International Networks & Funding Opportunities for R&I in the bioeconomy

International Development LAB on the Valorisation of Endogenous Resources in the Wine Value Chain

Anadia, Portugal - 19 June 2018

TIPS FOR PROJECTS TO SUCCEED

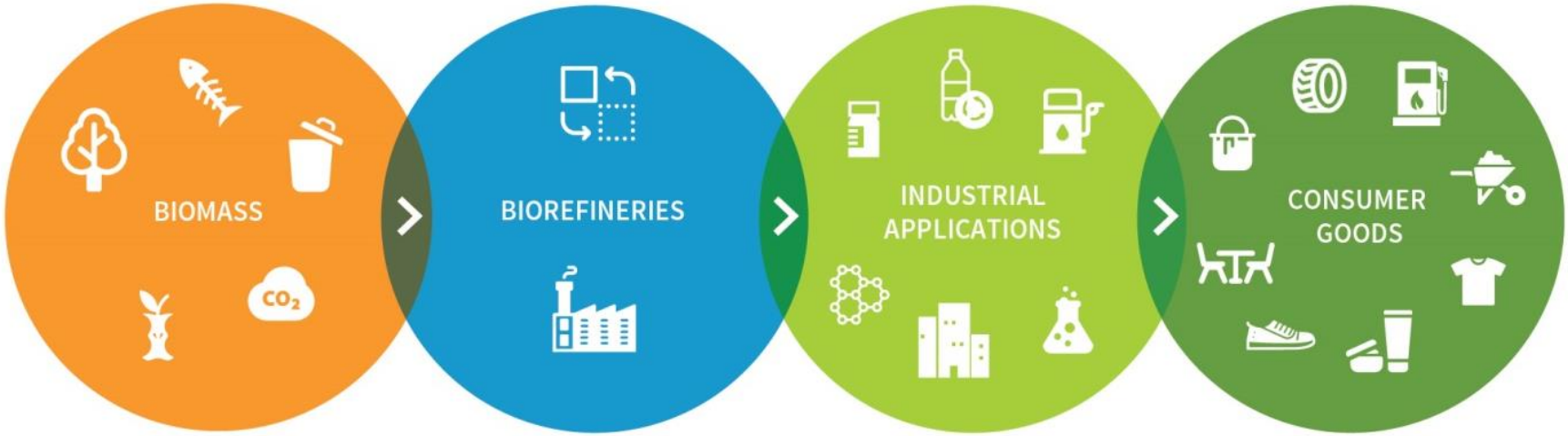
- MARKET RULES - Work from market to lab (not the other way around)
- Focus on current bottlenecks in the sector
- Work along the whole value chain
- Engage end users asap in the projects
- Engage at least one large industry players/project
- NETWORK IS KING - Connect to a broad range of national and international networks in your field
- INNOVATIVE APPROACHES - Use innovative approached to find new solutions
- Cross-sectorial/cross-disciplinar projects go a long way

FUNDING OPTIONS

- NATIONAL FUNDS (Regional and local)
- H2020
- INTERREG & REGIONAL FUNDS
- EEA GRANTS
- BBI JU Calls

Bio-based industries (BBI) value chains in 3 segments

BBI value chains represent 3.7 million jobs and € 695 bn turnover but **extremely fragmented** between **actors** and across **geographies**



- Waste streams
- Multiple organic waste
- By-products & by-streams
- Forestry side-streams
- Dedicated agricultural crops and residues
- Aquatic biomass
- Food processing residues
- Process and waste water
- CO_2

- (Pre -) treatment
- Transformation

- Bioplastics
- Building blocks
- Biopolymers
- Surfactants
- Active ingredients
- Biomaterials
- Biolubricants

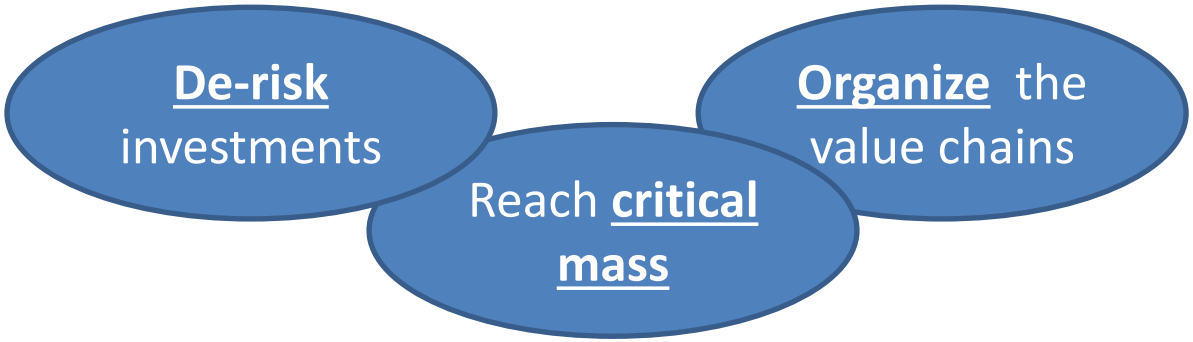
- Biofuels
- Textiles
- Packaging
- Solvents
- Furniture
- Cosmetics
- Construction elements
- Pharmaceuticals
- Clothing
- Car componments

BBI JU was part of EU Bioeconomy strategy in 2012

Public-Private Partnership (PPP) between European Commission & BIC (Bio-based Industries Consortium)

- BBI JU Budget: € 3.7 bn (25% EU - 75% BIC)
- Support R&I programme in Bio-based industries
- Expected leverage effect: 2.8

European public-private partnership (iPPP) aims at:



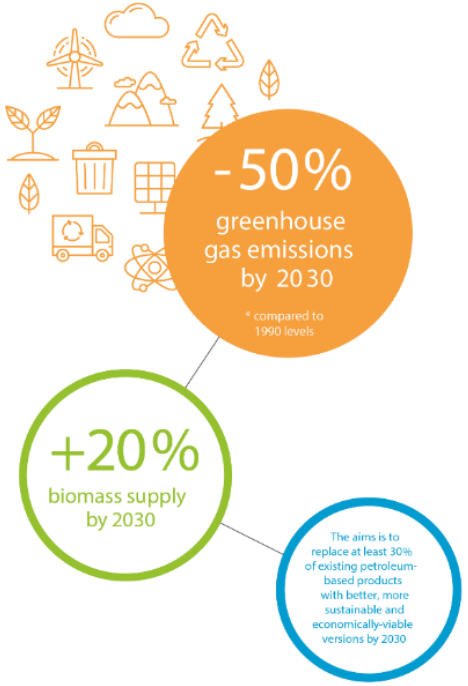
BBI JU objectives

Develop sustainable and competitive bio-based industries in Europe, based on advanced biorefineries that source their biomass sustainably.

How ? By,…

1. Demonstrating new technologies
2. Developing business models
3. Set-up flagship biorefinery plants

Expected impact for Europe by 2030*

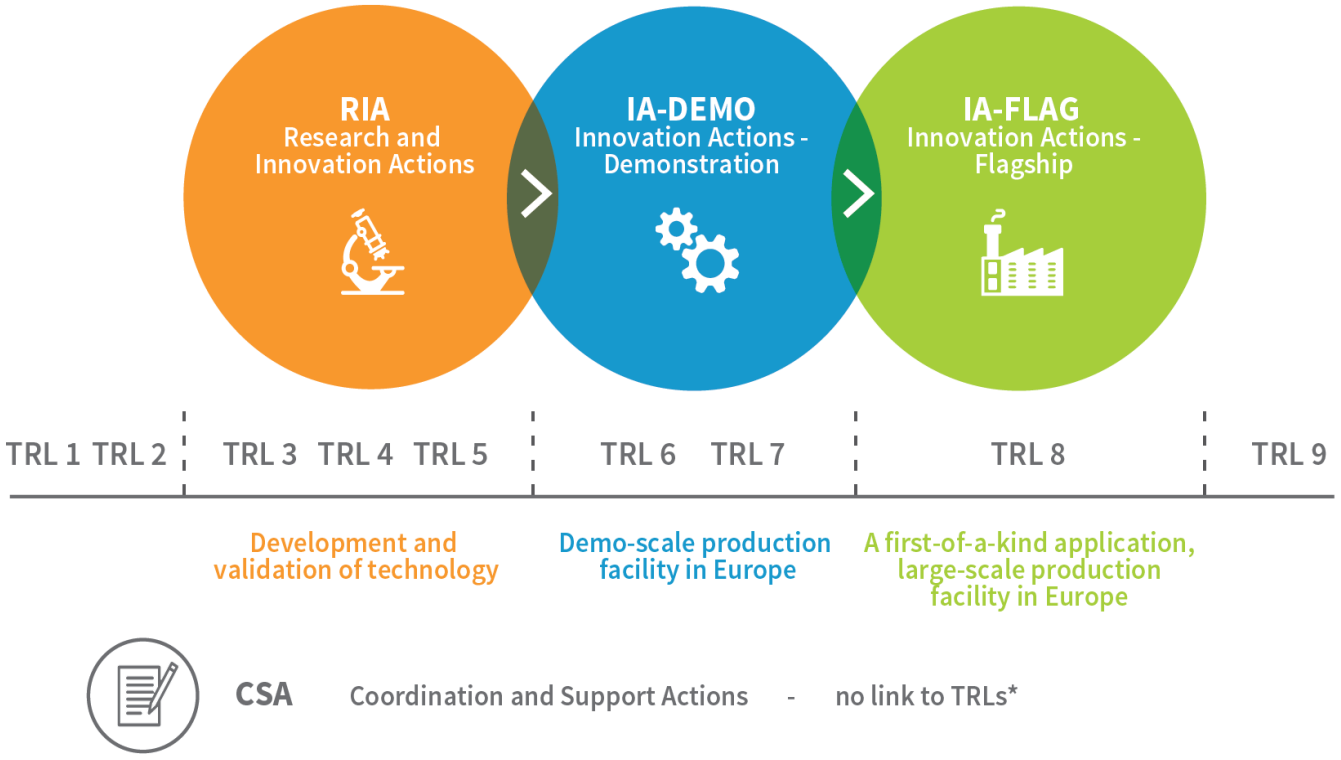


- Replace 25% of oil-based chemicals
- 10 times more bio-based materials
- Increase biomass supply by 20%
- Increase by 25% mobilisation of unused sources
- Develop potential of agro-food “waste” & forestry residues
- Diversify and grow farmers’ revenues
- Create 700,000 jobs – 80% in rural areas
- Reduce EU’s dependency on import of fossil raw materials, protein (- 50%) and P – K (- 25%)
- Average 50% GHG emission reduction

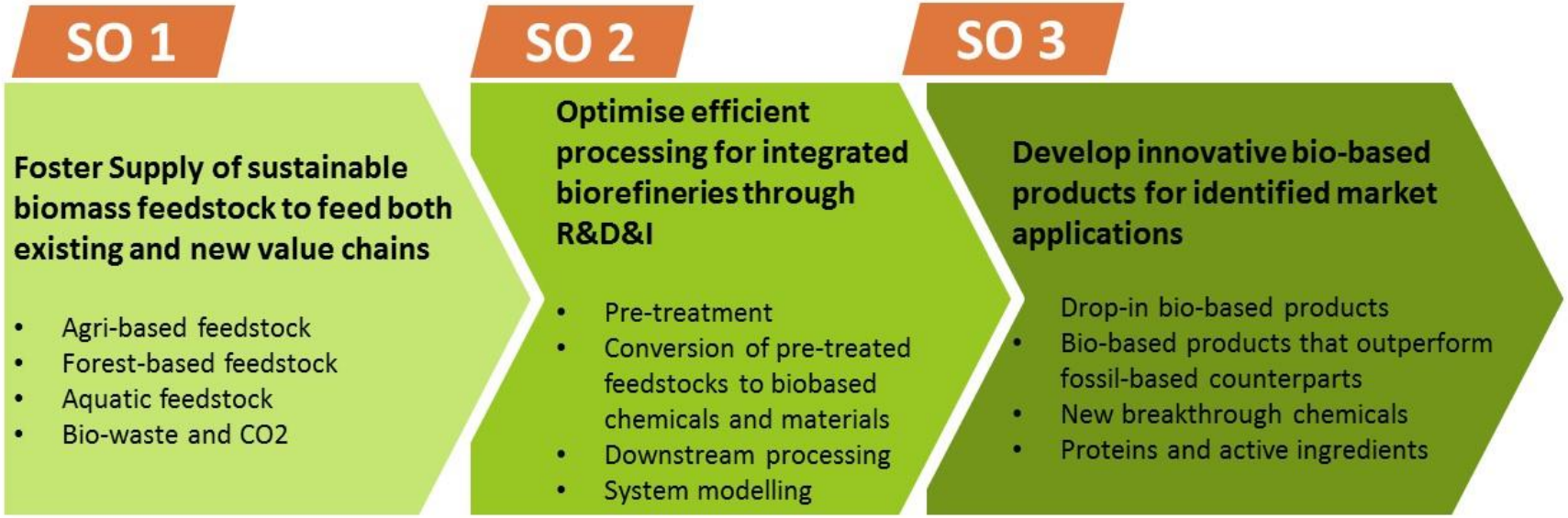
SIRA 2017 and impact assessment 2012

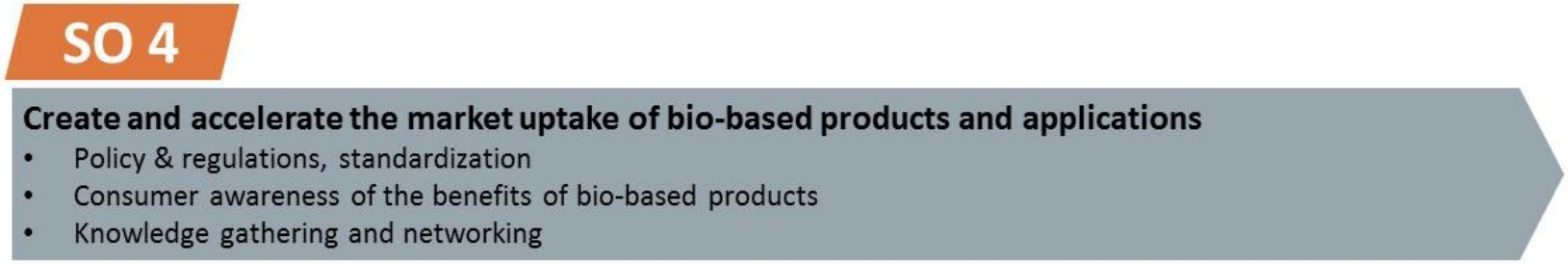
BBI JU Mission

Implement under Horizon 2020 rules, the Strategic Innovation and Research Agenda (SIRA) developed by the European Bio-based industry (BIC) and endorsed by the EC

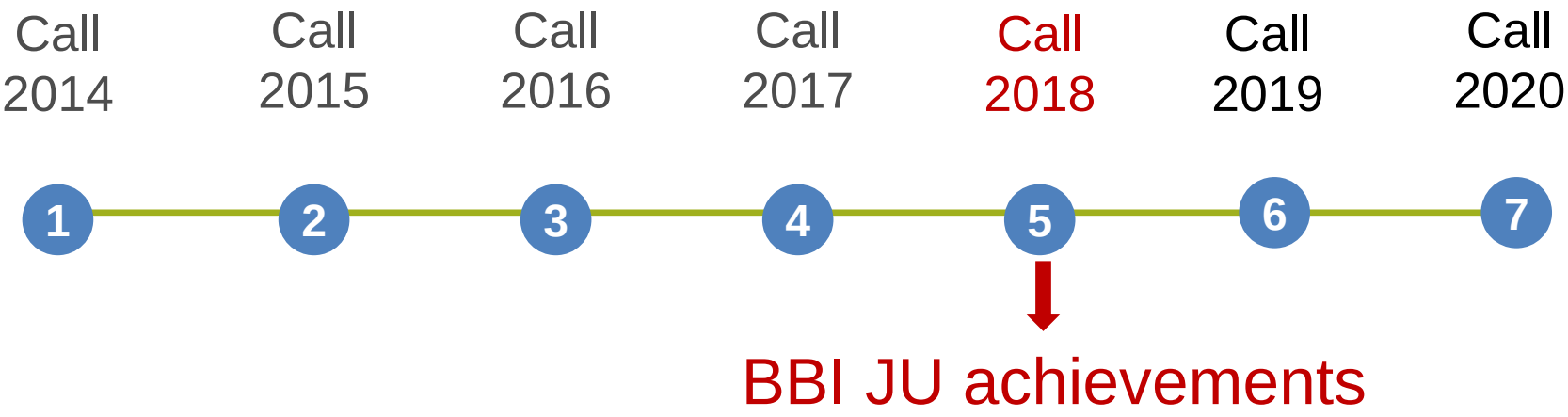


SIRA Strategic Orientations





BBI JU Calls overview



Call 2014: 10 running projects: 1 Flagship, 2 Demo, 7 RIAs

Call 2015 : 26 running projects: 3 Flagships, 9 Demo, 11 RIA, 3 CSA

Call 2016 : 29 running projects: 2 Flagships, 9 Demo, 15 RIA, 3 CSA

Call 2017 : 17 running projects: 1 Flagships, 4 Demo, 10 RIA, 2 CSA

BBI JU project portfolio: SO3: innovative bio-based products

Some examples of targeted sectors:

Packaging

- Bio-based packaging for food & others: FRESH, PULPACKTION, SHERPACK, BioBarr, BIOSMART, PEFerence

Pharmaceutical & healthcare

- Nutritional products: AQUABIOPROFIT, MAGNIFICENT
- Bioactive compounds: BIOrescue

Personal & home care

- Cosmetics: BIOSEA, EXILVA, LIBBIO, ABACUS
- Detergents & soaps: EXILVA

Food & feed

- Food & feed: SYLFEED, BIOSEA, AgriMax, MACROCASCADE, MAGNIFICENT

Automotive

- Advanced materials: BIOMOTIVE, GreenLight, SmartLi,

Agriculture

- Fertilisers: NewFert, SUSFERT
- Increasing productivity of agr. Crops: LIBBIO

Forestry

- Forest management: EFFORTE, TECH4EFFECT

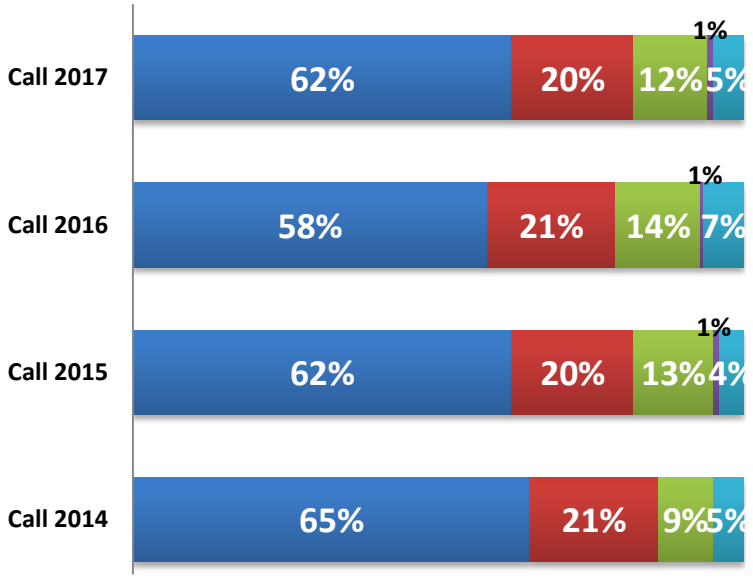
Construction

- Construction materials: ECOXY, GreenSolRes

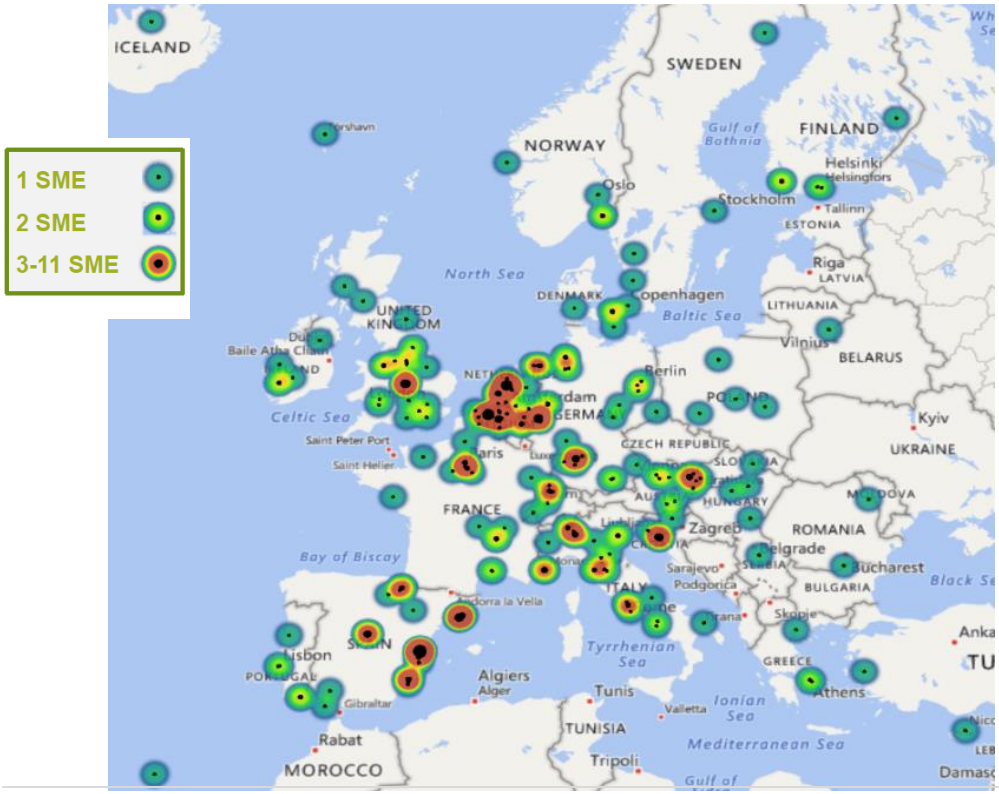
Calls 2014-2017
Type of organisations in funded projects

82 running projects **923 beneficiaries** **€ 794 m grant**

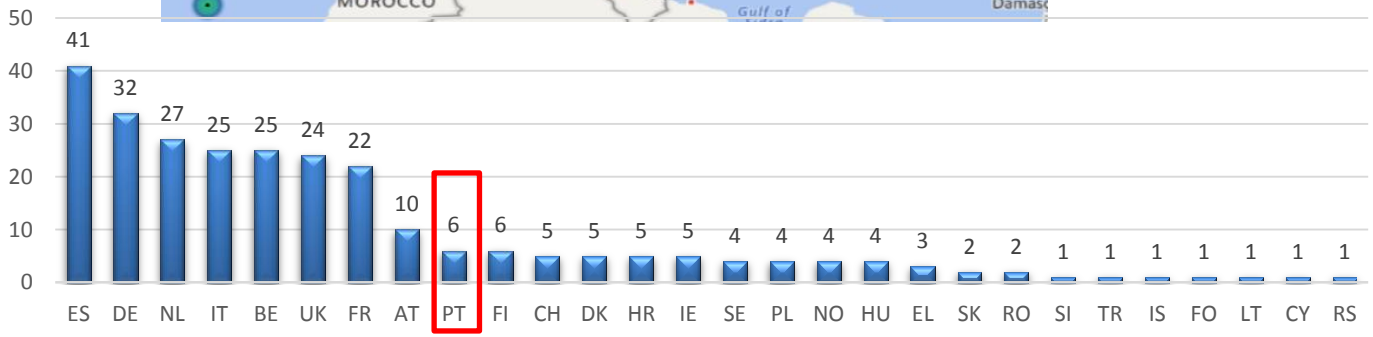
- Private for-profit entities (excluding Higher or Secondary Education Establishments)
- Research Organisations
- Higher or Secondary Education Establishments
- Other
  - private not for profit entities
  - international organisation (or international organisation of European interest)
  - natural person
  - entities without legal personality
- Public Organisation



SME beneficiaries Geographical distribution



- Wide geographical coverage: majority of MS have SMEs participation
- Intense mobilisation in Western Europe: DE, BE, FR, AT, CH, NL, UK as well as in certain countries in the Mediterranean Region



Next Call for Proposals: 2018

Dec 2017	• Publication of topic texts
Apr	• Call opens (11 Apr)
Sept	• Call closes (6 Sep)
Oct-Nov	• Proposal evaluation
Dec 2018	• Evaluation results

Red = Tentative timing

Evaluation criteria

- 3 ***main*** evaluation criteria (= H2020):
  - ***Excellence*** *WHAT?*
  - ***Impact*** *SO WHAT?*
  - (Quality and efficiency of the) ***implementation*** *HOW?*
- Different ***sub***criteria per main criterion
  - All H2020 subcriteria per action are applicable
  - Limited amount of BBI JU-specific subcriteria

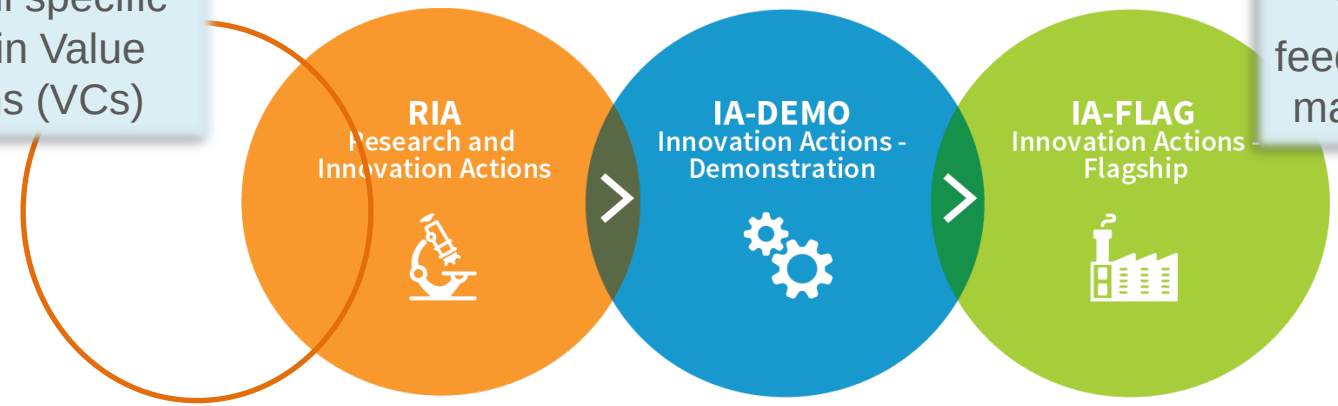
Highlights of BBI JU Call 2018

- Strong focus on **impact & KPIs**
- Widens the scope in terms of **feedstock** (e.g. urban bio-waste in DEMO), **processes** (e.g. electrochemical, modelling), **new products** (e.g. bio-based aromatics, coatings)
- Specific focus on the **improvement of logistical and pre-processing steps of local biomass resources** both for RIA & DEMO topics
- Promotes a **multi-value-chain approach**
- Contains **RIA topics covering lower TRLs (1-3)**

BBI JU - Type of Actions

RIAs fill specific gaps in Value Chains (VCs)

IAs address the whole VC from feedstock sourcing to market applications

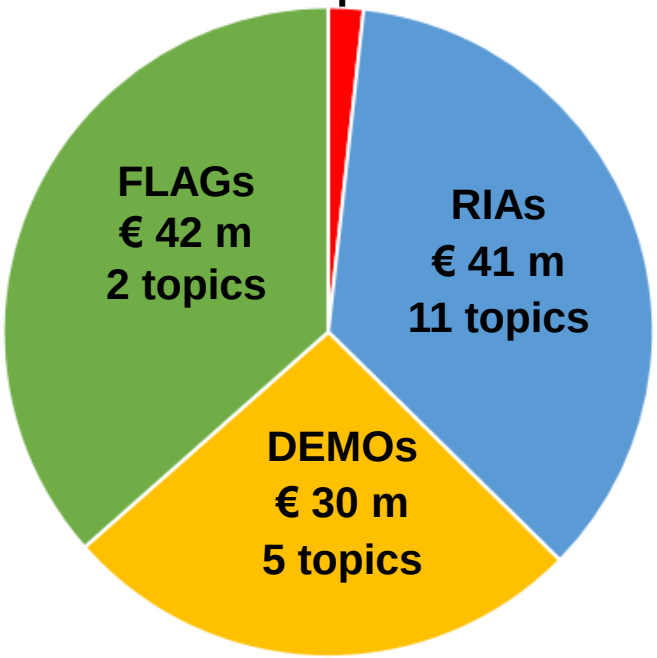


CSA Coordination and Support Actions - no link to TRLs*

CSAs address non-technological challenges of VCs

*TRL = Technology Readiness Levels

Budget distribution Call 2018



RIAs (end TRL 4-5):
€ 26 m, 5 topics

RIAs (end TRL 3)
€ 15 m, 6 topics

Additional eligibility condition: at least 1 BIC member (not eligible for funding)

Total Indicative BBI JU budget is € 115 million for 21 topics

In addition substantial resources from industry expected

Estimated value of the in-kind contribution is minimum 45 M €

AgriChemWhey

Flagship industrial project

Coordinator - Glanbia Ireland

Dairy Side streams to biobased chemicals and polymers

Markets
Food and Feed ingredients, cosmetics, Bioplastics

Challenge
Industrial scale biotechnology using a variable side stream

Benefit
Farmer co-op innovation
Creating a new value chain
Industrial symbiosis

PULP2VALUE

Demonstration project

Coordinator - Royal Cosun - Netherlands

Sugar beet pulp

- **Personal care (cellulose)**
- **Detergents & paints (cellulose)**
- **Food and Flavors (arabinose)**
- **Cosmetics (galacturonic acid)**
- **Biogas**

350KT
€200M
7 Value Chains
Reduced GHG

BARBARA

RIA project

Coordinator: FUNDACION AITIIP (Spain)

Objective:

To develop techniques for extracting bio-molecules and bio-polymers from agro-food residues and producing functionalized sustainable bioplastics with advanced thermal, mechanical, aesthetic and sanitary properties.

Feedstock:

- Lemon, carrot, pomegranate and almond shell residues Corn by-products for bio-polymers (polysaccharides).

Process:

Extraction and valorisation of molecules & bio-polymers → Processing for **3D printing** → New – sustainable bio-advanced materials

Bio-based and biodegradable materials for the automotive & building sectors.

Added value/newness:

Added value: Revolutionise production with new methods and materials for more eco-friendly industries.

Technical novelty: New bio-based, compostable polyester matrix for a novel 3D printing device.

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Thank you