

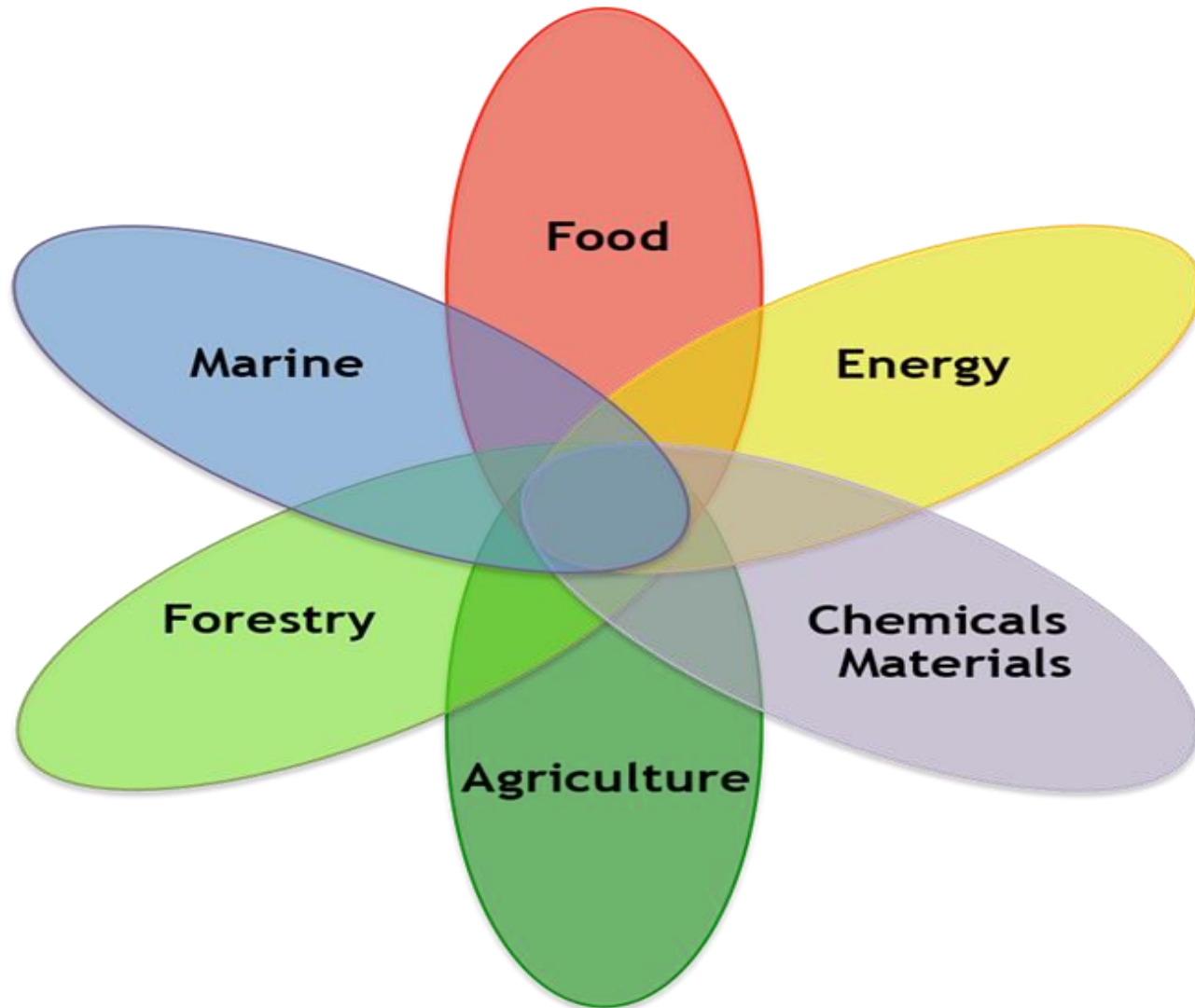
# The Necessity of National Level Strategic Planning in CEE Countries

**“STRATEGIC THINKING: BUILDING A RESEARCH AND INNOVATION LED BIOECONOMY”**

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# BIOECONOMY linked **Research and Innovation**



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

# Unsolved equation on sustainability

1. Climate change
2. Ecosystem services under pressure (N, P, Freshwater etc.)
3. Population growth
4. Increase use of bioresources

1. Energy security
2. Jobs, growth and competitiveness
3. Food, feed and nutrition security
4. Fresh water security

Shift in the economic paradigm towards “sustainability”

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

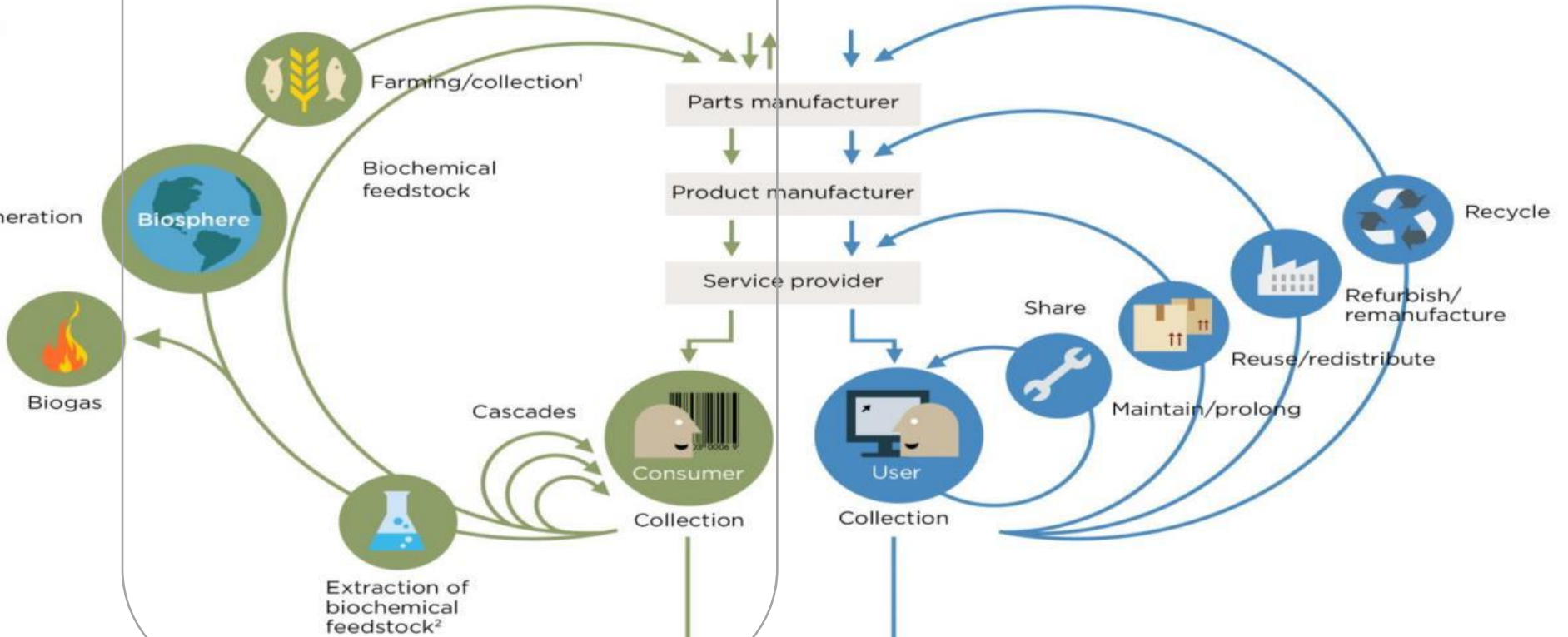
Stock management

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

Regeneration



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).



All the offered solutions for solving the challenges requires:

1. systems approach (transdisciplinary and cross-sectoral)
2. technological (innovative) solutions.

Are the Central and Eastern European Economies prepared for solving the problem?

# Gaps

1. Lack of societal understanding and participation in addressing challenges
2. Sector based, parallel processes (ex. agro-food sector)
3. Market driven approaches (mostly profit driven, some times technology driven, but no governance)
4. Often missing research based policy-making
5. Missing macro-regional approach for the sustainability (economic, environmental, societal)
6. Traditional knowledge transfer process

# The strategic thinking is inevitable

1. To solve „food first” issues
2. To ensure sustainable yields
3. To have cascading approach for biomass use
4. To secure circularity
5. To sustaine the diversity of production systems

# The strategy building is multi-layered and due to time constrains should be done parallelly

1. National (including micro-regional) /government level strategy
  - To avoid the „just for immediate economic profit” situations
  - To ensure the principles based approaches
  - To solve security questions (food, jobs, energy etc.)
2. Macro-regional level cooperation and strategy
  - To cope with sustainability (environmental, societal and economic)
3. European level
  - To ensure knowledge transfer between EU13 and other member states
4. Global level cooperation
  - To ensure viable solutions with solidarity



# To do things at national and macro-regional level:

- **Initiate cooperation:** establish a multi-stakeholder network to facilitate joint actions;
- **Provide an evidence base:** establish data-driven support for implementation of policies;
- **Focus on research:** map specific challenges for a Strategic Research and Innovation Agenda;
- **Improve skills:** train a new generation of dedicated multi-stakeholder actors;
- **Develop synergies:** promote regional, national, EU and international funding opportunities;
- **Increase visibility:** draw attention to specific challenges of the CEE regions.

# Challenges for Strategic (Research and Innovation)

## Agenda building

1. Systems approach:
  - for national security (food and nutrition, energy, jobs) and for macro-regional sustainability questions the answers should be transdisciplinary and cross-sectorial
2. Technological developments:
  - (Bio)Technologies to increase yields, reduce wastes and losses, create new biomass-derived products
  - Trade-off between reducing wastes and losses, and the creation of new value chains in a circular & cascading biomass-based economy
3. Societal acceptance:
  - Consumers' behaviours (determinants, variability, changes, ...)
  - Education on skills and competences
4. Governmental policy
  - To incorporate changes and ruptures (environmental, behavioural or technological)

Where we are in this process?

**[www.bioeast.eu](http://www.bioeast.eu)**

Thank you for your attention!