



Orientation Paper 2013

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COOPERATION

Theme 2

FOOD, AGRICULTURE AND FISHERIES, AND BIOTECHNOLOGIES

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Building bioeconomy in Europe

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

This presentation shall neither be binding nor construed as constituting commitment by the European Commission



FAFB - Activity 2.2

“Fork to farm”: Food (including sea-food), health and well being



FAFB - Activity 2.3

Life sciences, biotechnology and biochemistry for sustainable non-food products and processes



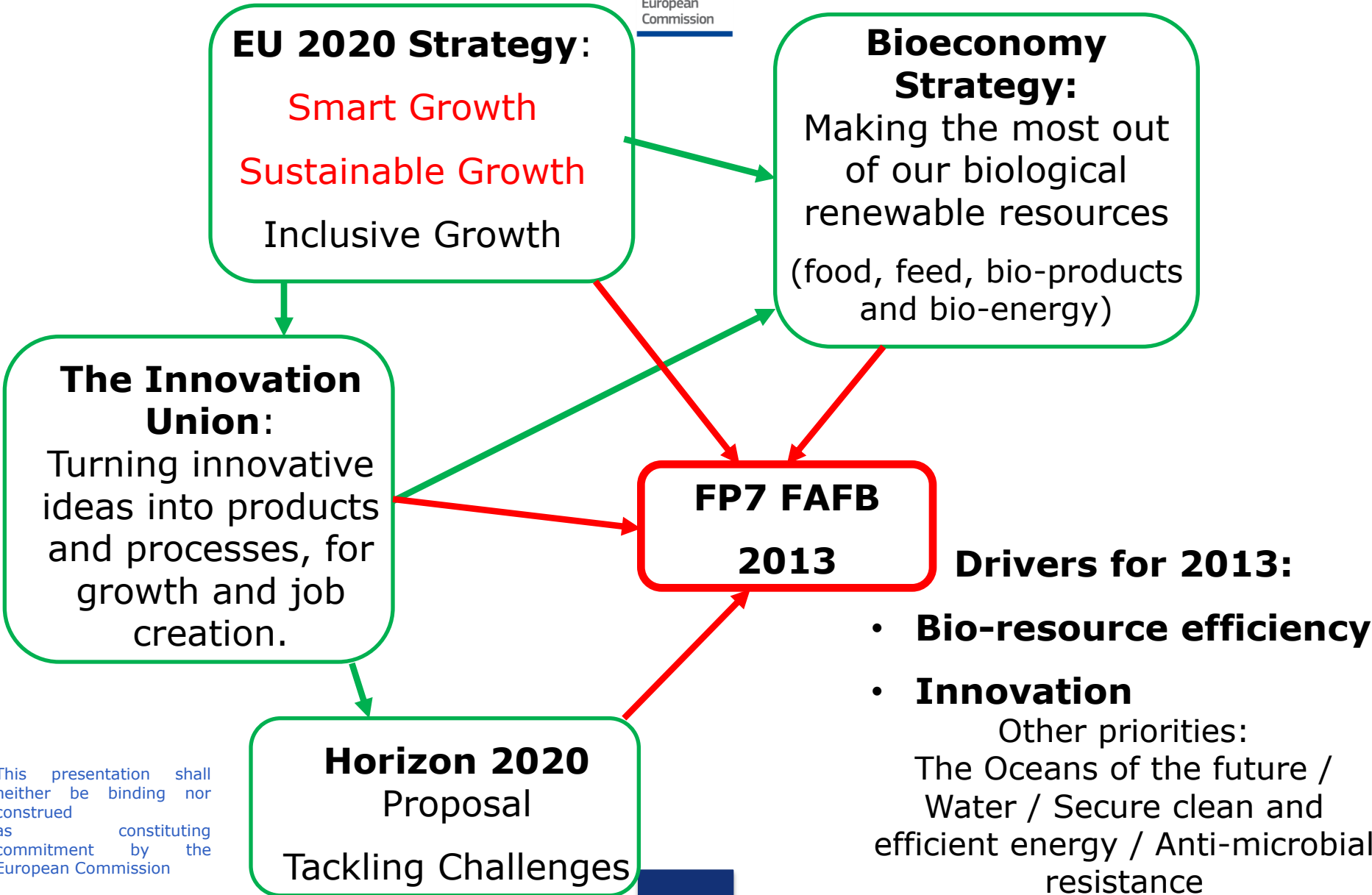
FAFB - Activity 2.1

Sustainable production and management of biological resources from land, forest and aquatic environments



Orientation Paper 2013 : non-binding document presenting priorities and orientations for EU FP7 2013 calls

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EU 2020 Strategy:

Smart Growth

Sustainable Growth

Inclusive Growth

Bioeconomy Strategy:

Making the most out of our biological renewable resources
(food, feed, bio-products and bio-energy)

The Innovation Union:

Turning innovative ideas into products and processes, for growth and job creation.

Horizon 2020 Proposal

Tackling Challenges

FP7 FAFB
2013

Drivers for 2013:

- **Bio-resource efficiency**
- **Innovation**

Other priorities:
The Oceans of the future /
Water / Secure clean and efficient energy / Anti-microbial resistance

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Regional Dimension in WP 2013

Focussing investments to foster interregional competitive advantage

Topics WP2013

Ideas, data and measures to help regions defining Smart Specialisation Strategies:

- Bioeconomy and bioregions
- Network for the transfer of knowledge on traditional foods to SMEs

5 ERA-NETs, including

- Sustainable Forest Management and Multifunctional Forestry.
- Integrated Pest Management (IPM).
- Information and Communication Technologies (ICT) and robotics for sustainable agriculture.

2 ERA-NET+, covering

- Climate smart agriculture
- Innovative solutions in organic food and agriculture

Strengthening the European Research Area



Bridging with Horizon 2020, supporting innovation

- **From FP5 to FP7 FAFB:** 5% projects → new companies
38% projects → permanent job
- **2013 FAFB reinforces this, with emphasis on “from discovery to demonstration”.** Several topics require or encourage:
 - ▶ Proof-of-concept and demonstration activities (16 topics)
e.g. demonstrating the potential of biotechnological applications
 - ▶ Knowledge transfer and dissemination actions (23 topics)
e.g. network for transfer of knowledge on traditional food to SMEs
 - ▶ Demand-side measures, such as pre-commercial procurement or standardisation activities (4 topics)
e.g. standardisation, labelling and procurement for bio-based products
- **Bottom-up approaches** with cross-cutting and cross-thematic topics, allowing for participants to freely develop their solutions to achieve the expected impact (6 topics)
e.g. generating tools and methods for synthetic biotechnology applications



Bridging with Horizon 2020, strengthening SME participation

- **In FP7 FAFB until now: SMEs = 12% of budget
16% of participants**
 - **In 2013, continued focus on strengthening industrial and SME participation:**
 - ▶ SMEs as key players to foster innovation
 - ▶ Almost 20% of budget earmarked for SME participants
 - ▶ A majority of topics have ring-fenced budget for SMEs
EU contribution for SMEs varies from 10% up to 75 % of topics' budget (27 topics)
- e.g.*
- *boosting the translation of FP projects' results into application in agriculture, forestry, fisheries and aquaculture (min 50% SMEs)*
 - *exploitation of FP projects' results in food, health and well-being by SMEs (min 75% SMEs)*



Sustainable production and management of biological resources from land, forest and aquatic environments



Agriculture & Forestry:

- Systems-wide approaches; focus on agro-ecological research, integrated concepts and production systems with a higher degree of diversity (e.g. agro-silvo-pastoral systems, intercropping).
- Focus on strategically important crops, genetic resources, and specific plant pest and diseases.
- Initiatives for forest research to foster innovation for pest control and wood mobilisation



Livestock:

- Fostering the exploitation of 'omics' technologies to support innovation in livestock breeding
- Supporting the Implementation of the Action Plan against the rising threats from AMR
- Initiatives on animal genetic diversity, health and welfare; actions on diseases and pathogens on economically important animal productions.



Sustainable production and management of biological resources from land, forest and aquatic environments



Socioeconomics:

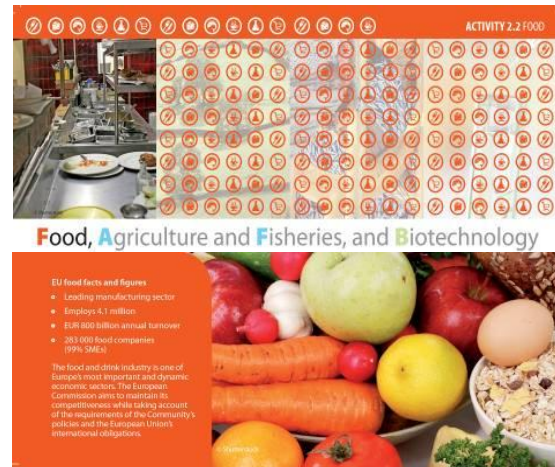
- Assessment of the EU agricultural R&I system; study on the effects of trade relations on agricultural systems in Europe and with trade partners.
- Exploitation of results of former FP projects' results



Fisheries and Aquaculture:

- Unlocking the potential of aquatic living resources, to exploit them in a sustainable way and to secure food supply: ecosystem approach to fisheries management; boosting innovation in aquaculture through fish species diversification and selective breeding.
- A new "Ocean of Tomorrow" joint call to promote R&I on marine technologies: sensors, anti-biofouling materials, and innovative transport and deployment systems for the offshore energy sector

Fork to farm: Food (including sea-food), health and well being

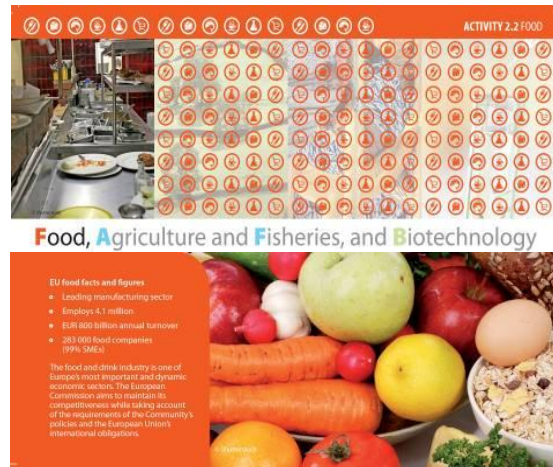


Approach:

Provision of safe, healthy, sustainable and affordable food for all, through an integrated approach:

- Understanding nutritional needs, choices and effects
- Reducing food wastage and energy and water consumption in food processing
- Reducing negative impacts on ecosystems and the environment and develop sustainable food production systems
- Enhancing the competitiveness of the European food industry and promote innovation
- Ensuring the uptake of research results

Fork to farm: Food (including sea-food), health and well being



Activities:

- Links between food and depression
- Brain function and eating behaviour and well being
- The gut microbiome, diet-related diseases and brain development
- Eradicating Vitamin D deficiency
- New, innovative sensors for food processing
- Transfer of knowledge on traditional foods to SMEs
- Assuring quality and authenticity in the food chain
- Impacts of global drivers of change on EU food security
- Saving more water and energy in food processing
- Facilitating the exploitation of FP research results by SMEs



Life sciences, biotechnology and biochemistry for sustainable non-food products and processes



Food, Agriculture and Fisheries, and Biotechnology



EU biotechnology facts and figures

- More than 2,300 companies
 - 44% of employees involved in R&D activities
 - Over EUR 21.5 billion in revenue
 - EUR 7.6 billion in R&D
- By 2010, the products of industrial biotechnology and bio-chemistry will have an estimated worth of EUR 300 billion of industrial production.

Approach:

- Promoting European industrial leadership and competitiveness in pursuit of the political agenda for growth and jobs and specifically
- Bottom up, variable geometry approach with cross-cutting and cross-thematic topics.
- Actions in support of market development of biobased products and processes
- Dedicated demonstration action to facilitate exploitation of the knowledge generated
- Bringing SMEs to the centre of the innovation cycle to increase private investment in R&I



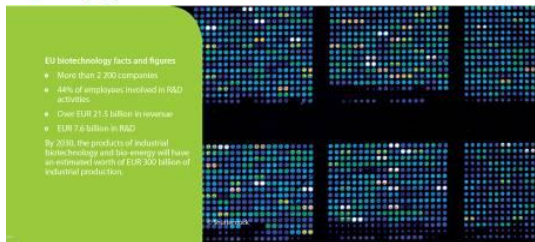
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Activities:

- Bioprospecting of terrestrial and marine diversity (in extreme or specific environments) for harnessing their huge unexploited potential for innovative industrial and environmental applications
- Developing cost-efficient and sustainable bioprocesses and biomaterials to meet industrial and societal demands with an emphasis on those showing growing market projections
- Support of emerging trends in biotechnology to maintain biotechnology at the front line of innovation



Food, Agriculture and Fisheries, and Biotechnology





- **FP7 FAFB Orientation Paper 2013 now available at:**
https://ec.europa.eu/research/participants/portal/page/fp7_documentation
→ Orientation papers 2013 → Cooperation
- **10 July: Publication of 2013 Call**
<http://ec.europa.eu/research/participants/portal/page/home>
- **16 July: Info day and brokerage event**
- **More information on the bioeconomy available at:**
<http://ec.europa.eu/research/bioeconomy>