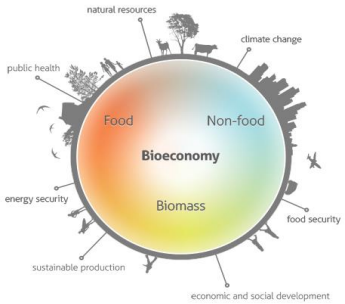
Oportunidades no Desafio Societal da Bioeconomia (DS2) em 2017

Maria João Fernandes | José Antão

Desafio Societal Bioeconomia, H2020
Pontos de Contacto Nacional

Objetivos do DS2

"Segurança alimentar, agricultura e silvicultura sustentáveis, investigação marinha, marítima e de águas interiores e a bioeconomia"



H2020 – Bioeconomy

Orçamento global (2014-2020): 3851 M€
(5% orçamento H2020)

- ✓ Garantir o abastecimento adequado de alimentos seguros e de qualidade e outros produtos de base biológica
- ✓ Desenvolver sistemas de produção primária produtivos e eficientes na utilização de recursos
- ✓ Potenciar cadeias de abastecimento competitivas e hipocarbónicas

Explorar de modo sustentável e eficiente os recursos biológicos
acelerando a transição para uma bioeconomia europeia sustentável

Entidades nacionais a participar no DS2. Bioeconomia (incl. SME Instr.)

71 participações| 9 coordenações | 14,8 M€

Ensino Superior

- COFAC - Cooperativa de Formação e Animação Cultural - CRL
- FACULDADE DE MEDICINA VETERINARIA
- Instituto Politécnico de Bragança
- **Instituto Politécnico de Coimbra (3)**
- Instituto Politécnico de Viana do Castelo
- **Instituto Superior de Agronomia (3)**
- Instituto de Geografia e Ordenamento do Território da Universidade de Lisboa
- Instituto de Tecnologia Química e Biológica da Universidade Nova de Lisboa
- Universidade de Aveiro
- Universidade de Coimbra
- Universidade de Trás-Os-Montes e Alto Douro
- **Universidade de Évora (6)** — Coordenação Nacional
- Universidade do Algarve
- Universidade do Minho
- Universidade do Porto

PME

- ACESSOMATIC - Comércio Componentes Pneumáticos Hidráulicos, e Eléctricos Lda. [SME Instr]
- Boereboom Invitro Portugal, Unipessoal, Lda. [SME Instr]
- Doiseco Unipessoal, Lda.
- **EnergyPulse Systems, Lda. (2)** [1 SME Instr]
- **UBQ II, Lda. (2)** [2 SME Instr]
- ALGAPLUS - Produção e Comercialização de Algas e seus Derivados, Lda.
- Aveleda, S.A. [SME Instr]
- BioMimetx Lda [SME Instr]
- CoolFarm, Lda. [SME Instr]
- MAGNOMICS SA [SME Instr]
- OCEANSCAN - Marine Systems & Technology, Lda.
- ORIZONVISION LDA [SME Instr]
- **Sagremarisco - Viveiros de Marisco, Lda. (2)**
- setenta e três mil e cem, lda

Outros

- ADVID - Associação para o Desenvolvimento da Viticultura Duriense
- AFVS - ASSOCIACAO FLORESTAL DO VALE DO SOUSA
- **Ciência Viva - Agência Nacional Para a Cultura Científica e Tecnológica (2)**
- Câmara Municipal de Almada
- DIRECAO-GERAL DE POLITICA DO MAR
- **Fundação Eurocean (2)**
- **Fundação para a Ciência e a Tecnologia (5)**
- SECRETARIA REGIONAL DO MAR, CIENCIA E TECNOLOGIA

Centros de investigação

- Associação do Instituto Superior Técnico para a Investigação e
- CENTRO PARA A VALORIZACAO DE RESIDUOS ASSOCIACAO
- **CIIMAR - Centro Interdisciplinar de Investigação Marinha e Ambiental (4)**
- Centro de Ciências do Mar do Algarve
- Fundação Gaspar Frutuoso
- **IMAR- Instituto do Mar (4)**
- Instituto Nacional de Investigação Agrária e Veterinária
- Instituto Português do Mar e da Atmosfera, I.P.
- Instituto de Ciência e Inovação em Engenharia Mecânica e Engenharia
- Instituto de Investigação Cientifica Tropical

Programa de Trabalho 2017 do Desafio Societal Bioeconomia

4 concursos | 51 tópicos | 416 M€

Programa de Trabalho ainda não adotado oficialmente

Sustainable food security

Blue Growth

Rural Renaissance

Bio-based innovation for sustainable goods and services

©Kzenon,45515311,fotolia.com

©nevio3,86647369,fotolia.com

©BillionPhotos,84877547,fotolia.com

[Lista de tópicos a concurso]

Deadlines:

14 Fev 2017 | 13 Set 2017

Summer update WP 2017

EN

Annex 12

Horizon 2020

Work Programme 2016 - 2017

9. Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy

Important notice on the second Horizon 2020 Work Programme

This Work Programme covers 2016 and 2017. The parts of the Work Programme that relate to 2017 (topics, dates, budget) have, with this revised version, been updated. The changes relating to this revised part are explained on the Participant Portal.

(European Commission Decision C(2016)XXX of XXX 2016)

DRAFT

HORIZON 2020 - Work Programme 2016 - 2017
Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy

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Data prevista de publicação: 26 Julho 2016

SC2 Info Day & Brokerage Event – calls 2017 → Bruxelas, Junho 2016

Apresentações e *webstream* disponíveis *online*!!

27 June – FP7-H2020 Dissemination event	
All applicants	Example of past and on-going projects of relevance to calls 2017

↓

28 June morning - Info Day	
All applicants	Practical information – Tips and tricks Topic presentations with Q&A

↓

28 June afternoon – Brokerage event by 'BIOHORIZON'	
All applicants	Brokerage sessions to facilitate consortia creation

Dissemination Event & Info Day

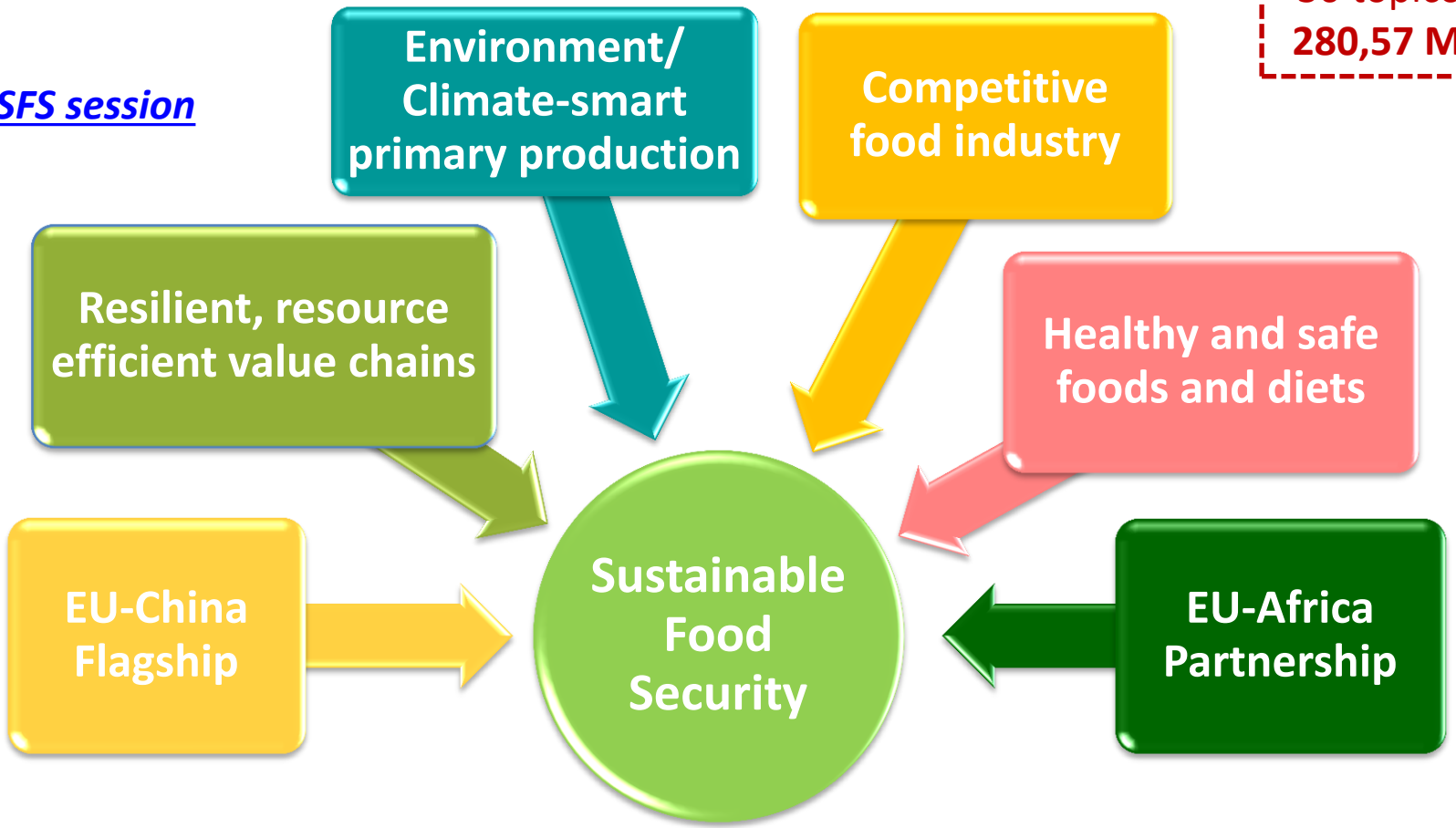
Brokerage Event

Call 'Sustainable Food Security' (WP 2016/17) → 6 áreas

Garantir a segurança alimentar, promovendo uma produção primária e uma indústria **resilientes e eficientes,** bem como o **consumo sustentável e saudável**

30 tópicos
280,57 M€

Topics SFS session

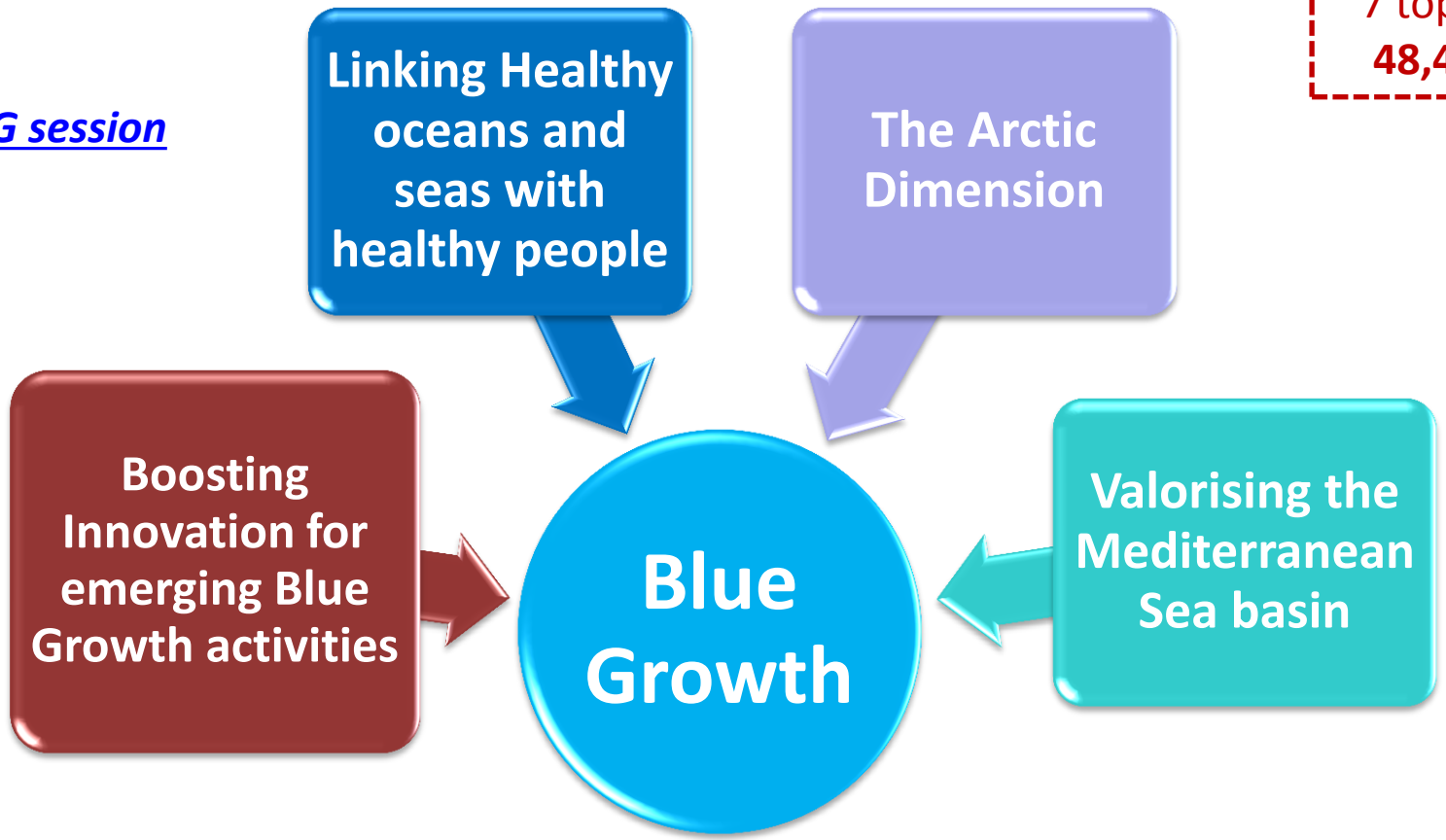


Call 'Blue Growth' (WP 2016/17) → 4 Áreas

Demonstrar o potencial de inovação dos oceanos, trazendo novas tecnologias para o mercado

7 tópicos
48,4M€

Topics BG session

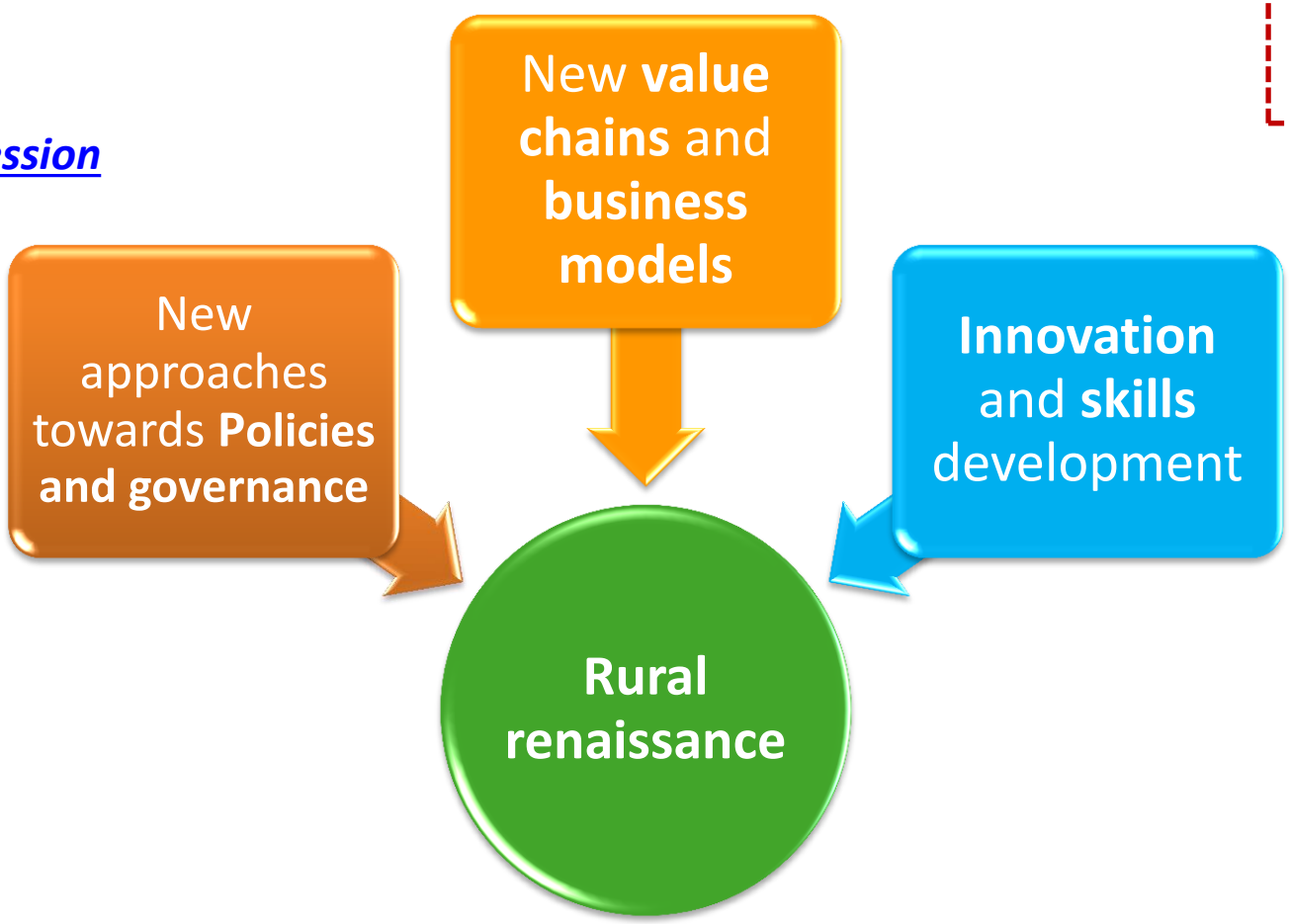


Call 'Rural Renaissance' (WP 2016/17)→ 3 Áreas

Promover a inovação e oportunidades de negócio nas áreas rurais e costeiras, através de novas perspectivas territoriais e modelos de negócio

9 tópicos
61 M€

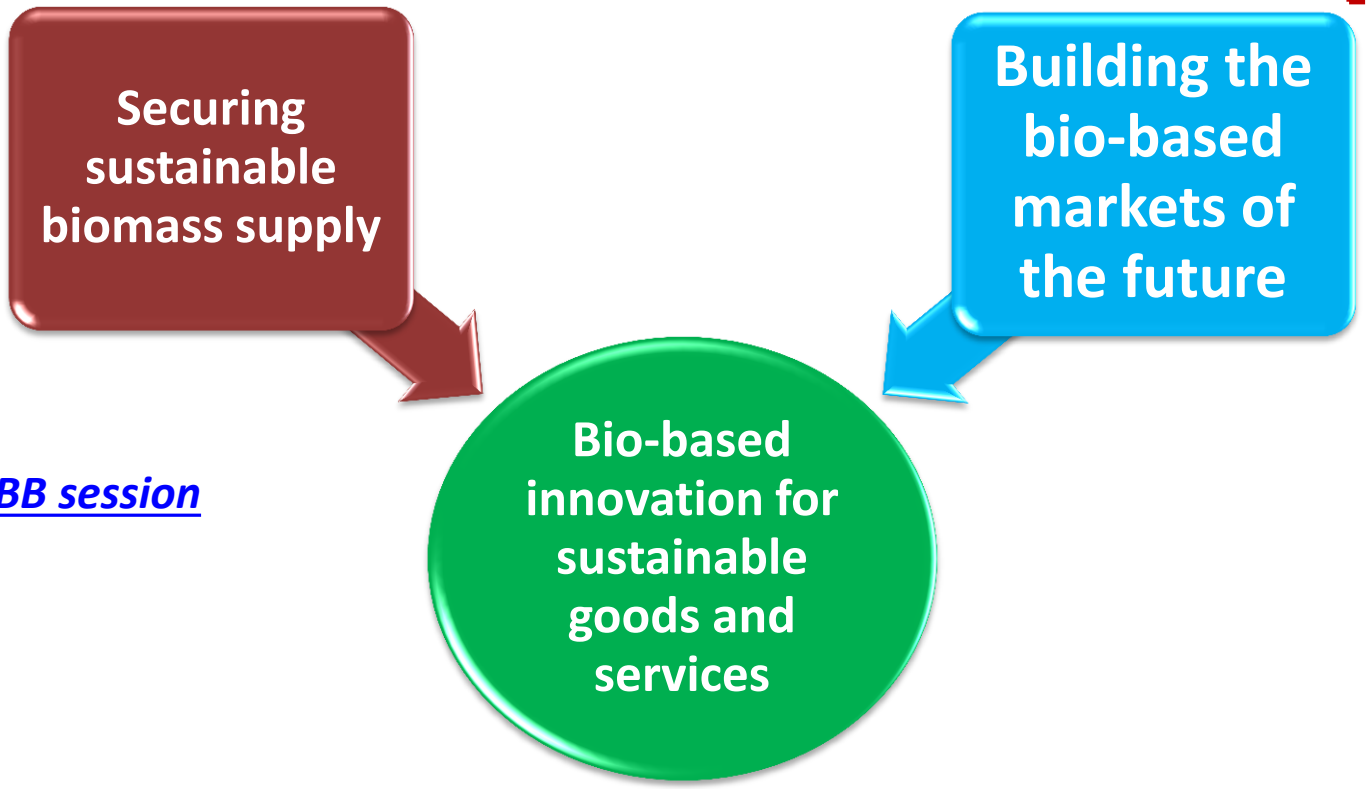
Topics RR session



Call 'Bio-based innovation for sustainable goods and services' (*WP* 2016/17) → 2 Áreas

Re-industrializar a Europa, através de novas cadeias de valor de base biológica, assegurando biomassa sustentável

5 tópicos
26,47 M€



Topics BB session

H2020 | DS2 → Aspetos a considerar no Programa de Trabalho 2016/17

- ***Interdisciplinary projects:*** *involve the* ***collaboration of several disciplines*** *in which concepts, methodologies or epistemologies are* ***explicitly exchanged and integrated****, resulting in a mutual enrichment* (**SFS-39**; **SFS-40**; **BG-4**)

- ***Transdisciplinary projects:*** *those in which researchers from different fields not only work together on a common problem* ***create a shared conceptual model of the problem that integrates and transcends each of their separate disciplinary perspectives.*** (**SFS-16**; **SFS-21**; **SFS-27**; **SFS-28**; **SFS-29**; **SFS-30**; **BG-6**; **BG-11**)

- ***Multi-actor approach:*** *aims at more demand-driven innovation through the* ***genuine and sufficient involvement of various actors*** *(end-users, such as farmers, fishers, advisors, enterprises, etc)* ***all along the project*** → *the adequate choice of key actors, with complementary types of knowledge (scientific/practical)* ***should be reflected in the consortium and in the description of the project concept and result in a broad implementation of project results*** (**SFS-4**; **SFS-7**; **SFS-8**; **SFS-10**; **SFS-16**; **SFS-17**; **SFS-20**; **SFS-27**; **SFS-28**; **SFS-30**; **SFS-34**; **SFS-39**; **SFS-48**; **RUR-2**; **RUR-5**; **RUR-9**; **RUR-10**; **RUR-12**; **RUR-13**; **RUR-15**; **RUR-16**)

Parceria Europeia de Inovação para a Agricultura (*EIP-AGRI*)

EIP-AGRI

Visa **fomentar a competitividade e a sustentabilidade da agricultura e da silvicultura**, de modo a que estas atividades consigam mais com menos recursos e se desenrolem em harmonia com o ambiente.

Co-criação e troca de conhecimento em projetos de I&I

- **Projetos multi-ator:** Os utilizadores finais da investigação e os multiplicadores têm de estar estreitamente envolvidos durante todo o projeto
- **Redes temáticas:** Enfoque nas boas práticas e nos resultados de investigação que precisam ainda de ser testados e adaptados às necessidades práticas

Multi-actor approach → Elementos-chave

- **Descrição** e requisitos na **introdução do Programa de Trabalho do DS2**
- **Demonstrar** como o projeto responde às **necessidades dos utilizadores finais**
- **Envolvimento genuino** dos vários atores **ao longo de todo o projeto**, da fase de planeamento à demonstração ("inovação interativa")
- **Conhecimento prático facilmente acessível e compreensível** para os **utilizadores finais** (através dos canais de divulgação existentes e contribuição para a EIP-AGRI)

  - Produzir um número substancial de "*practice abstracts*" (formato *EIP-AGRI*)

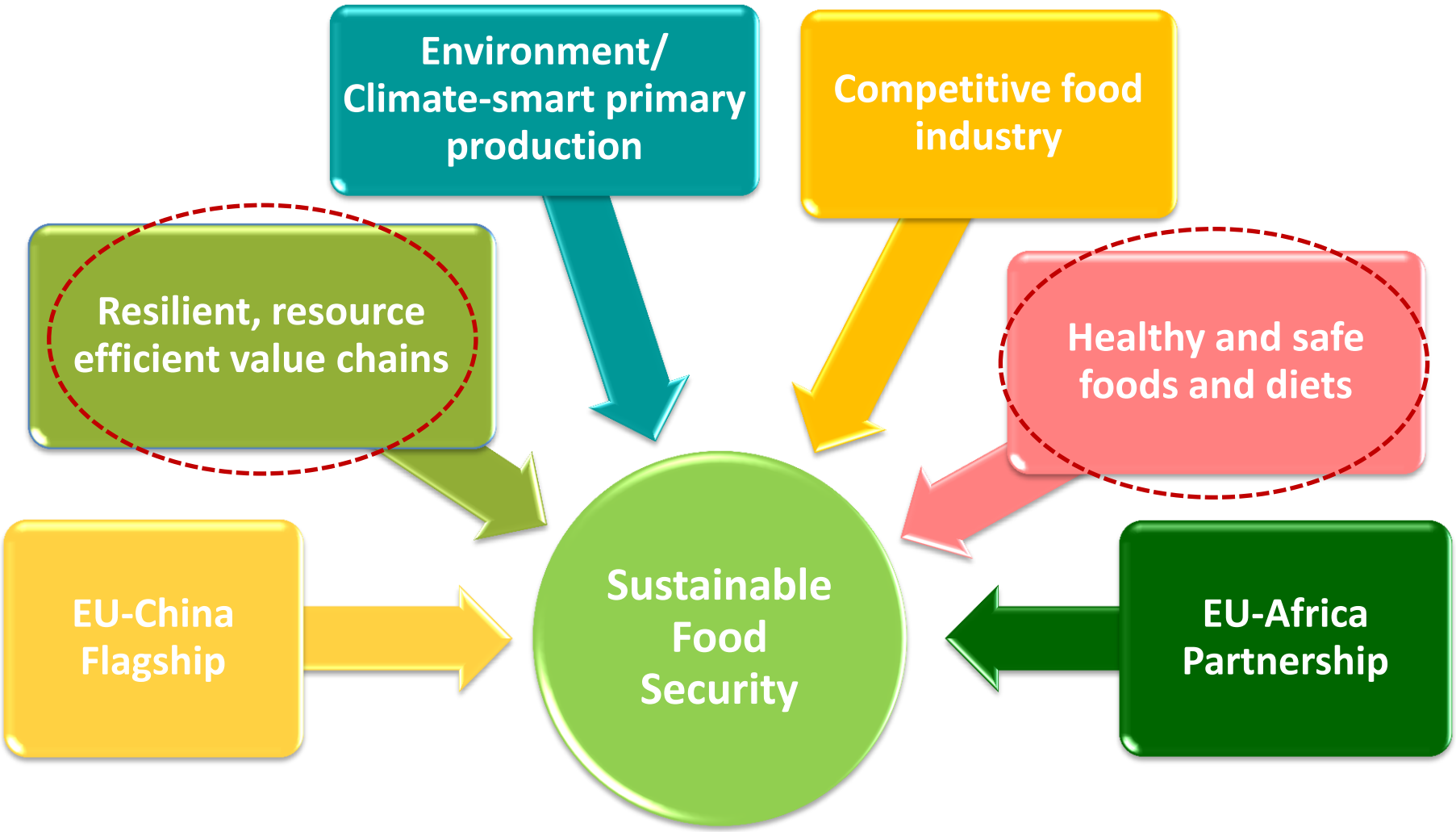
  - Forte recomendação de **ligação aos Grupos Operacionais** existentes no tema específico (financiados pelo PDR)

Workshop "Interactive innovation in motion: multi-actor projects and thematic networks under Horizon 2020"

BioHorizon webinar "practice abstracts'to facilitate contact and share information in the EU agricultural knowledge and innovation systems (AKIS)"

Call 'Sustainable Food Security' (WP 2016/17) → 6 áreas

2017 - ICT Relevant topics



ICT relevant topics in 2017

MORE RESILIENT & RESOURCE EFFICIENT VALUE CHAINS			
Tópico	Tipo proj	M€/proj	Orçamento disponível (M€)
SFS-5-2017: Robotics advances for **precision farming**	RIA (single-stage)	2-4	7

HEALTHY & SAFE FOODS & DIETS FOR ALL			
Tópico	Tipo proj	M€/proj	Orçamento disponível (M€)
SFS-39-2017: How to tackle the **childhood obesity** epidemic	RIA	10	20

SFS-05-2017:
ROBOTICS ADVANCES FOR PRECISION FARMING

***Single-stage topic* (RIA)**

70 páginas

***Deadline:* 14 Fev 2017**

SPECIFIC CHALLENGE: to help **attain high levels of precision in modern farming** through the smart use of robotics.

TECHNOLOGICAL CHALLENGE: to **develop and demonstrate new robotics technologies in real-world scenarios**, fitting user needs.

- **Current systems still have significant drawbacks**, in particular in terms of flexibility, efficiency, robustness, high operator cost and capital investment.
- There is **insufficient cross-over** between emerging generic advances in field robotics and the more specific, practical needs of the modern farming community.

SFS-05-2017:
ROBOTICS ADVANCES FOR PRECISION FARMING

SCOPE:

- Focus on the **design, development and testing of robotics systems for precision farming**, including autonomous or semi-autonomous farm vehicles or sophisticated sensors and intervention mechanisms.

- **Prioritise technologies** such as selective harvesting, more targeted weed reduction or environment friendly fertilization, and / or livestock management, based on better planning and targeted intervention, using sensors (local and aerial, even maybe earth observation satellite)

- **Traceability** to optimise the whole agriculture process (from field to fork)

SFS-05-2017:
ROBOTICS ADVANCES FOR PRECISION FARMING

IMPACT:

- Significant **increase in farm productivity** with **more environment-friendly processes** (e.g. reduced water use, toxic substance use and soil compaction)
- Increase the **safety, reliability and manageability** of **agricultural technology**
- **Improving working conditions** (reducing excessive human burden for laborious tasks)

SFS-05-2017:
ROBOTICS ADVANCES FOR PRECISION FARMING

INFORMAÇÃO ADICIONAL DE APOIO

PPP in robotics
is the teaming up of the robotics industry, research, academia and the European Commission to launch a joint research, development and innovation programme in order to strengthen the position of European robotics as a whole.

- Topic group on Agricultural Robots
- Strategic Research Agenda (SRA)
- Robotics 2020 Multi-Annual Roadmap (MAR)

Some Tips

EIP-AGRI
Focus Group “Mainstreaming Precision Farming”

SFS-39-2017:
HOW TO TACKLE THE CHILDWOOD OBESITY EPIDEMIC?

***Two-stage topic* (RIA)**

Deadlines:

14Fev2017 (1ª fase, 10 pp)

13Set2017 (2ª fase, 70 pp)

SPECIFIC CHALLENGE:

- **Childhood obesity is one of the most serious public health challenges of the 21st century** and its prevalence has increased at an alarming rate in the last decades.
- **Obese children are likely to remain obese in adulthood** and more likely to **develop noncommunicable diseases**
- An **integrated EU approach** to help reduce the impact on health of poor nutrition, excess weight and obesity **is a political objective**
- **Overweight and obesity**, as well as their related diseases, are largely **preventable**

SFS-39-2017:
HOW TO TACKLE THE CHILDWOOD OBESITY EPIDEMIC?

SCOPE:

- The main objective is to **reduce effectively childhood obesity** and its comorbidities

- **Focus** primarily on **specific target groups in the young** (e.g., during pregnancy and foetal development, in infants, toddlers, most vulnerable groups in children, adolescents)

- **Combine approaches and expertise from different disciplines** (e.g. (epi)genetics, molecular biology, microbiome, gut-brain signalling, physiology, nutrition, physical activity sciences, **information and communication technology**, social sciences and humanities, education, environment, architectural and urban design, psychology)

SFS-39-2017:
HOW TO TACKLE THE CHILDWOOD OBESITY EPIDEMIC?

SCOPE:

- Innovative and efficient strategies, tools and/or programmes for promoting sustainable and healthy dietary behaviours and lifestyles
- Reflect and build on **existing initiatives and platforms**
- **Interdisciplinary and multi-actor approaches** engaging academics, policy makers, civil society and relevant industry and market actors
- **Gender dimension** in the research content
- **International Cooperation:** US, AU, NZ, CA

SFS-39-2017:
HOW TO TACKLE THE CHILDWOOD OBESITY EPIDEMIC?

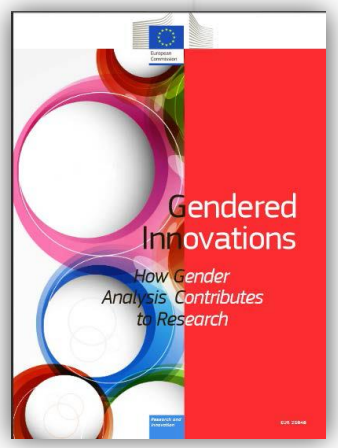
IMPACT:

- Provide an **understanding of which factors are involved and how they influence** the childhood obesity epidemic
- Provide **innovative, efficient, effective, scientific evidence-based and ready-to-use** tools, strategies and/or programmes
- **Transfer** generated knowledge and innovation **to relevant stakeholders**
- **Strengthen interdisciplinary research approaches** and foster participatory and inclusive **multi-actor approaches**

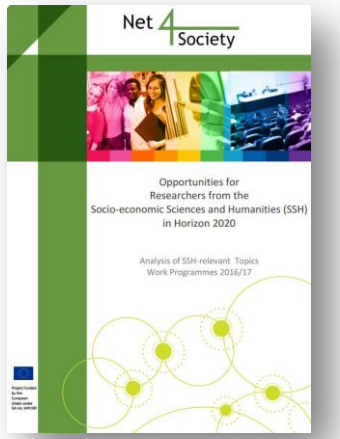
SFS-39-2017:
HOW TO TACKLE THE CHILDWOOD OBESITY EPIDEMIC?

Cross cutting issues

International Cooperation



Gendered Innovations



SSH in H2020

SFS-39-2017:
HOW TO TACKLE THE CHILDWOOD OBESITY EPIDEMIC?

INFORMAÇÃO ADICIONAL DE APOIO

- **DG SANTE**

PUBLIC HEALTH – projects on Nutrition & Physical activity

- EU Action Plan on Childhood Obesity 2014-2020
- WHO European Childhood Obesity Surveillance Initiative (COSI)
- EU Platform on Diet, Physical Activity & Health

…

EU projects:

H2020-COACH

FP7-GIFTS

FP7-I.Family

FP7-ENERGY

…

RUR-10-2017: THEMATIC NETWORKS COMPILING KNOWLEDGE READY FOR PRACTICE

***Single-stage topic* (CSA)**

2 M€/proj (até 5 projs)

70 páginas

***Deadline:* 14 Fev 2017**

SCOPE:

- **Summarising, sharing and presenting**, in a language easily understandable for agricultural/forestry practitioners, **existing best practices and research results that are near to be put in practice**, but not sufficiently known by practitioners
- **Involve a wide range of actors**, covering both science and agricultural/forestry practice on specific themes (**multi-actor approach**)
- **EIP Operational Groups** and interactive innovation groups operating in the context of the EIP-AGRI, enterprises or supply chain actors should be involved
- **Specific themes** of the networks may be **chosen 'bottom-up'** and should contribute to a more competitive and sustainable agriculture and forestry and **focussed on the most urgent needs** (**avoid duplication**)
- **Synergies/coordination** with **RUR-11-2017** & *SCAR-AKIS WG*

Explore outras oportunidades de financiamento nas suas áreas de interesse

DS2
3,8 b€
(2014-2020)

BBI-JU website

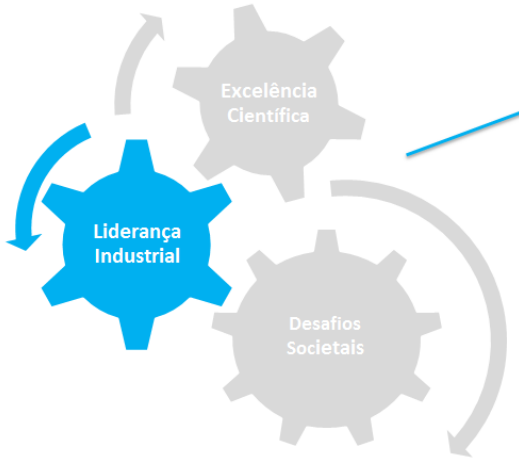
WP DS2
(2014/15; 2016/17;....)

SFS | BG | RUR | BE

Programas bianuais:
2016: 340,5 M€
2017: 416,44 M€

JTI BBI
3,705 b€ [975 M€ (UE) + 2,730 b€ (*BIC*)]

Programas anuais:
2016: 188,65 M€

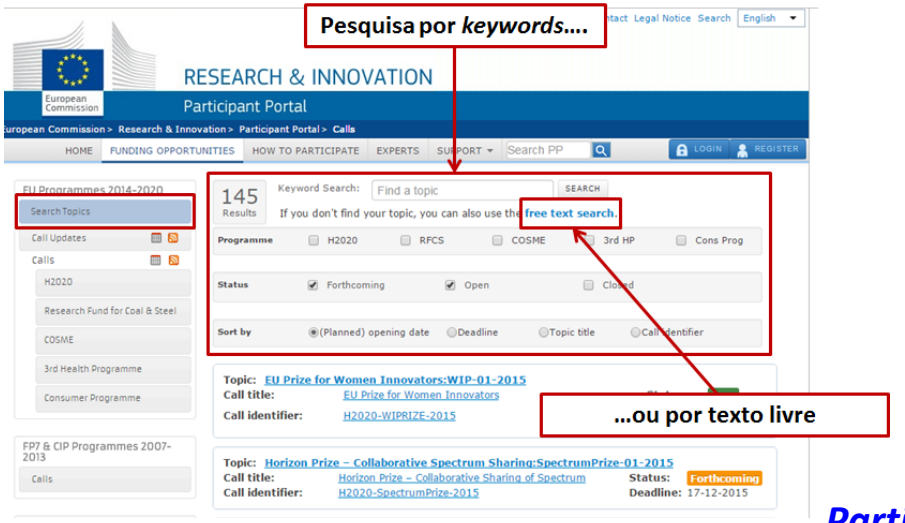


Liderança em Tecnologias Facilitadoras e Industriais (LEIT) – NMP, ICT, **Biotecnologia**, Espaço

Acesso a financiamentos de risco

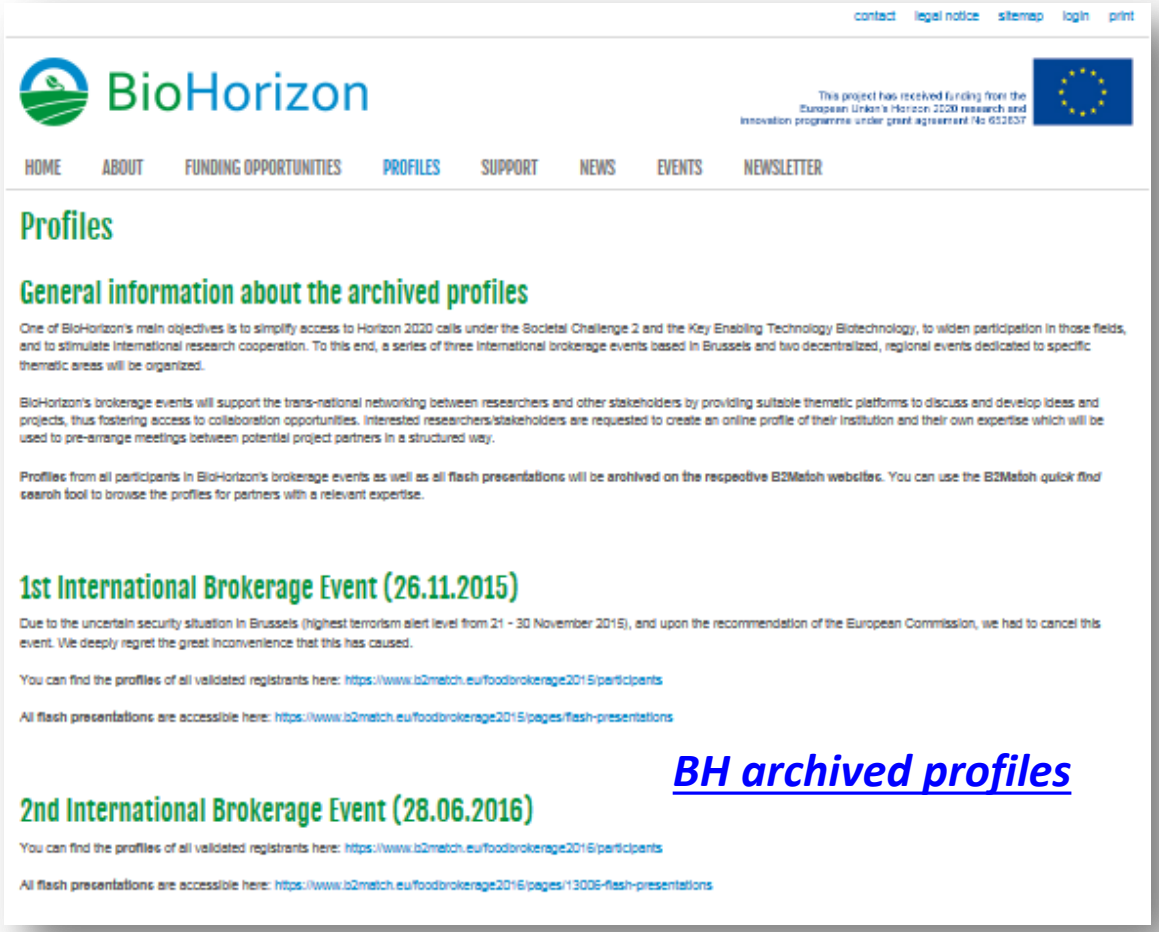
Inovação em PME

H2020 - Biotechnology



Participant Portal – Search topics

Plataformas para procurar parceiros e disseminar perfis de colaboração



[BH archived profiles]

[LinkedIn EIP-AGRI]

[CORDIS Partners Service]

Projetos já financiados na área da Bioeconomia

Publications library

Para posicionar a sua proposta e identificar quem já concorre!!

ICT-AGRI ERA-NET: *Information and Communication Technologies and Robotics for Sustainable Agriculture* (2014-2017)

ICT-AGRI-2

Information and Communication Technologies and Robotics for Sustainable Agriculture

[Website]

Home | ICT-AGRI | Calls and projects | Find partners | Community events | Partnerships | Project mapping

Search

Match making
- Find and be found
- Search users
- Search organisations
- Search PF company profiles
- Add organisation
- ICT-AGRI contacts

Search company profiles

[Find partners]

ICT provider survey statistics on profile

Number of responses: 115

In which sector is your organisation active?	N
Arable farming: staple crops (grains, beets , potatoes, oilseeds, sugarcane,....)	63
Arable farming: vegetable crops (cabbage, carrots, ...)	44
Arable farming: ornamentals (trees, flowers, ...)	31
Orchards (apples, pears, grapes (for direct consumption and for wine production), ...)	41
Greenhouse crops: vegetables (tomatoes, salat, ...)	44
Greenhouse crops: ornamentals (trees, flowers, ...)	25
Livestock: dairy production	37
Livestock: beef production	32
Livestock: egg production	16
Livestock: poulty production	19
Livestock: pig production	23
Other	32

[SRA – ICT-AGRI]

[ICT-AGRI projects 2010-2015]

Iniciativas relevantes na área da Bioeconomia

ETPs

Bio-based economy
EATIP
ETPGAH
FABRE TP
Food for Life
Forest-based
Plants
TP Organics

eip-agri
AGRICULTURE & INNOVATION

EIP-AGRI

BIO-BASED INDUSTRIES
Public-Private Partnership

BBI JU

PLATFORM

EIT

JPI
a healthy diet
for a healthy life

HDHL

FACCEJPI

FACCE

JPI OCEANS

OCEANS

cost
EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

COST

Importante posicionar-se estrategicamente!!

Desafio Societal 2
Processo de preparação do *WP* 2018-2020

Work Programme 2018-2020 preparation

Consulta Pública (até 28 Agosto!!)

Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy - Work Programme 2018-2020 preparation

Article | Newsroom

Preparation of the work programme 2018-2020 for Societal Challenge 2 has started and will involve various stakeholder engagement activities and consultations.

Preparations for the last work programme started at the end of 2015. They will into account the political priorities of the European Union and refer to several foresight exercises.

Consultation of stakeholders will be an integral part of this programming process which will be managed as a participatory process. In this respect Societal Challenge 2 particularly considers the following inputs:

- **Advisory group report**: The advisory group started to work on programming for 2018/2020 in February 2016. Building on the outcomes of their work for 2016/2017, they will produce a report by summer 2016.
- **Stakeholder consultation**: a consultation questionnaire will be made available on-line in the course of April 2016. Contributions are especially expected from stakeholder organisations including SC2 relevant European Technology Platforms, Joint Programming Initiatives, European Research Area Networks (ERANETs), European Innovation Partnerships, science organisations, industry organisations. Results will be assembled in a report which is expected in June 2016.
- **Strategic approach to EU agricultural research and innovation**: a large participatory process has been launched in June 2015 to elaborate a long-term strategy for EU agricultural research and innovation, the final version of which is expected in April-May 2016. This strategy will be an important input into the programming process. The content of the strategy builds on:
  - one kick-off workshop in EXPO Milan – Event page – Final report
  - two on-line targeted stakeholder consultations;
  - a large conference on 26-28 January 2016 - Conference page;
- **European Innovation Partnership for Agricultural productivity and sustainability (EIP-AGRI)**: agriculture and forestry stakeholders are also engaged in reflection on the research agenda via the EIP-AGRI network and activities, in particular through focus groups, through various workshops and events which will be organised on themes such as 'Data revolution' (June 2016), 'Food and cities' (sept 2016), 'forest value chains' (October 2016) or sustainability indicators (January 2017). In addition, EIP-AGRI keeps collecting needs for research from practice via the e-form on EIP-AGRI interactive platform. Finally, outcomes of activities undertaken for 2016/2017 will still be taken into account.
- **SRI Research workshops**: In addition to workshops organised for preparation of work programme 2016-2017, many of which provided outcomes which are also relevant for 2018-20, specific working sessions are organised to deepen the gap analysis and formulate research questions with key selected experts. Specific themes tackled so far were:
  - 'Bee health and sustainable pollination' (10.03.2016) – Event page

Exemplos de projetos H2020 com colaborações DS2-TIC

FATIMA

Farming tools for external nutrient inputs and water

(*call* SFS-2014-2)

DOISECO UNIPESSOAL LDA, (2ECO)

*Addresses and works with user communities in the farm and agribusiness sector providing them with maps of fertilizer and water requirements (**to feed into precision farming machinery**), crop water consumption and a range of further products for sustainable cropping management supported with innovative water-energy footprint frameworks. All information will be integrated in **leading-edge participatory spatial online decision-support systems**.*

smartAKIS Smart Farming Thematic Network

European Agricultural Knowledge and Innovation Systems (AKIS) towards innovation-driven research in Smart Farming Technology

(*call* ISIB-2015-1)

European Network mainstreaming Smart Farming Technologies among the European farmer community and bridging up the gap between practitioners and research on the identification and delivery of new Smart Farming solutions fit to the farmers' needs.

4D4F Data Driven Dairy Decisions for Farmers

Data Driven Dairy Decisions 4 Farmers

(*call* ISIB-2015-1)

focus on the role which dairy animal and environmental sensors can play in collecting real time information to help make more informed decisions in dairy farming

Para mais informações & apoio
GPPQ – Contactos dos Pontos de Contacto Nacionais DS2. Bioeconomia

http://www.gppq.pt/h2020

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