE   SPITFIRE   HOBNET   NOVI   Research   Experimentation   OPNEX   ECODE   N4C   SMART-NET   PERIMETER   CONECT   Requirements   Nanodatacenters   SELF-NET

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FIRE Roadmap

Work Programme 2011/12

FIRE Federation and Sustainability
(Call 8: Facility + Experiments)

Third Wave of FIRE projects
(Call 7: Facility + Internet Science)

Second Wave of FIRE projects
(Call 5: Facility + Research)

First wave of FIRE projects
(Call 2: Facility + Research)

Preparatory projects
under FP6

2007   2008   2009   2010   2011   2012   2013   2014   2015

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FIRE plans under Work Programme 2011/12

Call 7 (tentative closing January 2011)
- Maturing and expanding the FIRE Facility (**Continuity!**)
  i. Complimentary areas
  ii. Extending and advancing early prototypes
  IPs only, 15 M€ (indicative < 5M€, indicative: minimum one IP each)
- FIRE Science (**New!**)
  - Multidisciplinary NoE in holistic FI research
  - Overcome fragmentation and integrate life and human sciences
  - 5 M€

Call 8 (tentative closing January 2012)
- FIRE Federation
  - Implement a high level federation framework for all facilities
  - Making it self-sustainable towards 2015
  - Develop credible business models assuming decrease of EU funding
  - 1 IP, 8M€
- FIRE Experimentation
  - Challenging RTD, e.g. on holistic network and service architectures
  - Innovative usage of the FIRE facility
  - STREPs only, 15 M€ (indicative: 1 - 1.5 M€ per project, 24 months

FIRE Science

A multidisciplinary Network of Excellence in holistic Future Internet research to lay the foundations of an Internet Science:

- allowing a better understanding of the complex nature of Internet networks, services and applications

- allowing their design based on desirable social, economic or environmental objectives

Objectives
overcoming sectoral fragmentation
creating an "internet scientist" profile

FIRE Challenges 2010 and beyond

- ❑ Prototypes of new FIRE facility projects by early 2011
- ❑ Collaboration of FIRE facility projects in Working Groups
  - Towards high level federation/collaboration/integration
  - Sharing a joint user-friendly customer portal
- ❑ Match the offer of FIRE with the demand by FI research
  - Promote system-level showcases
  - Proof the FIRE value in complex experimentation projects
- ❑ Establish bilateral federations between FIRE prototypes and with other EU national or intl. facilities and infrastructures
  - GEANT, German-Lab, GENI, JGN/AKARI, …
- ❑ Establish the role of FIRE in the Future Internet PPP
  - FIRE infrastructure as part of the PPP experimentation infrastructure
- ❑ Derive a sustainability model for the FIRE facility

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In conclusion

- *FIRE is growing and maturing, more collaboration and integration to establish successful federation*

- *Increase numbers of users, look for business models and sustainability*

- *Coming FIRE calls 7 and 8 including FIRE science*

- *See you in **Ghent 15 December** for the FIRE launch followed16-17/12 FIA and in Brussels already in September for ICT*

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Thanks for your attention!

More information on…..

http://cordis.europa.eu/fp7/ict/fire/home_en.html

http://ec.europa.eu/information_society/activities/livinglabs/index_en.htm
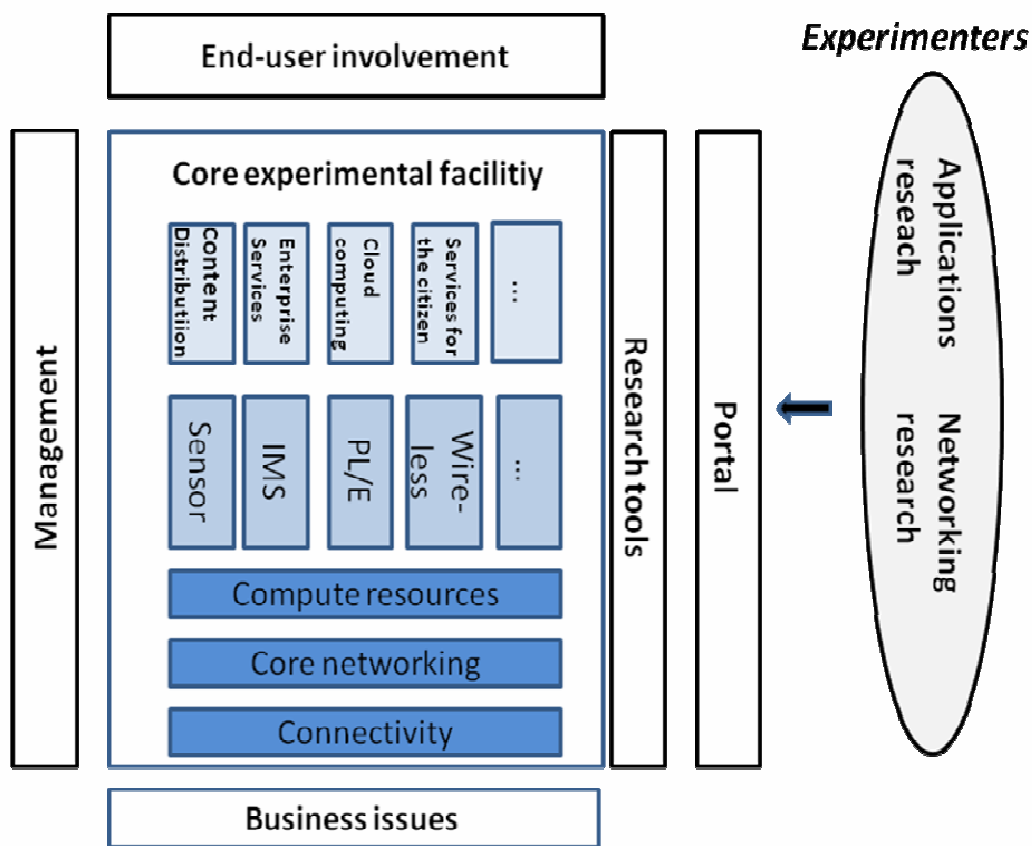
http://ec.europa.eu/information_society/policy/ipv6/index_en.htm

per.blixt@ec.europa.eu

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Towards a collaboration and high level federation structure for the FIRE Facility

Published in July 2009 by the Working Group on modular federation of FIRE Facilities

European Digital Agenda

Research & Innovation

"Fibre" Europe

Future Internet
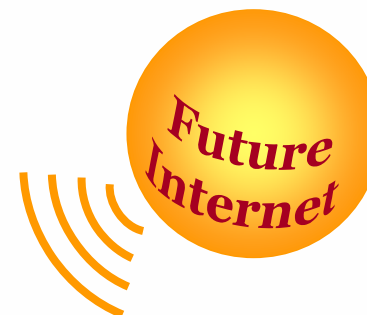
Sustainable Lifestyle

Digital Skills

Borderless Services & Content Market
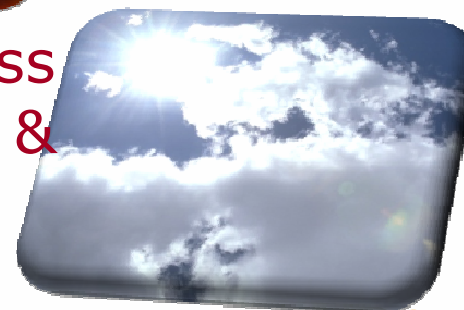
"…an ambitious **European Digital Agenda** that takes concrete steps towards the completion of an **Online Single Market** will be a key element in Europe's sustainable recovery and social development."

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