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# A ROADMAP TOWARDS CIRCULAR ECONOMY OF NORTH MACEDONIA

**Launch meeting**  
Skopje, 26 March 2024



# Objectives of the roadmap

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Assist the government of North Macedonia in formulating policies for a circular economy, with a focus on improving inter-institutional coordination and collaboration with stakeholders to drive the transition forward



Consolidate existing policies and promote collaboration between various sectors, measures, and stakeholders



Promote sustainable production and consumption, which could further economic, environmental, and social objectives



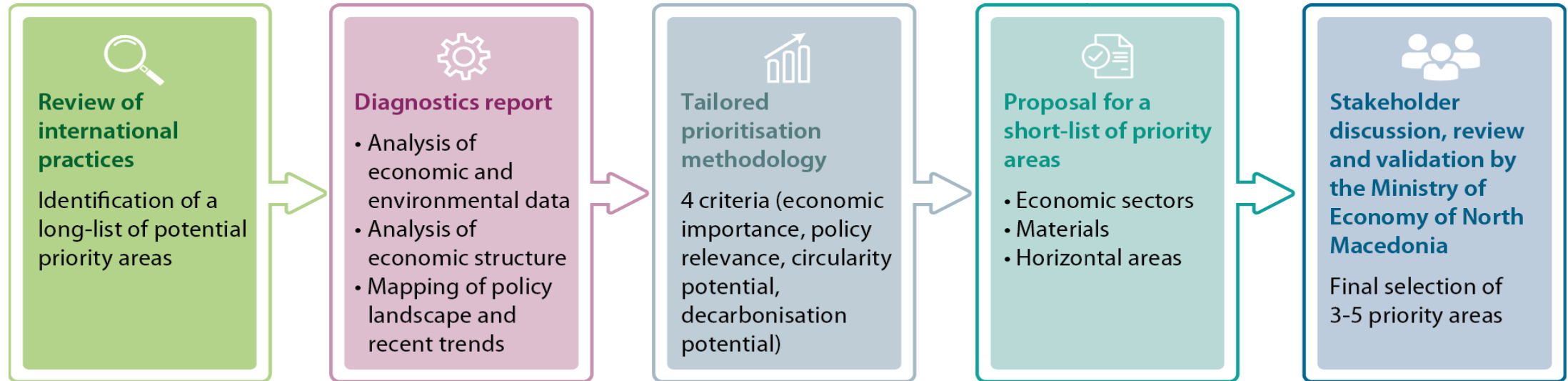
Reduce material and resource consumption, increase productivity levels, and decrease pollution



Increase societal awareness of circular economy concepts



# Roadmap development process



## Key ingredient:

**Consultation process with key stakeholders**, including the government, private sector, civil society, academia and IOs **throughout the CE roadmap development** to obtain insight into their views, experiences, challenges, needs and concerns regarding the circular transition.



# Main circular economy stakeholders in North Macedonia



Government

## Leading Ministry: Ministry of Economy

- Ministry of Environment and Physical Planning
- Office of the Deputy Prime Minister
- Agency for Foreign Investments
- Agency for Promotion of the Entrepreneurship
- Fund for Innovation and Technology Development

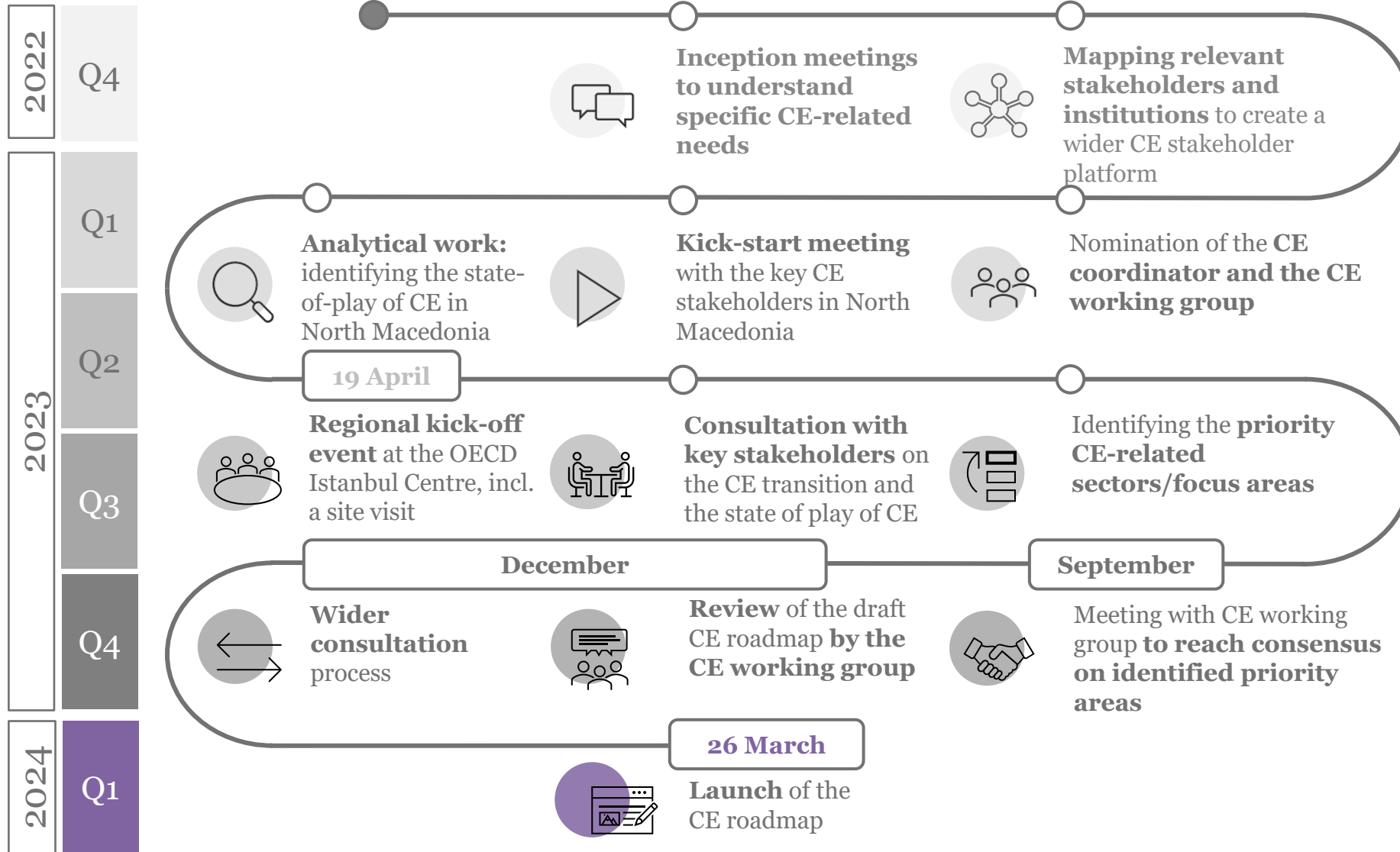


Non-government stakeholders





# Timeline and key milestones



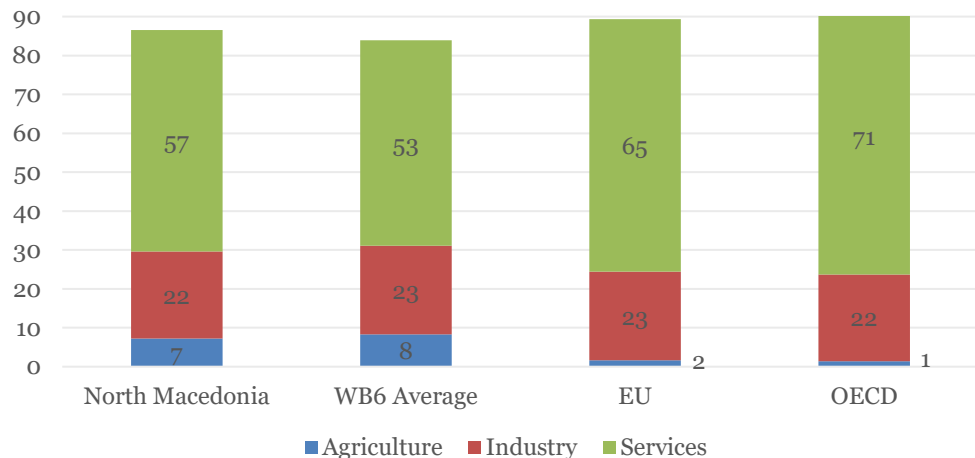


# RECAP OF DIAGNOSTICS OF CIRCULAR ECONOMY IN NORTH MACEDONIA



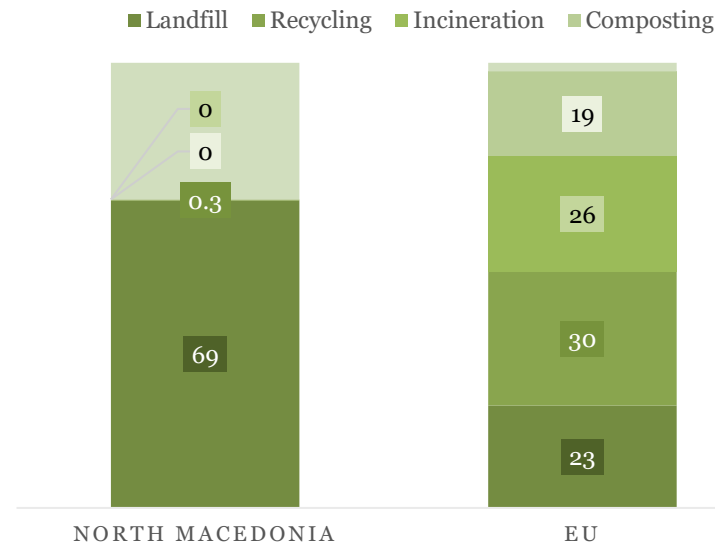
# North Macedonia's key economic features and environmental trends relevant to circular economy

Value added by grouped activity in North Macedonia (% of GDP), 2021



- Wholesale and retail trade account for largest share of **service-oriented economy**. Large share of SMEs can be a key driver in achieving circular objectives.
- Special economic zones recently helped expand the **industry** sector. However, largest industrial sectors are energy and carbon intensive and there remains untapped CE potential.
- **Agriculture** is dominated by subsistence farming on small and fragmented holdings with low-skilled jobs. Food waste is a critical issue (45% of municipal waste was organic in 2021).

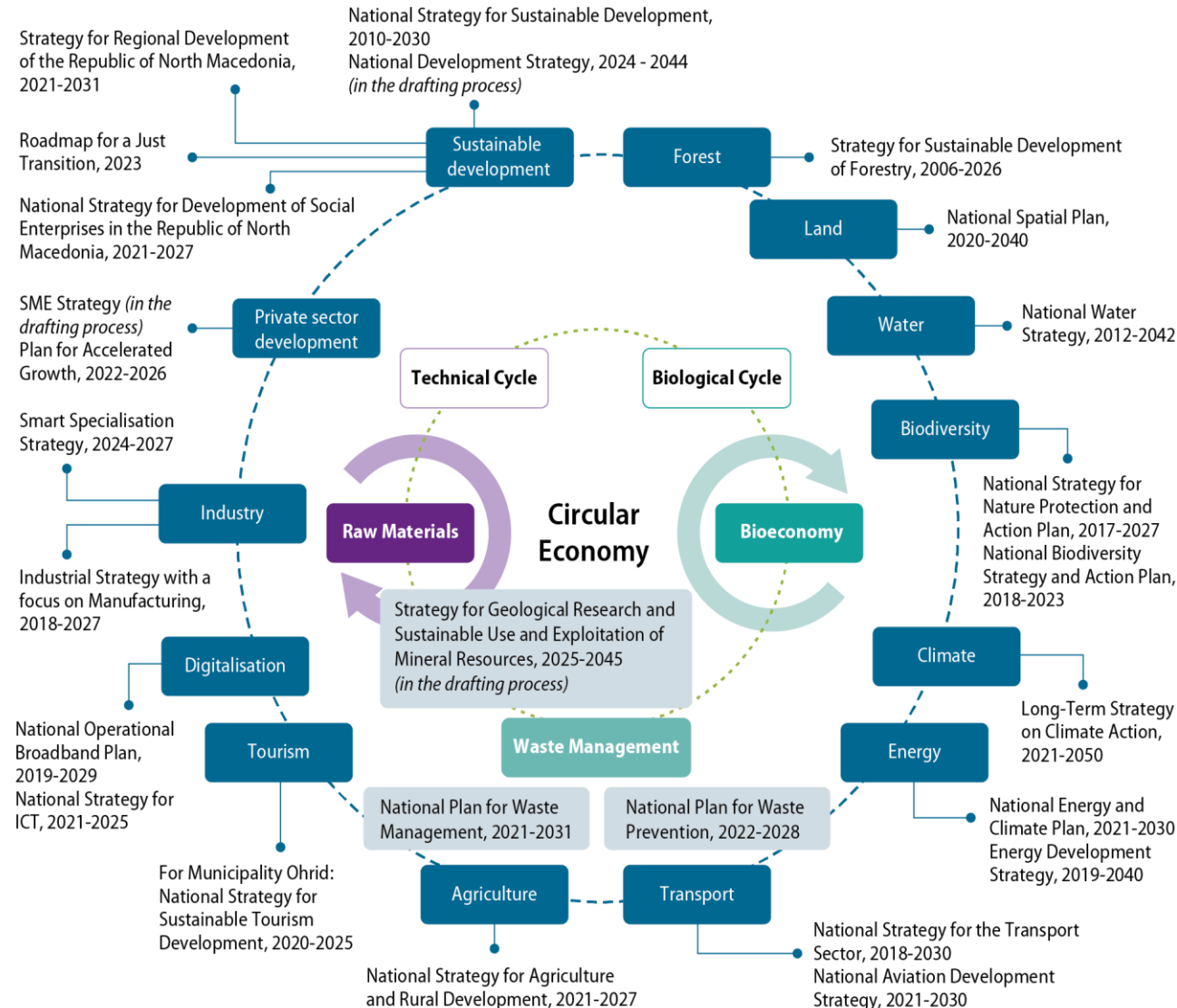
Municipal waste treatment (%), 2020



- **Resource productivity** is improving, reached an all-time high value in 2018, but remains well below EU average.
- **Waste management** is a challenge: inadequate waste separation (69% landfilled) and low recycling rates, mainly conducted by informal waste pickers.
- **EPR schemes** regulate bring systems for packaging waste.



# Existing policy landscape relevant to circular economy



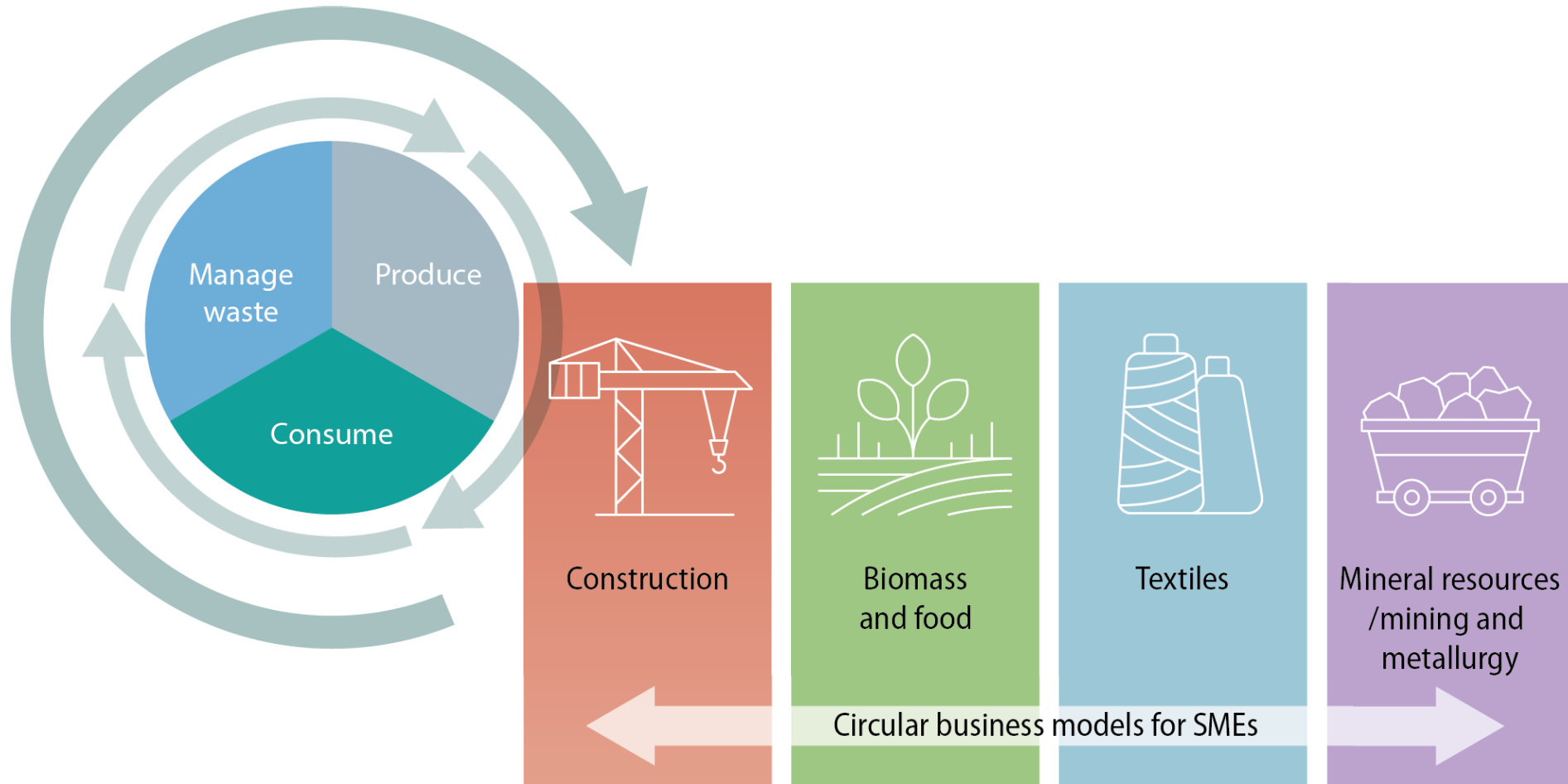




# SELECTION OF PRIORITY AREAS



# Selected 5 priority areas for North Macedonia





# CIRCULAR BUSINESS MODELS FOR SME<sub>s</sub>



# Circular business models for SMEs

## Key facts

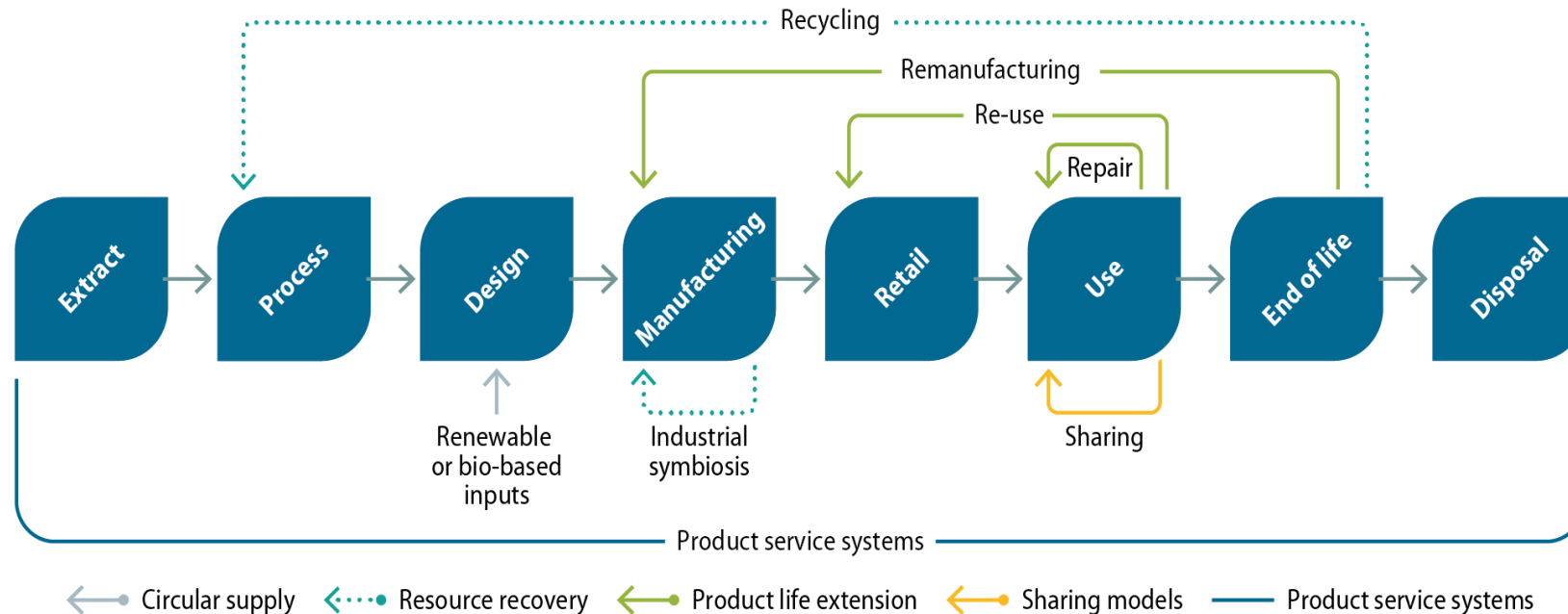
In North Macedonia, SMEs account for

- 99.9% of enterprises
- 67% of value added to GDP
- 74% of employment (70% working in services)

## Did you know?

North Macedonia's SME Strategy (2018-2023) already emphasised environmental policies. With ongoing support programmes, the country bolsters SME sustainability and competitiveness through targeted measures.

## What are circular business models?





# Key recommendations: circular business models for SMEs

- **Raise SMEs' awareness and understanding of the circular economy** through various tools (e.g. communication campaigns; training, mentoring, or acceleration programmes).
- **Improve multi-stakeholder co-operation within/across value chains by improving collaboration** (e.g. grants for collaborative R&D, stakeholder platforms, investor-entrepreneur matchmaking events).
- **Provide financial support** for scaling up circular business models by introducing calls for SMEs within existing, or creating new, funding programmes and offer corresponding non-financial support
- **Implement supportive legislation and economic instruments** to support circular business models and resource recovery (e.g. extended producer responsibility schemes, green public procurement, eco-design requirements).

## Good practice: Turkey Circular Economy Platform

Established by the Business Council for Sustainable Development of Türkiye (2020). The platform:

- provides practical solutions, incentives, news and opportunities in the field of the circular economy.
- includes a knowledge hub and measurement tools and offers training, financial opportunities and consultancy services for companies.
- manages the Turkey Materials Marketplace (TMM), an e-commerce platform for industrial symbiosis.



# TOWARDS A CIRCULAR CONSTRUCTION SECTOR



# Construction

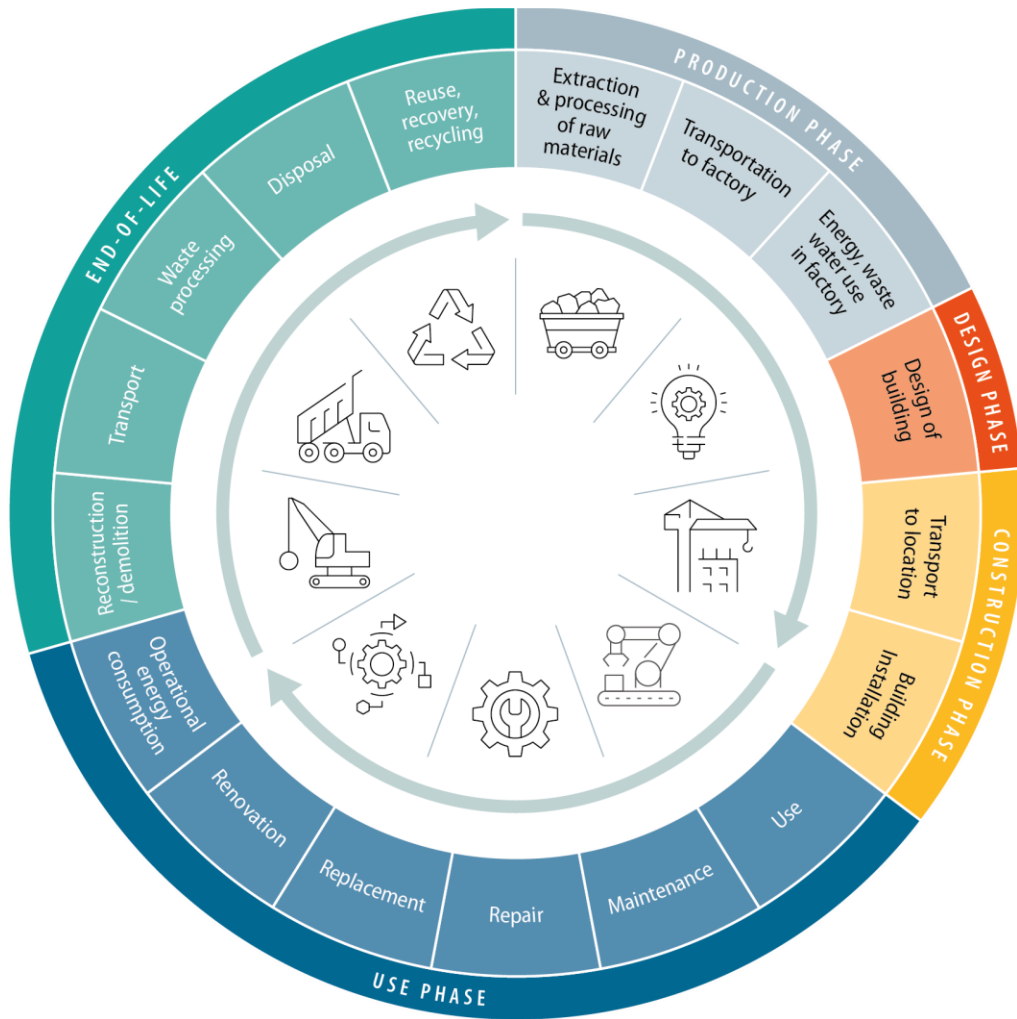
## Key facts

In North Macedonia, the construction sector accounts for

- 5.5% of GDP
- 5% of total employment
- Large amounts of construction and demolition waste
- One of the biggest consumers of energy and raw materials and has a high decarbonisation potential.

## Key recommendations to support a circular construction sector:

- **Improve stakeholder engagement and collaboration, and ensure that funding is available** for circular construction projects through different measures (e.g. working group on circular construction, launch and fund circular construction pilots).
- **Manage construction and demolition waste** in a more environmentally sound manner, including increasing its recovery and reuse through information-driven processes (e.g. systemic data collection) and legal tools (e.g. mandatory selective demolition, end-of-waste criteria).
- **Boost the production and uptake of sustainable construction materials in construction and renovation** by leveraging green public procurement and introducing quality standards for secondary and recycled construction materials.





# CIRCULAR TRANSITION FOR BIOMASS AND FOOD



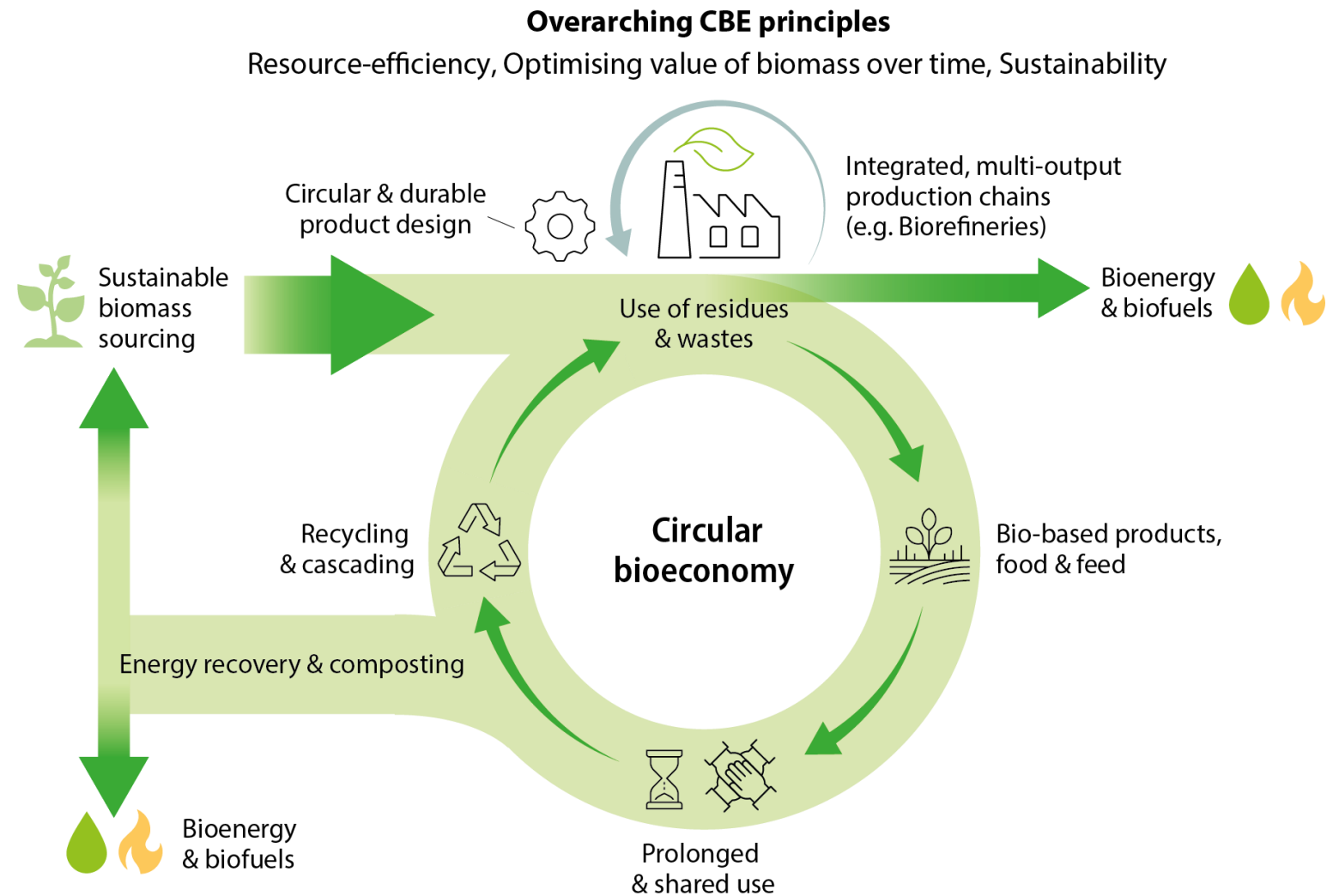


# Biomass and food

## Key facts

In North Macedonia, the sectors account for:

- 15% of gross value added
- strong export capabilities and emerging organic farming growth
- 10% of employment
- low-skilled, low-wage jobs, primarily due to subsistence farming





# Key recommendations: Biomass and food

- **Improve the management of agricultural waste and bio-waste and close their biological cycle** by taking action to improve infrastructure and incentives for separate collection, investing in composting facilities and strengthening the regulatory framework by developing quality assurance systems.
- **Move towards a sustainable consumption of food by preventing waste** (e.g., through tax incentives for food donations) and **create demand for sustainable food products** (e.g., through green public procurement).
- Incentivise the development of the circular bioeconomy through better **funding and technical support in research and innovation projects**.
- **Improve stakeholder engagement and collaboration, and awareness raising through various key actions** (e.g., dedicated working groups on circular bioeconomy, circular economy platforms, voluntary agreements and leveraging existing measures under the Smart Specialisation Strategy).

## Good practice: Slovenia's innovative Decree on Biodegradable Waste Treatment

- Mandates stringent treatment and utilisation standards for biodegradable waste, including compulsory recovery operations and market placement conditions.
- Outlines specific criteria for biogas plant design and operation, types of processable waste, and rigorous composting and anaerobic digestion protocols.





# TEXTILE INDUSTRY



# Textile industry

## Key facts

The textile industry in North Macedonia:

- The second largest industrial sector
- 10% of exports
- 13% of industrial GDP
- 4.7% contribution to total municipal waste through landfilling, alongside minimal recycling and fabric underutilisation.

## Good practice: EPR for textiles and clothing in France

- Incentivises producers to design more sustainable and recyclable clothing.
- Rewards producers using recycled materials
- Discourages landfill by offering subsidies for reuse and recycling facilities.



## Key recommendations for advancing a circular food and biomass sector:

- **Develop a national strategy for sustainable and circular textiles** that covers the entire textile value chain.
- **Reduce and better manage textile waste through improved production processes** (e.g. provide financial and technical support) and **increased recycling and reuse of textiles** (e.g. by supporting investments in targeted projects, mandatory extended producer responsibility take-back schemes).
- Strengthen the circular design of textiles by **introducing ecodesign requirements and supporting innovations** (e.g. introduce ecodesign requirements, support local projects and innovation for circular textile design).



# MINING AND METALLURGY



# Mining and metallurgy

## Key facts

- Mining and quarrying accounts for 1.3% of GDP and 10.9% of industrial production.
- Basic metals production represented 13.6% of exports in 2021, the vast majority being exported to the EU
- Mining sector has been backed by important FDI due to lower restrictions on procedures for issuing permits and concessions, but has resulted in long-lasting water and soil pollution

## Good practice: How the United Kingdom turns steel slag into valuable aggregates

The UK's steel slag quality protocol, developed in collaboration between regulatory bodies and the industry, promotes a circular economy in metallurgy.

It transforms waste steel slag into a valuable construction resource, exempting it from waste controls when specific standards are met.



## Key recommendations for advancing a circular food and biomass sector:

- **Improve stakeholder engagement, education and collaboration, and raise awareness** (e.g. develop a circularity potential study, assess data to map out material flows, facilitate symbiosis in green industrial zones).
- **Provide financial support and economic incentives for upstream eco-innovation and research and development** to enhance metal and mineral value chains for a low-carbon economy.
- Support legislation and policies for circular value chains in mining and metallurgy by **mainstreaming circularity principles in strategic documents, procedures for permits and concessions, and considering material recovery obligations.**



# MONITORING FRAMEWORK



# Monitoring framework – an integral feature of the roadmap

The proposed monitoring framework for North Macedonia has a two-tier structure:



1. **A set of headline indicators to monitor the economy-wide circular transition in North Macedonia, largely based on the European Union's circular economy monitoring framework** and grouped into five categories: 1) production and consumption; 2) waste management; 3) secondary raw materials; 4) competitiveness and innovation; and 5) global sustainability and resilience.
2. **A set of indicators per priority area to monitor the progress made on specific recommendations** (e.g. qualitative ones: the implementation has started, is ongoing or completed).

Indicator <sup>1</sup>	Description	Link to recommendation	Source <sup>2</sup>
<b>Circular business models for SMEs</b>			
Awareness-raising campaigns on the circular economy	Number of campaigns	Provide awareness-raising campaigns and training programmes on the circular economy for SMEs	Data to be provided by the Agency for Promotion of Entrepreneurship of the Republic of North Macedonia (APPRM), the Fund for Innovation and Technological Development (FITD), or chambers of commerce and industry
Small and medium-sized enterprises' (SMEs) awareness of circular business models	Share of SMEs aware of the circular economy		Regional Cooperation Council (Balkan Barometer Survey) or nationwide survey
Mainstreaming education on the circular economy into university-level curricula	Action-specific indicator for monitoring the implementation of the recommendation (yes/no)	Support capacity building and entrepreneurship skills, vocational training, and acceleration and mentoring programmes on the circular economy	Data to be provided by the Ministry of Education and Science
Environment-related research and development (R&D) and innovation expenditure by state and business sectors	Gross expenditure on research and development (GERD) %	Support collaboration between SMEs and academia, as well as regional and international collaboration on R&D and innovation	Indicator to be developed based on Eurostat by the Agency for Research, Technology and Innovation. Data to be provided by the APPRM or the FITD
Creation of a circular economy platform <sup>3</sup>	Action-specific indicator for monitoring the creation of the platform (yes/no)	Establish a circular economy stakeholder/business platform	Data to be provided by the co-ordinating institution (e.g. Ministry of Economy)
Number of platform members <sup>3</sup>	Number		
Number of events/workshops organised as part of the platform <sup>3</sup>	Number		
Matchmaking events organised	Number of events	Organise investor-entrepreneur matchmaking events	Data to be provided by the APPRM or the FITD
Budget allocated to circular economy projects under a concrete programme	Amount (MKD)	Introduce calls for circular business models projects within existing funding programmes. Provide financial, combined with technical, assistance to SMEs (business support, access to finance support)	Data to be provided by the APPRM or the FITD
Training courses on circular business models	Number of events organised Number of technical modules created as part of funding programmes		
SMEs benefitting from financial support for the creation of new circular business models	Number of SMEs		
SMEs benefitting from non-financial support for the creation of new circular business models	Number of SMEs		
Technical support for the public administration for the development and implementation of such programmes	Number of trainings		Data to be provided by the Ministry of Economy, the APPRM or the FITD





ANY QUESTIONS?



# Thank you for your attention!

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**MKseeurope**



**Republic of Serbia**  
**Ministry of Environmental Protection**

# **Development of Public Policy Documents in the field of Circular Economy**



**Sonja Matunović**

**26th March 2024**  
**Skoplje**

# Past MoEP Activities

- Working Group for Circular Economy, 2019
- EX-ante analysis of the effects for the circular economy, PLAC III project, Law on the Planning System of the RS, January 2020
- 7 areas - Waste; Energy efficiency, renewable energy sources; Micro, small and medium enterprises; Green public procurement; New technologies (innovations and technological development); EMAS and cleaner production; Eco-label, eco-design and energy efficiency labels (circular design)



# Roadmap for circular economy in Serbia

- **Developed** within the project Circular Economy Platform for Sustainable Development in Serbia, UNDP, Belgrade, April 2020
- **Guide** to circular economy transition models that equally focus on profit, environmental protection and preservation of resources.
- **Aim** is to gather, promote and connect the stakeholders whose knowledge, innovation and creativity can contribute to a faster transition to CE
- **Goal** is to encourage manufacturing with use of circular business models, improvement by finding innovative and sustainable solutions for the market
- **Intention** of this document is to inspire the society to consider systemic changes in mindset, culture and attitude towards resources, and to encourage the political decision-makers to commit to the public policies in the context of CE



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## ROADMAP for circular economy in Serbia



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- 7.3. Members of Special Working Group for Circular Economy

#### 8. REFERENCES

# Program for Development of Circular economy in the Republic of Serbia for the period 2022 – 2024

## GENERAL GOAL

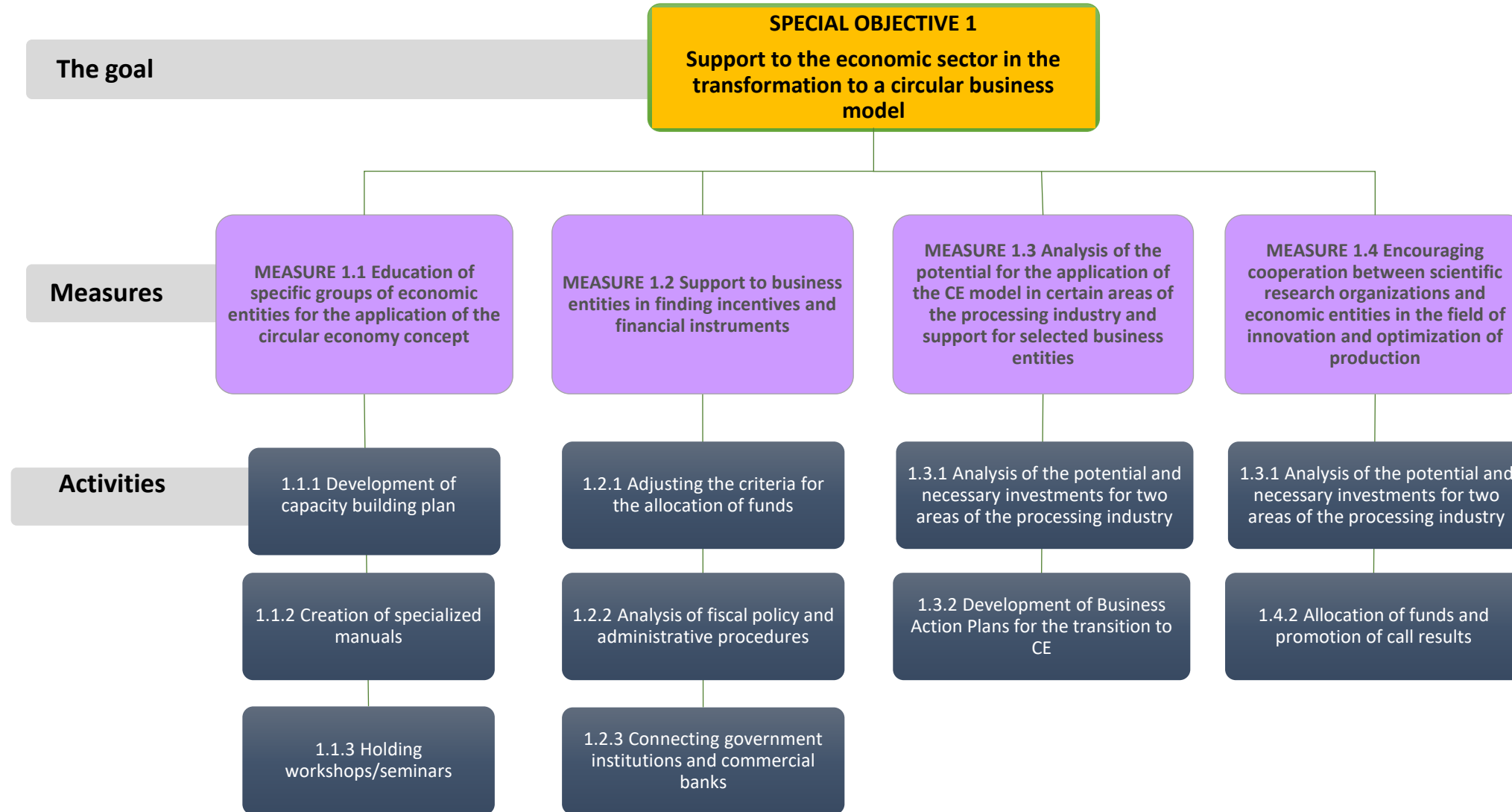
**Creating a stimulating environment for the development of the circular economy in order to support the green transition in the Republic of Serbia**

## SPECIFIC OBJECTIVES

1. Support to the economic sector in the transformation to a circular business model (4 measures, 10 activities)
2. Support to local governments in creating circular communities (2 measures, 4 activities)
3. Improving the waste management system through more efficient use of waste in the CE (5 measures, 13 activities)
4. Support for the implementation of green public procurement and voluntary instruments in the field of environmental protection (5 measures, 14 activities)
5. Raising the awareness of interested public and educational institutions about the concept of CE (2 measures, 6 activities)

# ACTION PLAN - SPECIAL OBJECTIVE 1

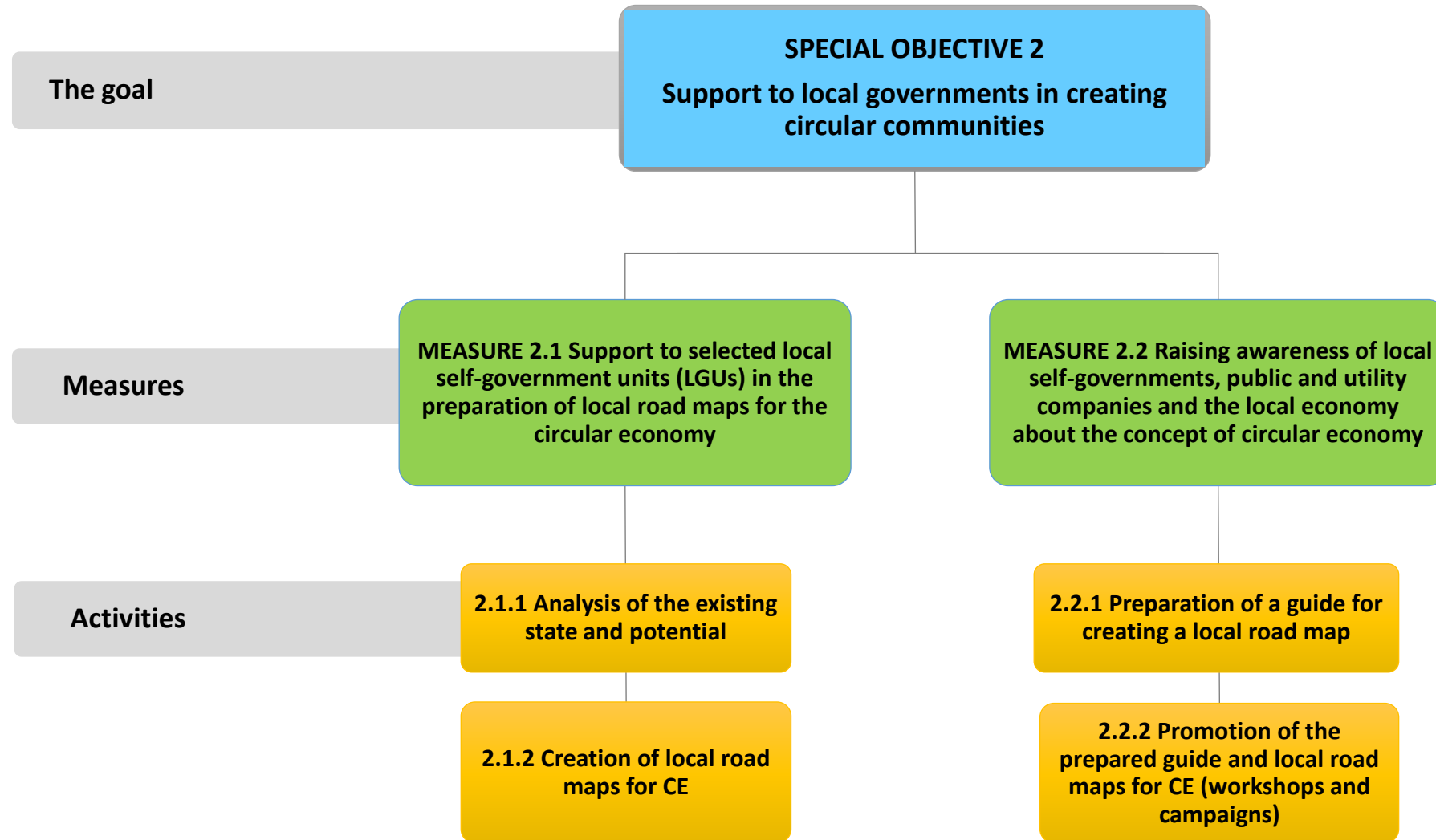
Program for Development of Circular economy in the Republic of Serbia for the period 2022-2024





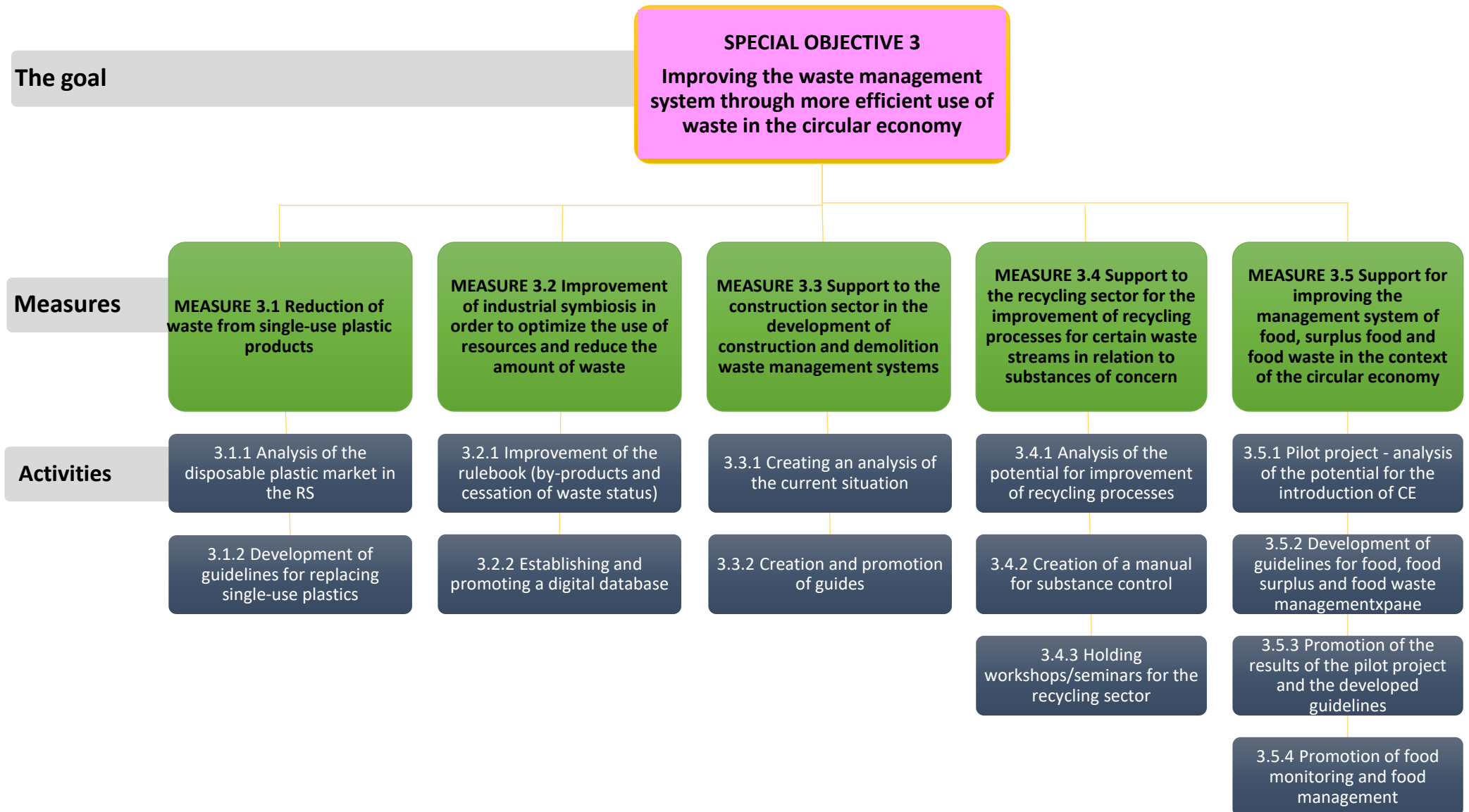
# ACTION PLAN - SPECIAL OBJECTIVE 2

Program for Development of Circular economy in the Republic of Serbia for the period 2022-2024



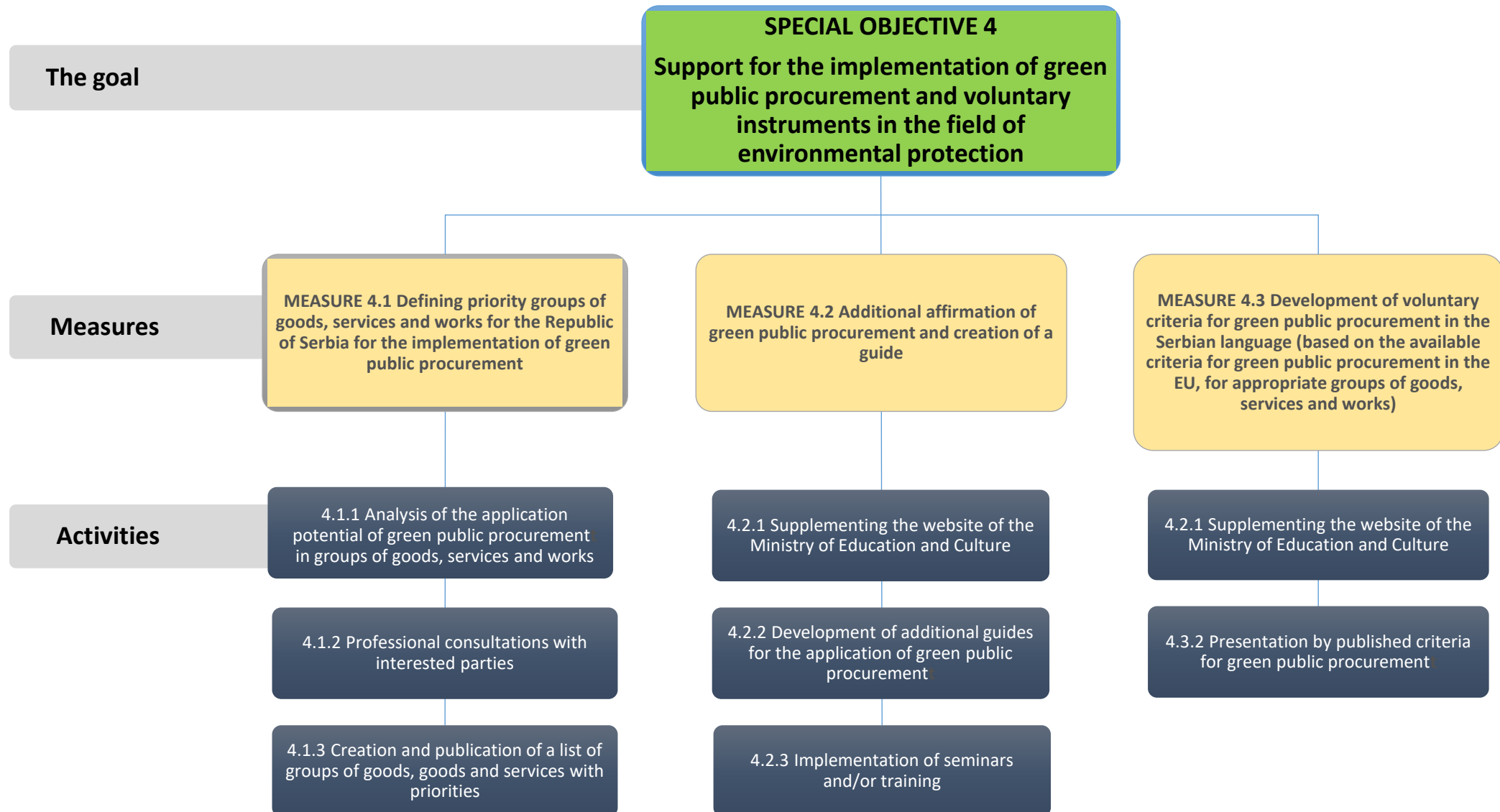
# ACTION PLAN - SPECIAL OBJECTIVE 3

Program for Development of Circular economy in the Republic of Serbia for the period 2022-2024



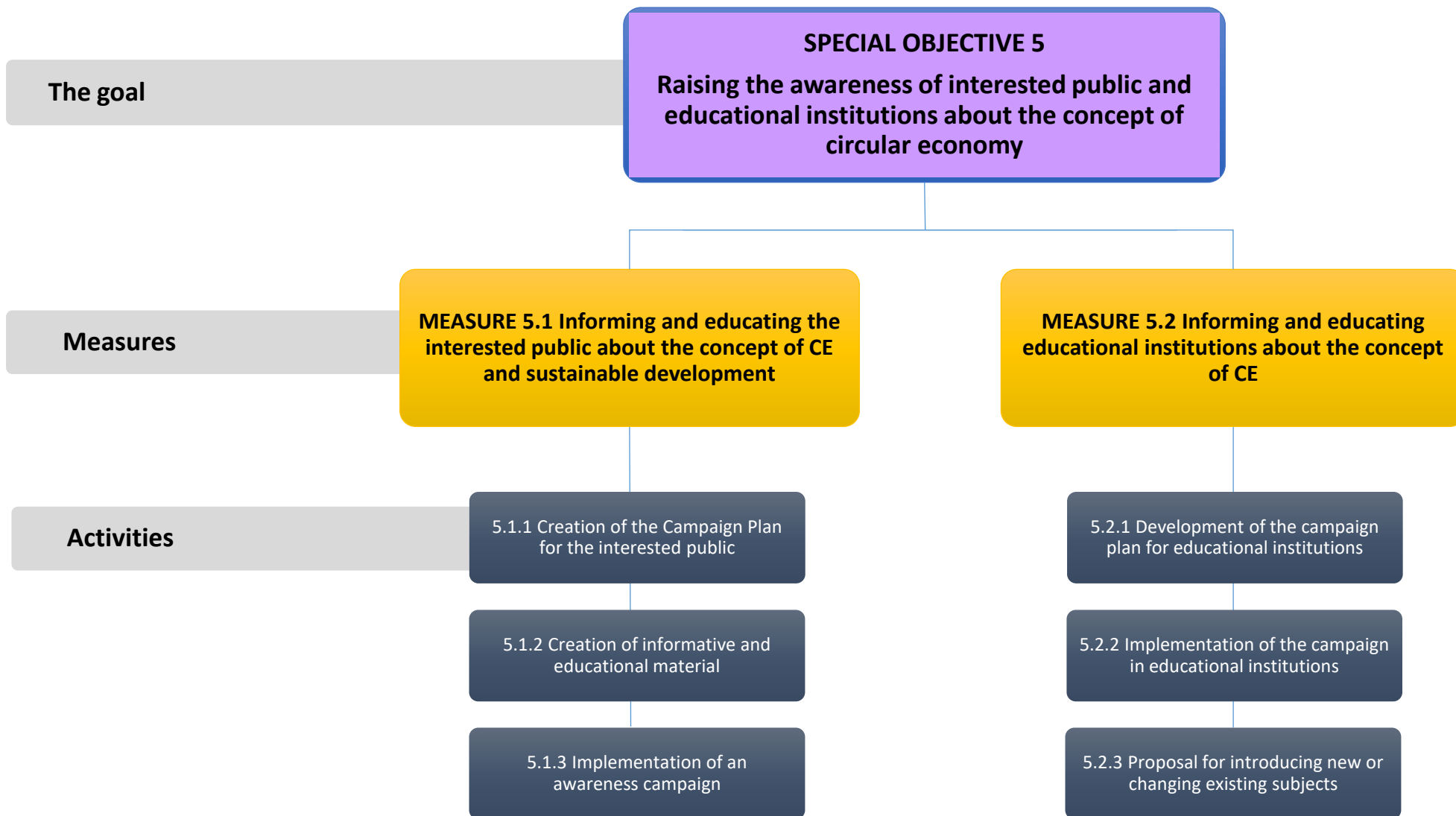
# ACTION PLAN - SPECIAL OBJECTIVE 4

Program for Development of Circular economy in the Republic of Serbia for the period 2022-2024



# ACTION PLAN - SPECIAL OBJECTIVE 5

Program for Development of Circular economy in the Republic of Serbia for the period 2022-2024



# Current and future MoEP Activities

Implementation of measures and activities from the Action Plan of the CE Development Program

GEF-UNDP project: "Reducing the carbon footprint of local communities by applying the principles of the circular economy in the Republic of Serbia - Circular Communities"  
*Support to the economic, scientific research sector and local communities*

*Circular Vouchers: A total of 25 vouchers of \$10,000 each were distributed to the R&D sector*

*Accelerator: 65 ideas were co-financed*

*Initiative "Accept the circular challenge", 2024 for the business sector and for local communities*

OECD project "Supporting Green Transition through CE road maps in Western Balkan regions"

UNECE project: Agriculture and food waste

Co-operation with key actors in the green transition

Regional cooperation

Creation of a new CE Development Program



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# A Roadmap Towards Circular Economy of North Macedonia

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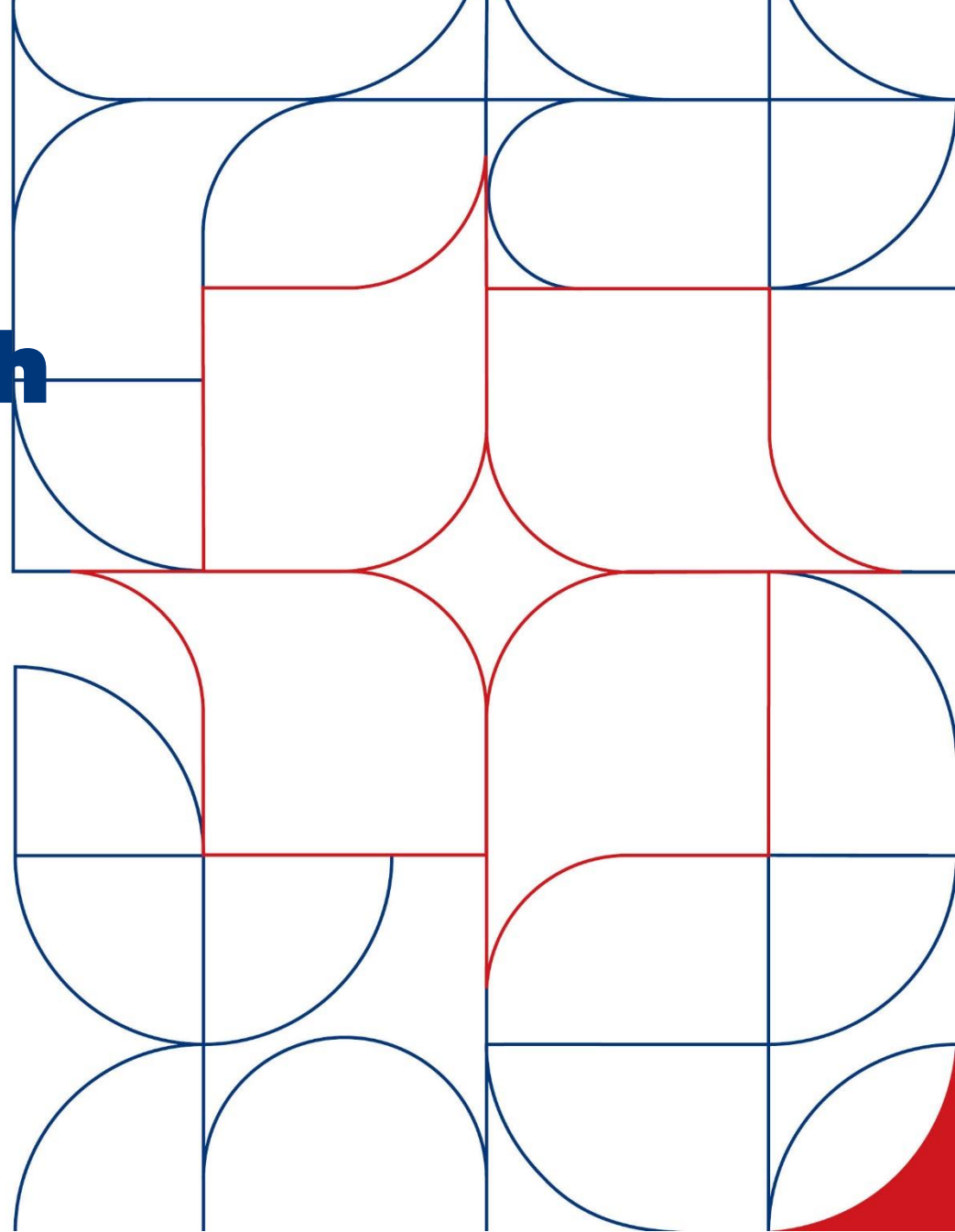


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KOMORA  
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**Skopje, 26<sup>th</sup> of March 2024**

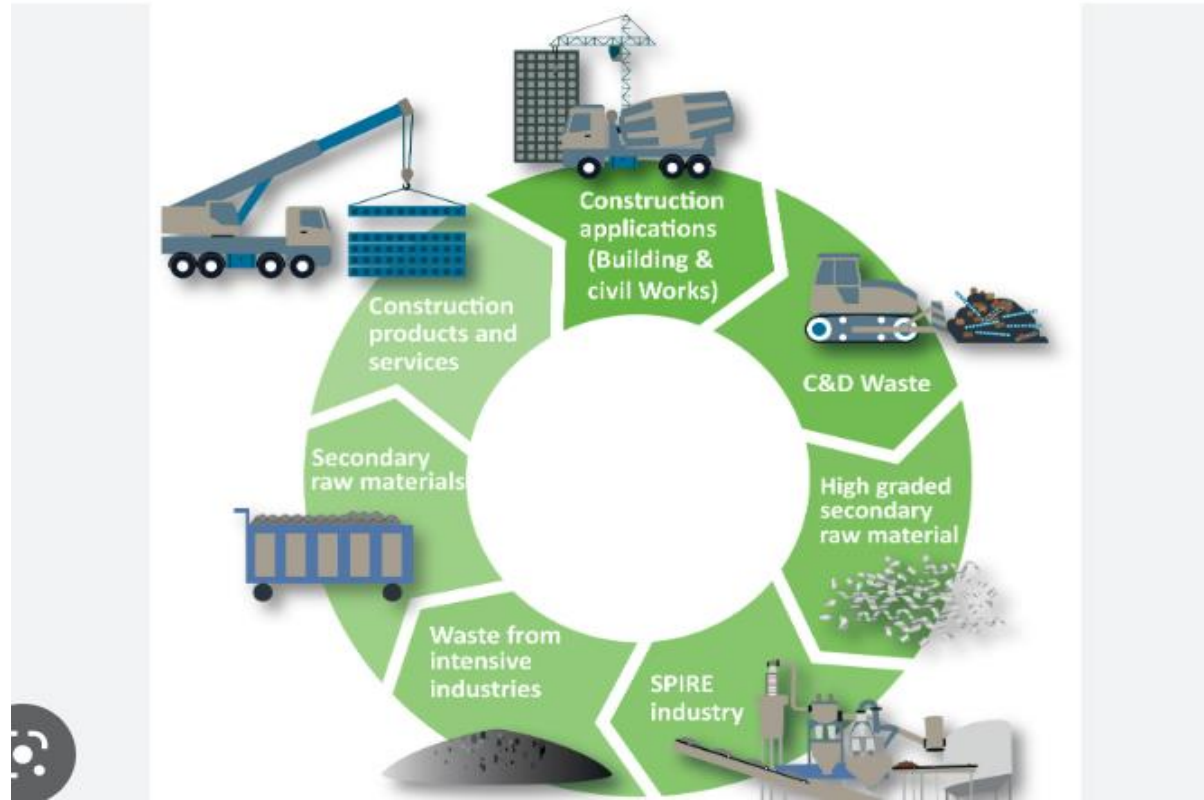
**Dr Radman Šelmić,  
Advisor to the President of the  
Chamber of Commerce and  
Industry of Serbia**





# Mapping out potential for industrial symbiosis

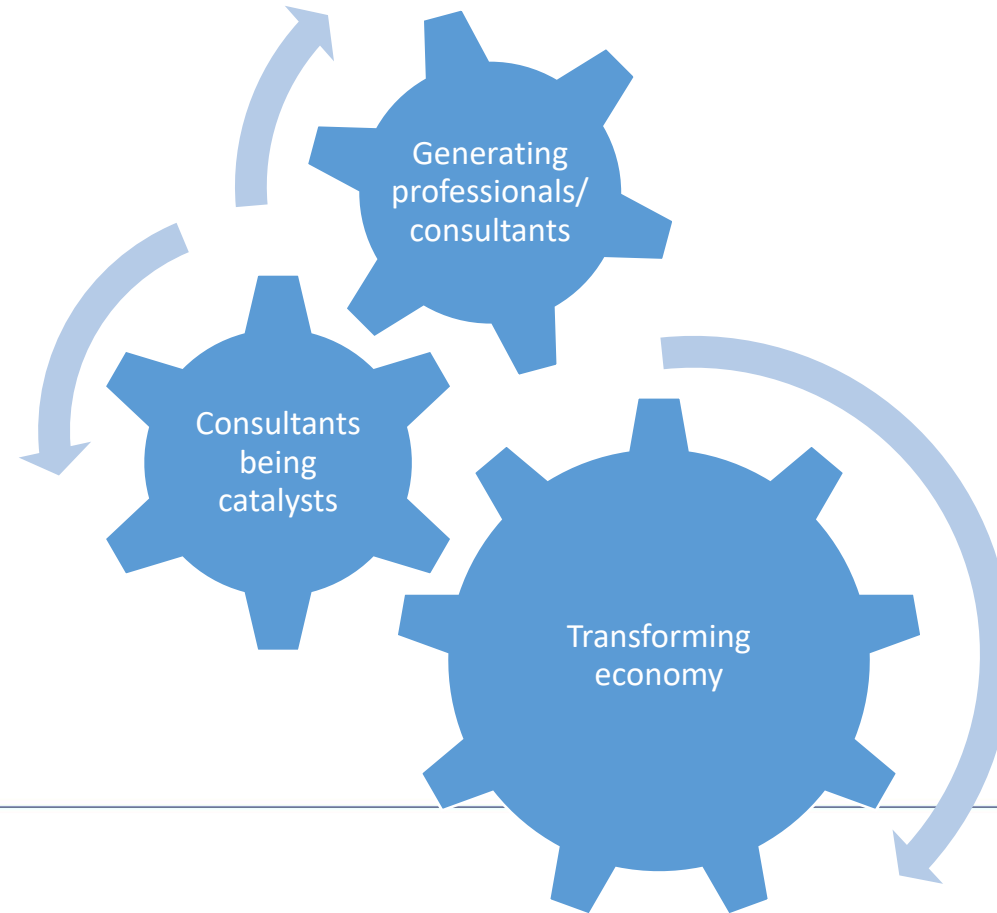
- Industrial zone in Pirot as a pilot project
- Five more industrial zones in Spring 2024
- Developing a market for industrial waste
- Putting pressure on government to adapt regulatory framework





# Plans until 2025

**- Infrastructure of knowledge and expertise – we need an army of well educated and knowledgeable experts**



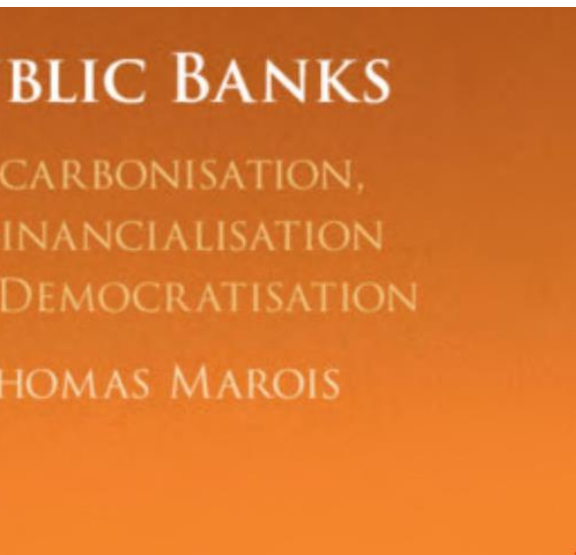
# Potential for regional cooperation

- **Transfer of knowledge and experience (CE, Carbon accounting, Financial capacity building, etc.)**
- **Certification of consultants for circular economy**
- **Digital mapping of potential for industrial symbiosis (local, national and regional digitalization)**
- **Potential for regional cooperation in waste management**



# State Investment Bank

- **Relevance of the state investment bank**
- **Financial engine of green transition plus catalyst of green – tech innovations**
- **Mariana Mazzucato and her team have risen to prominence**



Institute for Innovation and Public Purpose

## A mission-oriented framework for the Scottish National Investment Bank

by Mariana Mazzucato and Laurie Macfarlane

March 2019

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The Rise of Mission-Oriented State Investment Banks:  
The Cases of Germany's KfW and Brazil's BNDES

*SWPS 2015-26*

35 Pages • Posted: 8 Mar 2016

[Mariana Mazzucato](#)

University College London - Institute for Innovation and Public Purpose

[Caetano CR Penna](#)

University of Sussex

Date Written: September 16, 2015



# Carbon Accounting

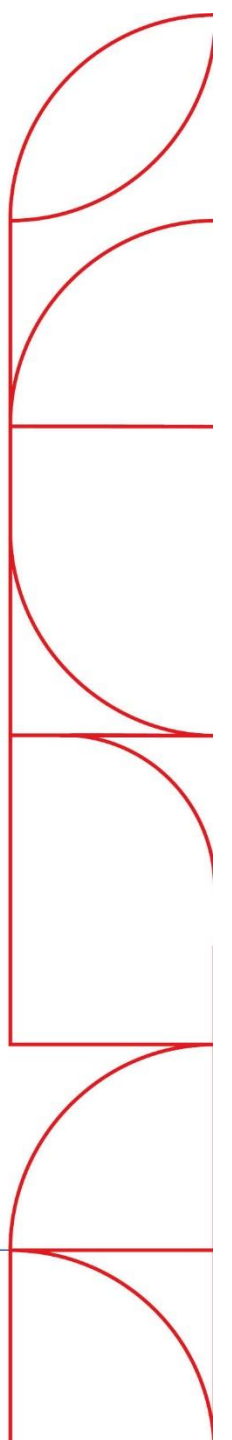
- We have introduced the **Carbon Accounting Module** into **University Curriculum** (short program at the **University of Kragujevac**)



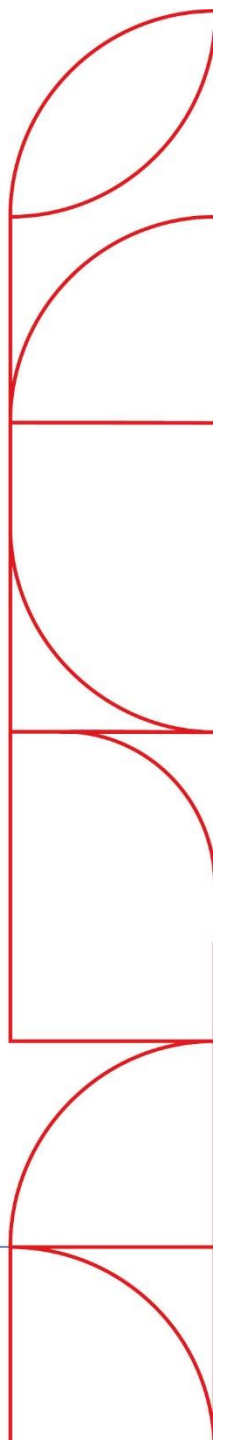
**Birmingham Business School  
Carbon Accounting for Net Zero  
(CANZ)**



First in the world to integrate climate change throughout its accounting programme



# Why carbon accounting?



**Thank you  
for your  
attention!**



[www.pks.rs](http://www.pks.rs)