



European
Commission

A Bioeconomy for Europe

Using resources from land and sea
for a post-petroleum economy

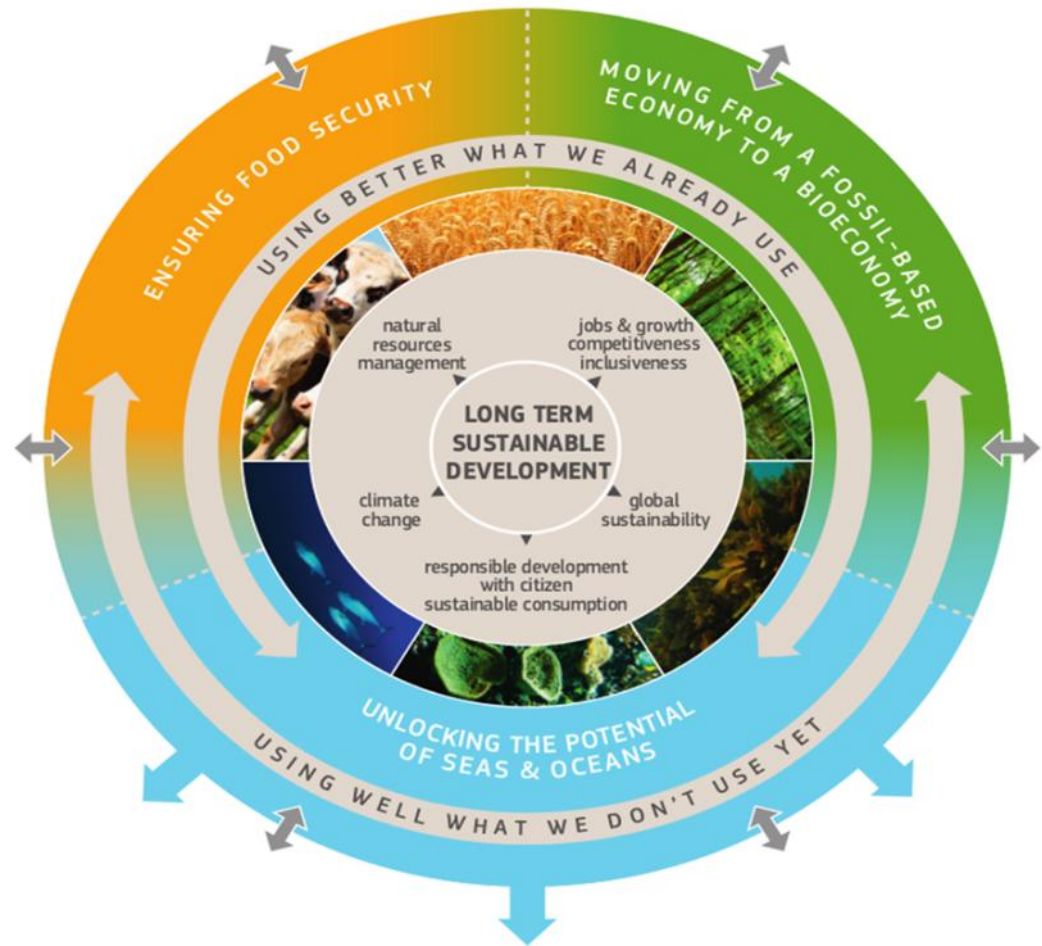
Barna Kovacs
Bioeconomy Strategy Unit – DG RTD

Danube Region Strategy 12th Steering Group Meeting
Brussels, 25/5/2016

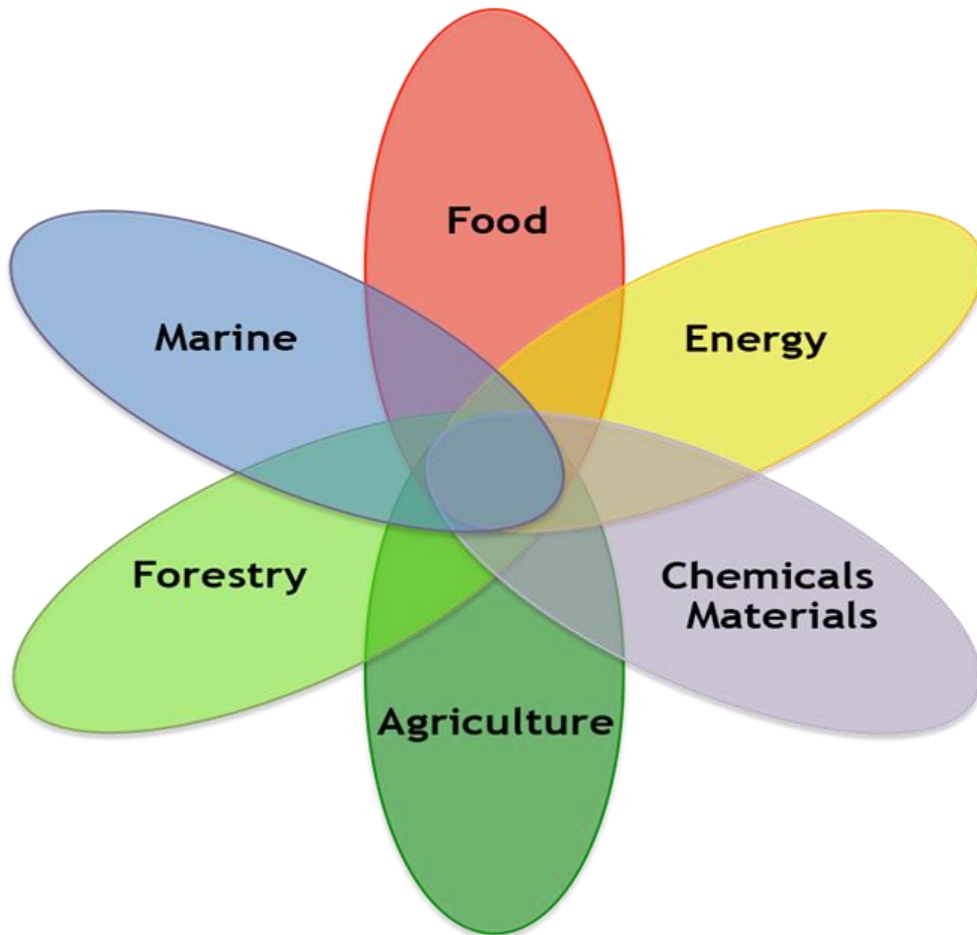
1. WHAT IS BIOECONOMY

" The Bioeconomy encompasses those parts of the economy that use renewable biological resources from land and sea to produce food, bio-materials, bio-energy and bio-products."

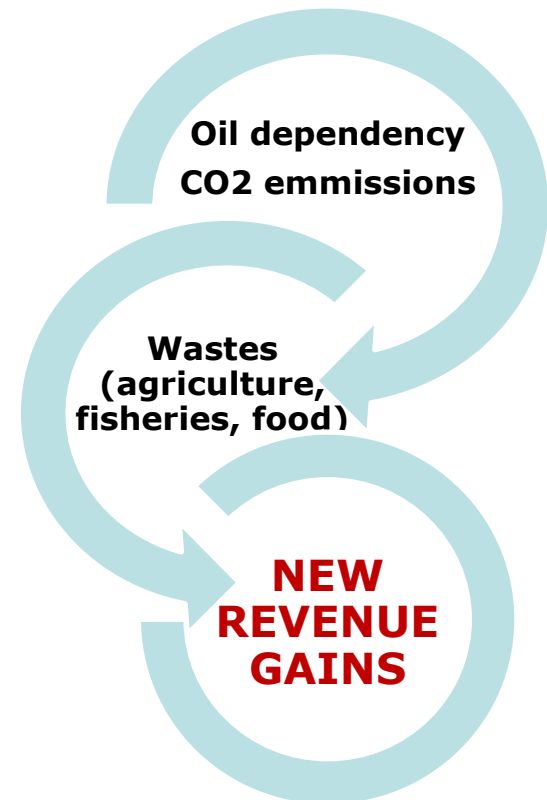
EU bioeconomy strategy, 2012



Bioeconomy -



Using biological
resources to
produce
**"more and better,
from less"**



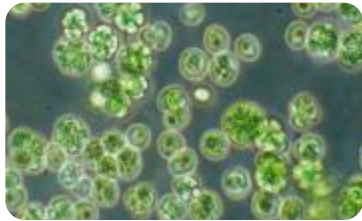
Life sciences enable the creation of new **bio-based** value chains

Primary production

Waste



Sugar beets



Algae



Wood residues



Biological waste



Fish waste

INTO



Cosmetics



Plastic bottles
Natural colourants
for candy



Dashboards



Bio-based plastics



Pharmaceuticals



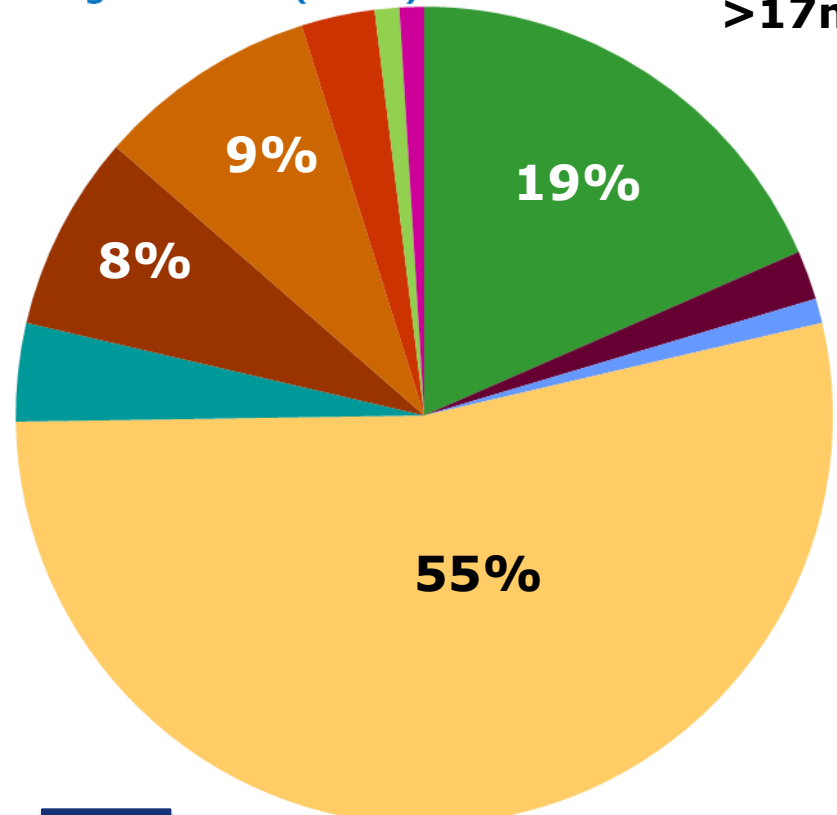
Bioeconomy is key for Europe

2 trillion euro turnover

Employs >17m people

**Turnover in the EU-28 by the bioeconomy sector
In percentage of value (2013)**

- 19%** ■ Agriculture
- 2% ■ Forestry
- >1% ■ Fisheries & aquaculture
- 55%** ■ Food, beverage & tobacco industry
- 4% ■ Bio-based textiles
- 8%** ■ Manufacturing of wood & wood furniture
- 9%** ■ Manufacturing of paper & paper products
- 3% ■ Bio-based chemicals, pharmaceuticals and plastics
- >1% ■ Biofuels
- >1% ■ Bio-based electricity



2. EU CONTEXT

2. EU context



1. A new boost for jobs, growth and investment

2. A connected digital single market

3. A resilient Energy Union with a forward looking climate change policy

4. A deeper and fairer internal market with a strengthened industrial base

5. A deeper and fairer EMU

6. A reasonable and balance free-trade agreement with the U.S.

7. An area of justice and fundamental rights based on mutual trust

8. Towards a new policy of migration

9. A stronger global actor

10. A Union of democratic change



PRINCIPLE

1

Preserve and enhance natural capital by controlling finite stocks and balancing renewable resource flows
ReSOLVE levers: regenerate, virtualise, exchange

Bioeconomy

Renewables    Finite materials

Regenerate Substitute materials Virtualise Restore

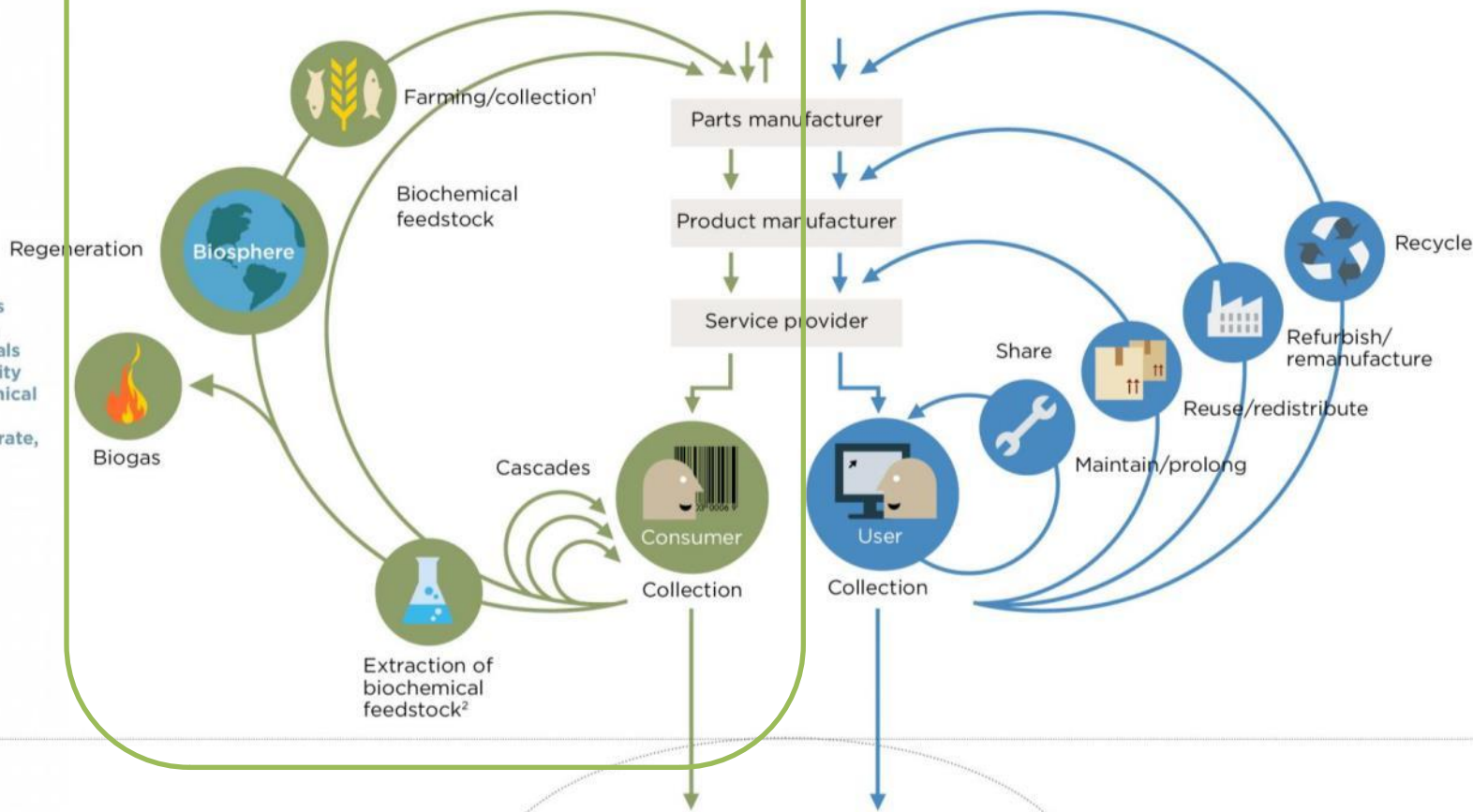
Renewables flow management

Stock management

PRINCIPLE

2

Optimise resource yields by circulating products, components and materials in use at the highest utility at all times in both technical and biological cycles
ReSOLVE levers: regenerate, share, optimise, loop



PRINCIPLE

3

Foster system effectiveness by revealing and designing out negative externalities
All ReSOLVE levers

Minimise systematic leakage and negative externalities

1. Hunting and fishing
2. Can take both post-harvest and post-consumer waste as an input

Source: Ellen MacArthur Foundation, SUN, and McKinsey Center for Business and Environment; Drawing from Braungart & McDonough, Cradle to Cradle (C2C).

3. EU BIOECONOMY POLICY



EU Bioeconomy Strategy introduced in 2012

EU Bioeconomy Strategy & Action Plan

Investment in R&I



- **Horizon 2020 (€3,8b SC2)**
- Increase multi-disciplinary & cross-sectoral R&I
- ESIF - Smart Specialisation
- EFSI

Policy interaction & stakeholder engagement



- EU Policy coherence
- Development of regional and national bioeconomy strategies
- Bioeconomy Panel
- Bioeconomy Observatory
- International cooperation

Enhancement of markets & competitiveness in bioeconomy



- Sustainable intensification of primary production
- Expansion of new markets
- Increase EU competitiveness
- **BBI JU**



Bioeconomy Policies around the World

Source: German Bioeconomy Council, Maisei/fotolia.com (flags), jktu_21/fotolia.com

- dedicated bioeconomy strategy
- bioeconomy-related strategy
- ▨ be-related strategy; dedicated be-strategy is under development
- dedicated be-strategy is under development



IN EUROPE:

Several MS have adopted **national Bioeconomy Strategies**.

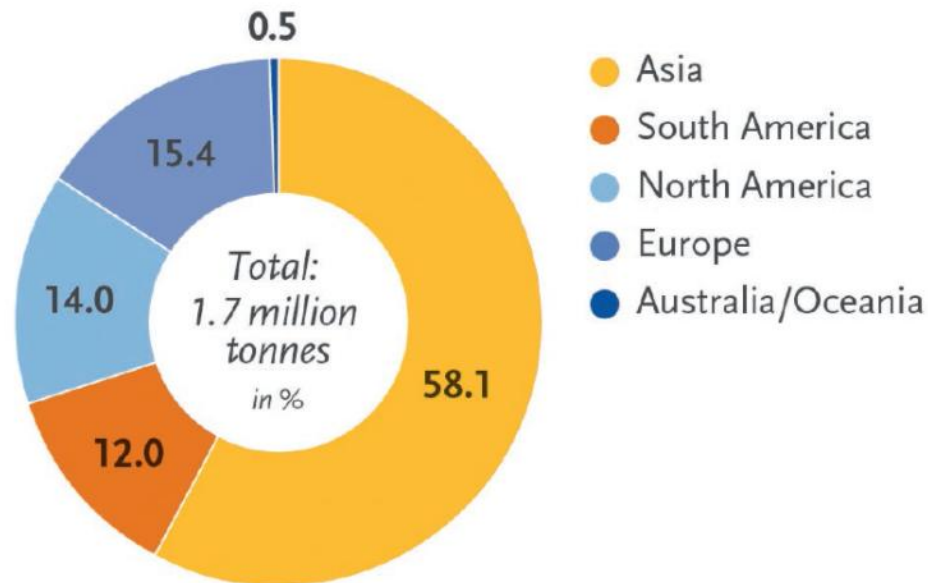


**More than 10 Regions
are investing in
Research on
Bioeconomy (ESIF)**

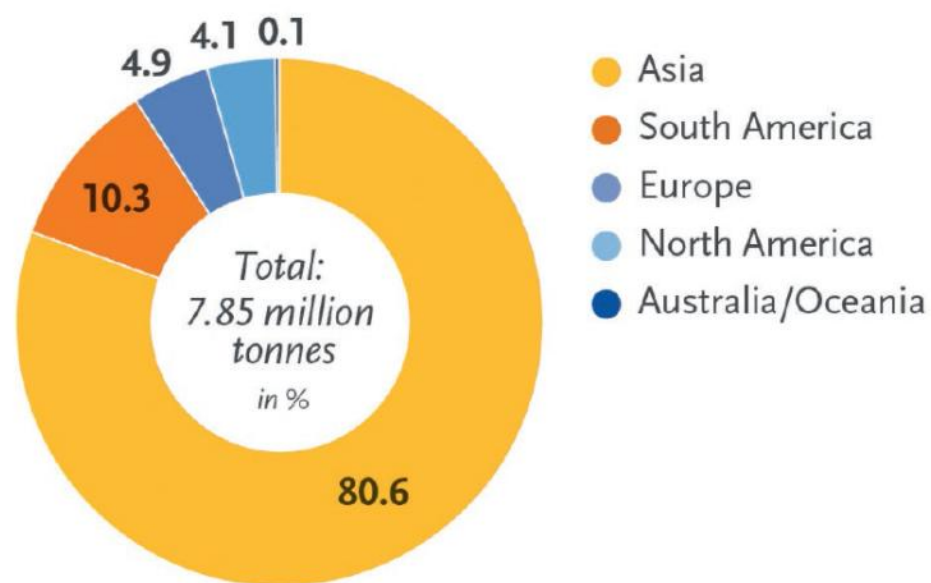
Finland and Poland
the most involved countries
(Source: eye@RIS3)

- dedicated bioeconomy strategy
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- dedicated be-strategy is under development

Global production capacities of bioplastics in 2014 (by region)



Global production capacities of bioplastics in 2019 (by region)



Europe needs to **act to remain competitive for industrial production and attract **investment** in the bioeconomy**

Next steps for the EU Bioeconomy policy: ..with the support of the EU Regions

PRIORITIES

ACTIONS

**Boost
investments**

- Financial Instruments - **EIB/InnovFin**
- Synergies with **ESIF** (*SoE, Widening participation*)
- Link with other programmes (**EFSI**, COSME...)

**Favorable
policy
environment**

- Identify and address **regulatory & financial or other** barriers /gaps/needs (**REGIONS' INPUT!!!**)

**Address
Knowledge
gaps**

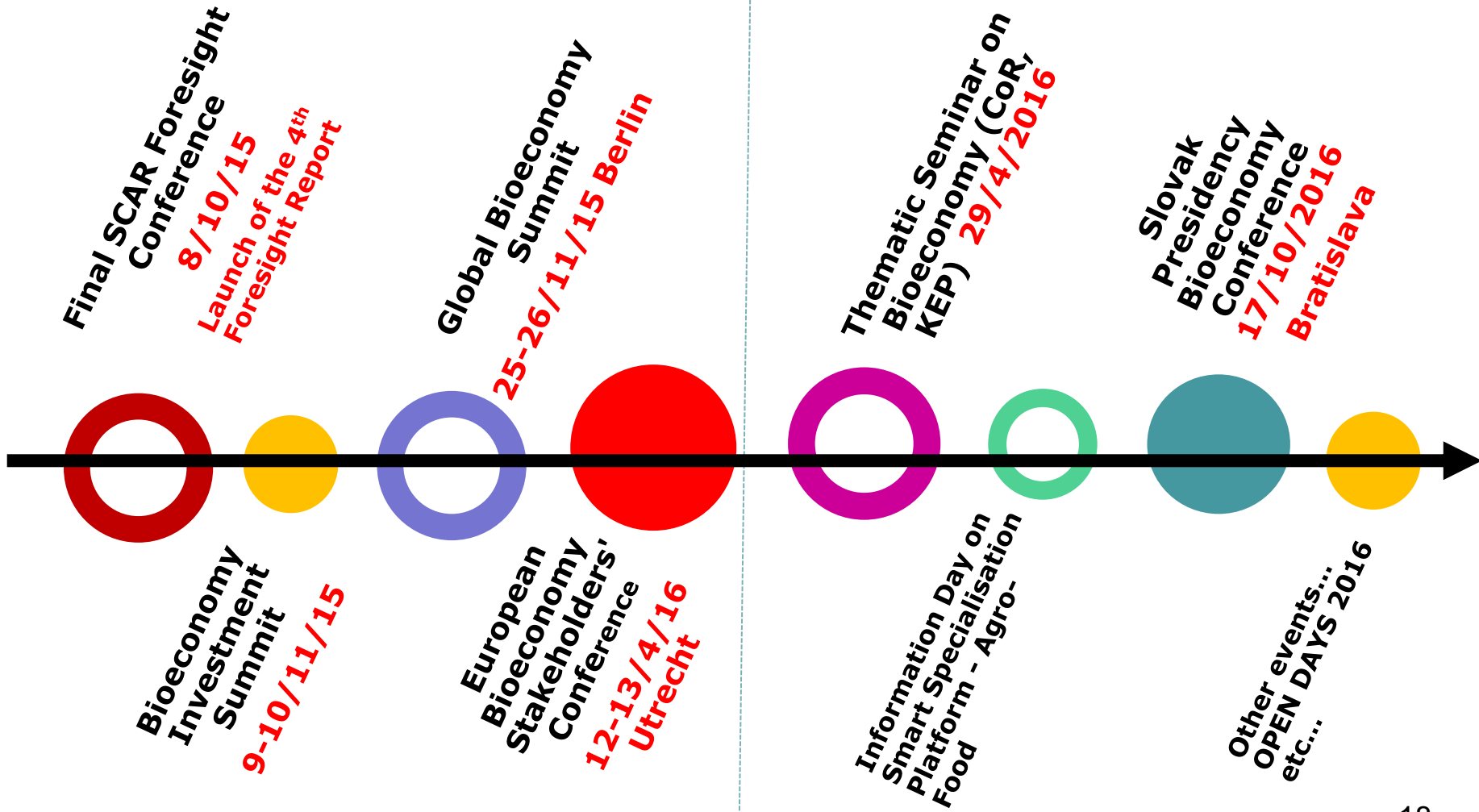
- **Study** to map EU regions BE Plans – RIS3 (2016)
- **Bioeconomy Knowledge Centre**

**Increase
stakeholders
engagement**

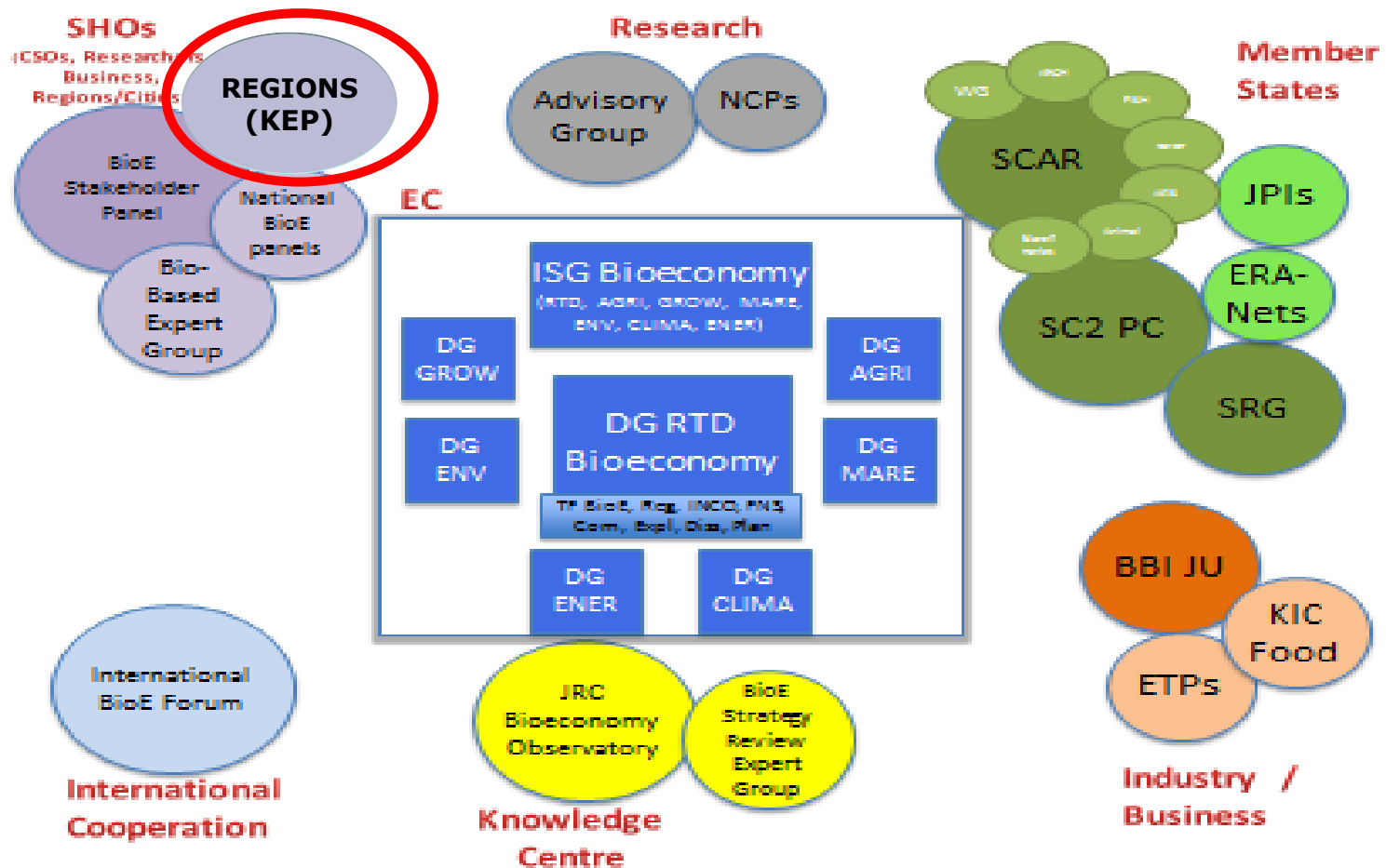
- **KEP-Knowledge Exchange Platform**
- Bioeconomy Stakeholder Panel
- Smart Specialisation Platforms, Networks (*ERRIN, ERIAFF*)

4. EU BIOECONOMY STRATEGY REVIEW

Calendar - events

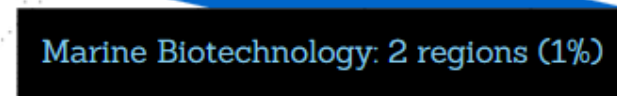
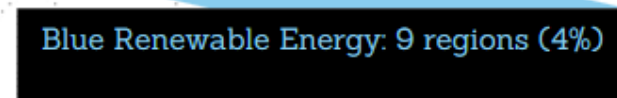
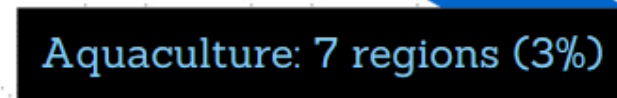
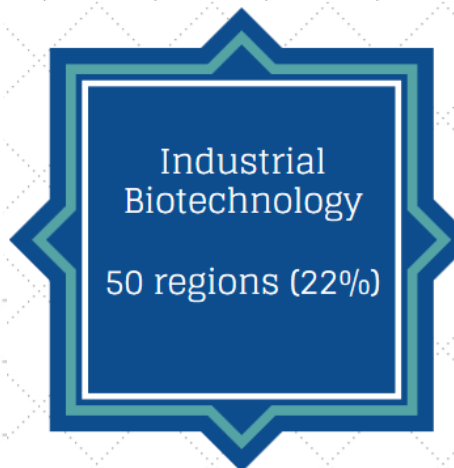
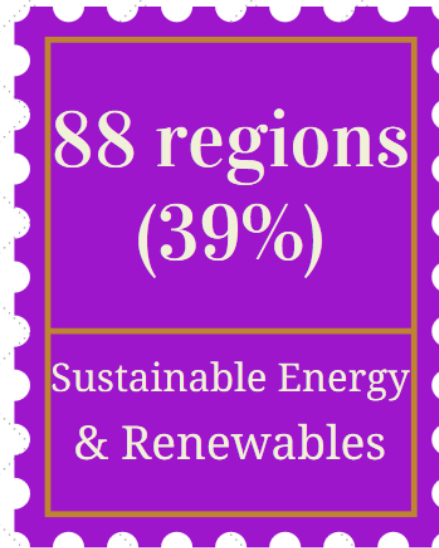


We count on EU regions for the review of the Bioeconomy Strategy

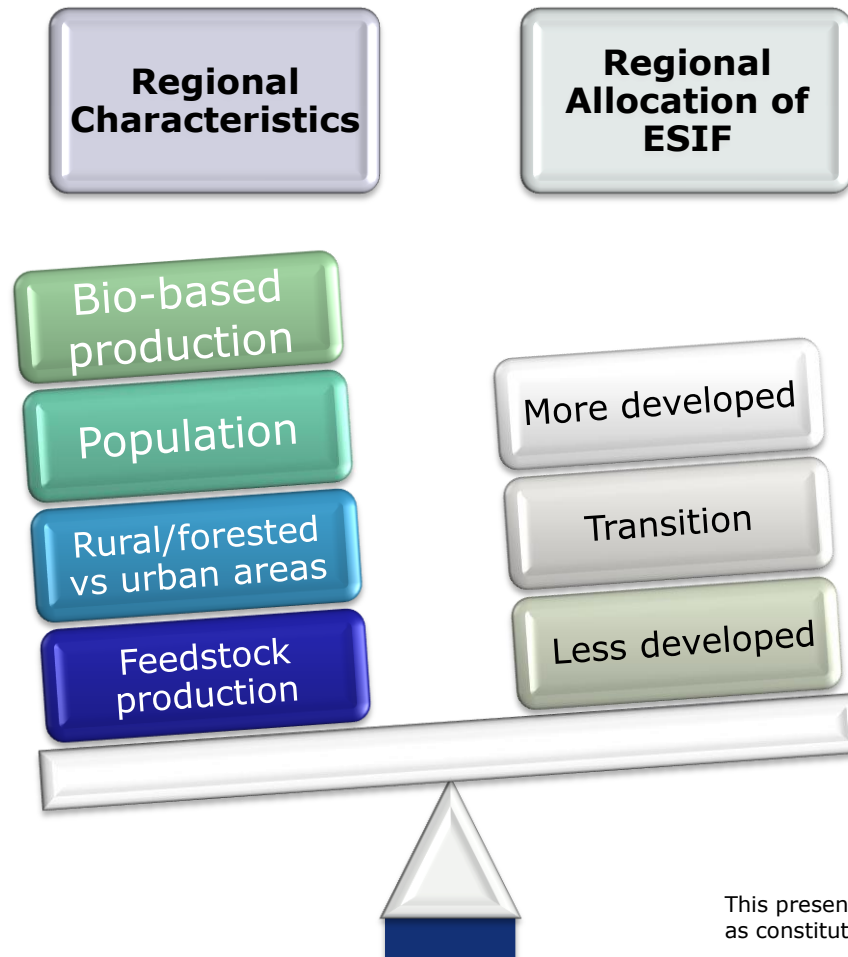


5. EU REGIONS ARE KEY PLAYERS FOR THE BIOECONOMY

What areas are EU regions going to invest in? *(RIS3)*

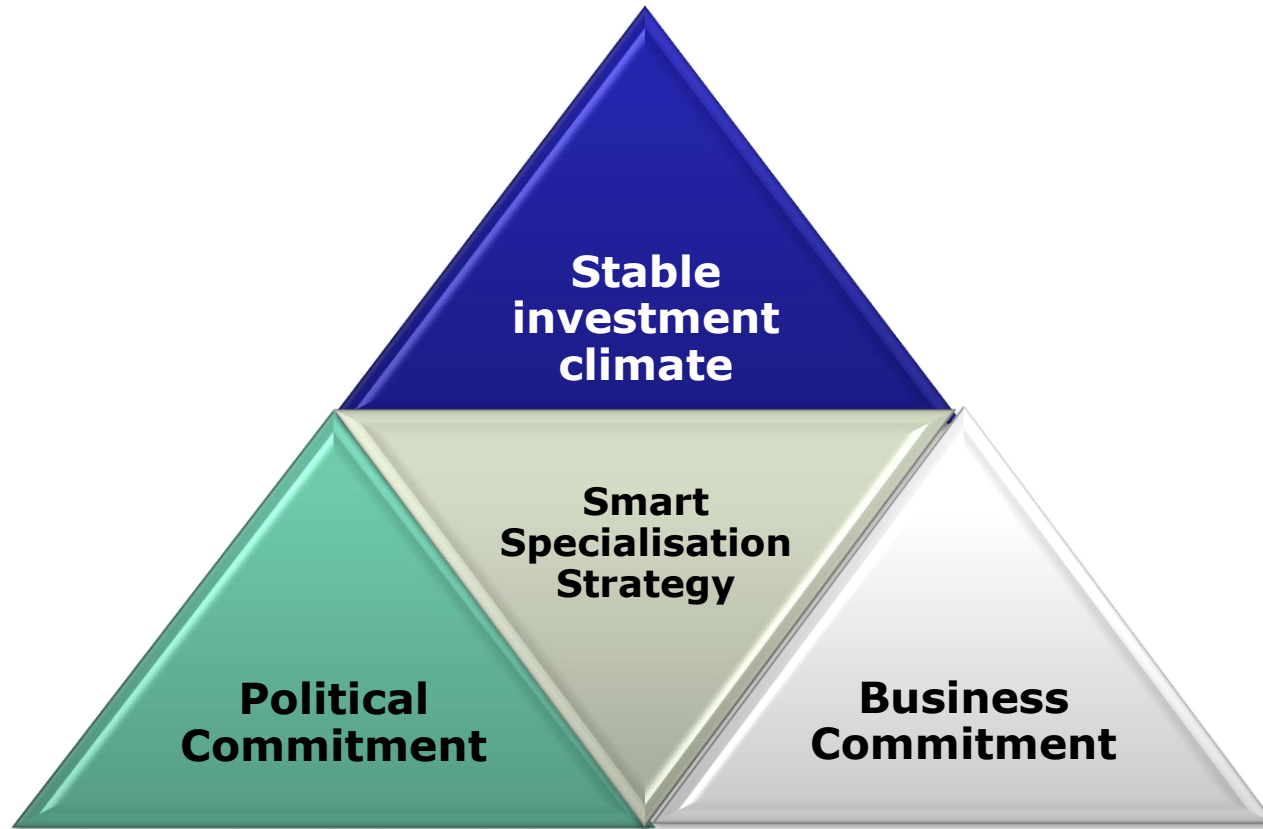


EU Regions' diversity is their advantage!



Regional Bioeconomy Strategy Development

4 fundamental ingredients



Regional Bioeconomy Strategy Development

7 Tips to remember!

- 1. Learn from Best Practices!** (*various EC Guides, web-sites*)
- 2. Link/create networks, clusters** (*Clusters Observatory*)
- 3. Involve in existing initiatives** (*BBI JU, Vanguard*)
- 4. Use available tools** (*eye@RIS3, Bioeconomy Observatory*)
- 5. Look for inter-regional + macro-regional opportunities**
Baltic, Danube
- 6. Use public-procurement** for new bio-based innovative solutions
- 7. Seek help!** (*Bio-NCPs, EIP-AGRI*)



TRY BIOECONOMY



Bio-Based Industries Joint Undertaking (BBI-JU)

<http://www.bbi-europe.eu/>

SYNERGIES & SEAL OF EXCELLENCE (**new website!**)

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

AGRI-FOOD SMART SPECIALISATION PLATFORM

<http://s3platform.jrc.ec.europa.eu/agri-food> (**new initiative!**)

VANGUARD INITIATIVE/ Bioeconomy Pilot Project

<http://www.s3vanguardinitiative.eu/cooperations/bioeconomy-interregional-cooperation-innovative-use-non-food-biomass>

GUIDES ON ESIF-H2020 SYNERGIES

http://ec.europa.eu/regional_policy/sources/docgener/guides/synergy/synergies_en.pdf<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/other/index.html>

http://www.bbi-europe.eu/sites/default/files/documents/Guidelines_BBI-ESIF-Final.pdf

S3 KNOWLEDGE REPOSITORY

<http://s3platform.jrc.ec.europa.eu/knowledge-repository>



Thank you!

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HORIZON 2020