

Strategic determinants for green growth and green economy

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The circular economy concept (CE) 1/2

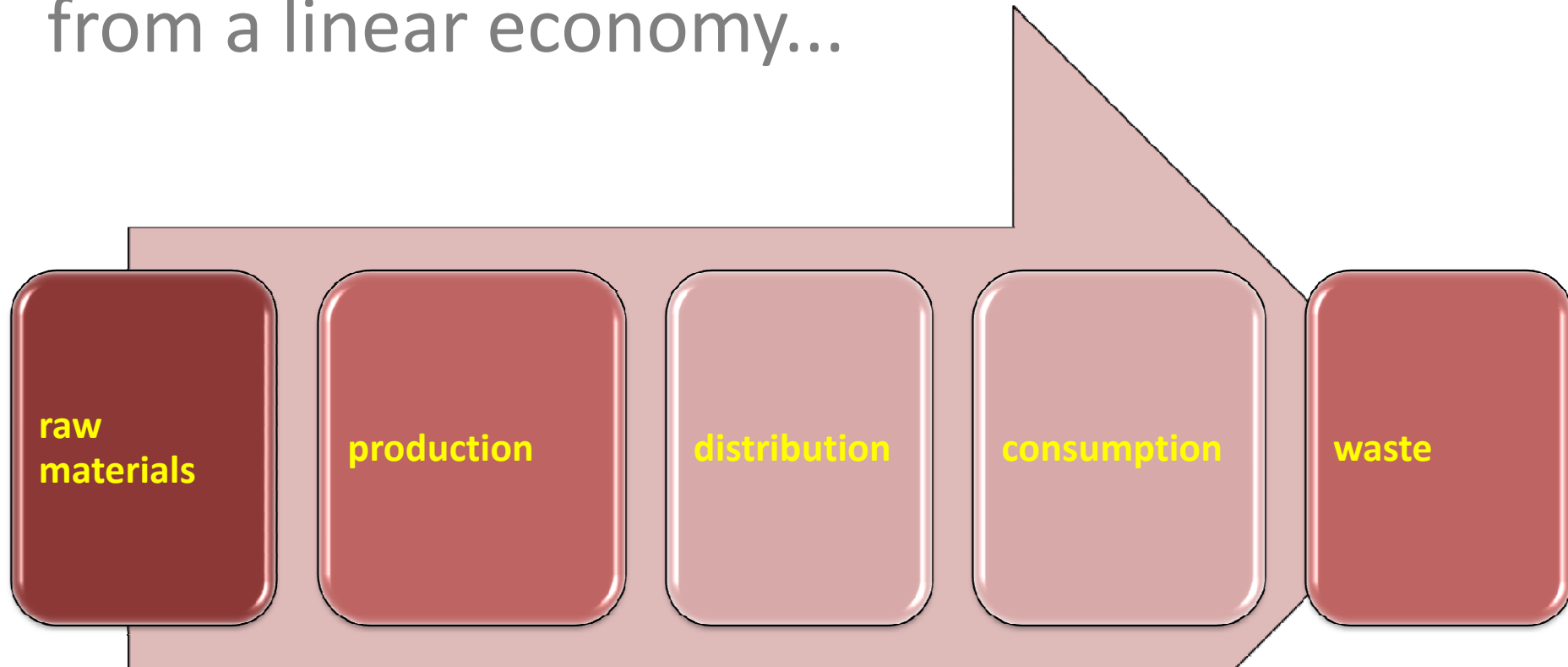
- from the Industrial Revolution onwards, our economies have developed the growth pattern operating under the principle of “take, create, consume, discard” – a **linear model** that rests on the assumption that resources are plentiful, available, easy to exploit and cheap to discard.
- the **competitiveness** of Europe is jeopardised
- the transition to CE requires **change in the entire value chain**, from the product design to new business and market models, from new ways of turning waste into resources to new consumer behaviour
- the necessary **complete change** of the system and innovation, not only in the technology, but also in the organisation, society, funding methods and policies

The circular economy (CE) concept 2/2

Circular economy approaches 'design out' waste and typically involves **innovation throughout the value chain**, rather than relying solely on solutions at the end of life of a product

- **reducing** the quantity of materials required to deliver a particular service (lightweighting);
- **lengthening** products' working life (durability);
- **reducing** the use of energy and materials in the production and use phases (efficiency);
- **reducing** the use of materials that are hazardous or difficult to recycle in products and production processes (substitution);
- **creating** markets for secondary raw materials (recyclates) (based on standards, public procurement, etc.);
- **designing** products that are easier to maintain, repair, upgrade, remanufacture or recycle (ecodesign);
- **facilitating** the clustering of activities to prevent by-products from becoming wastes (industrial symbiosis) etc.

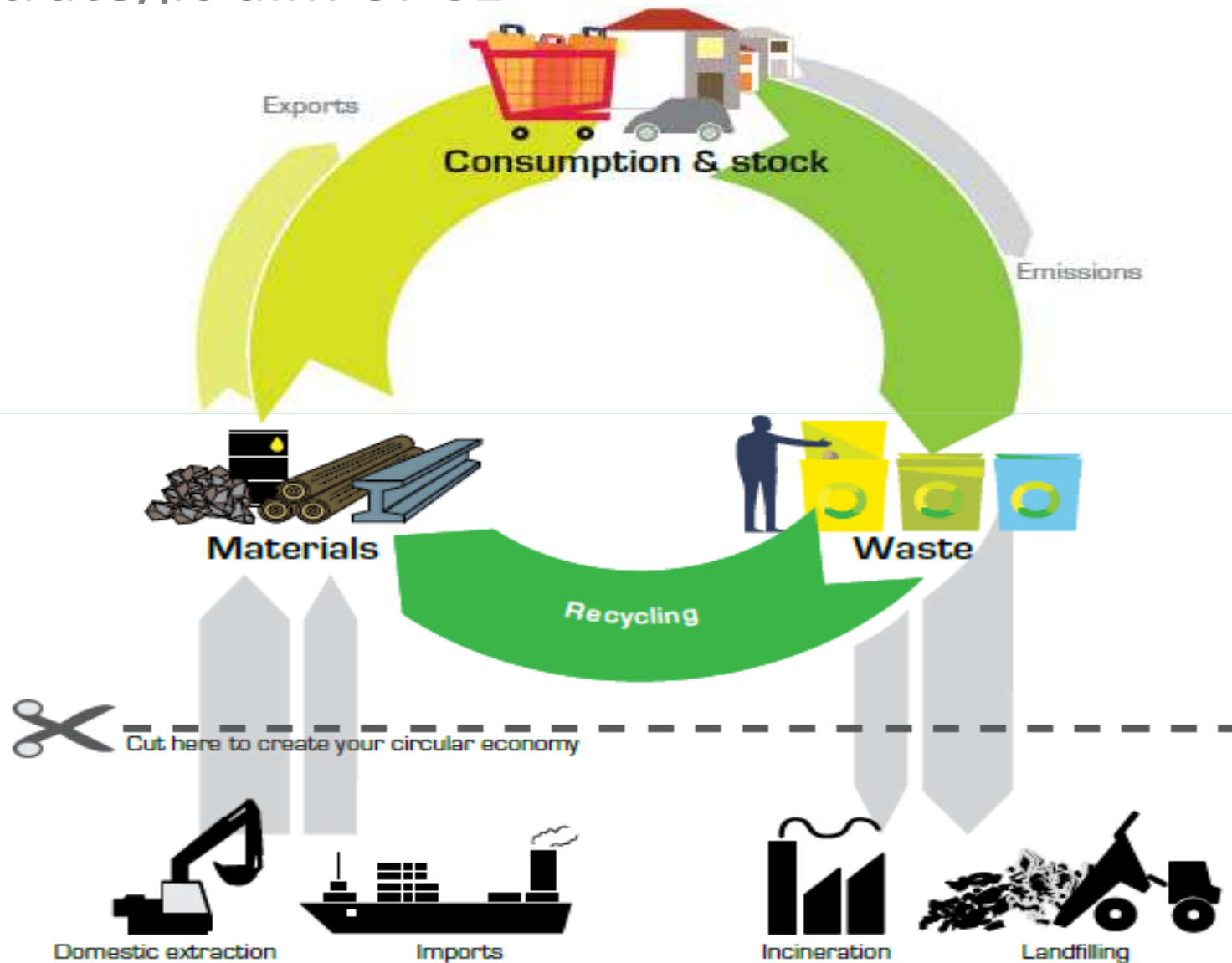
from a linear economy...



...towards a circular economy



The strategic aim of CE



EU industry in the context of access to CE

- A significant **potential** for creating economic value by improving resource **efficiency** in the European industry
- Estimated reduction of material input needs: **17 %-24 % by 2030.**
- a better use of resources could represent an overall savings potential of **€630 billion per year** for the European industry
- a potential to boost EU GDP by **up to 3.9%** by creating new markets and new products and creating value for businesses
- Resource productivity in the EU grew **by 20 %** in the 2000-2011 period, but this may be in part due to the effects of the recession

Strategic and other documents related to CE

- **Europe 2020 Strategy** for smart, sustainable and inclusive growth,
- **General Union Environment Action Programme** to 2020 (7th EAP)
- **Council conclusions** on sustainable materials management and sustainable production and consumption
- **Roadmap to a Resource Efficient Europe** and further measures following the Rio+20 Conference
- **Communication Towards a Circular Economy: Zero Waste Programme for Europe, Sustainable Buildings, Green Employment, Green Action Plan for SMEs, and Single Market for Green Products**
- **2020-2030 Framework for Climate and Energy Policies**
- **EU Council Conclusions** on the environment from 28 October 2014

Plan for a Resource-Efficient Europe

Aim: Separating the economic growth from the use of resources and their impact on the environment

Economy

Production and financial capital
Aim: to increase resource efficiency

Prosperity of the society

societal and human capital
aim: to reinforce social equality and just distribution

Ecosystem

natural capital aim: to maintain ecological elasticity (resilience)

Three time frames

- Short-term activities
- 2020 determinants
- 2050 vision

Three priority areas

- Shift towards a green, circular economy
- Protection of natural resources
- Solutions for the key sectors: food, building design and construction, mobility

Joint responsibility of the EU and MS

- Management and oversight within the Europe 2020 Strategy

CE framework

Establishing a CE framework

- **Communication**
Towards a circular economy: A zero waste programme for Europe
- **Green Action Plan**
for SMEs
- **Green employment initiative**

Waste management aims

- **Legislative proposals**
- **Impact assessment**
- **Setting out the goals for waste with the aim of creating a recycling concept of the society**

Special challenges regarding waste

- **Sustainable construction**
- **Sustainable food**
- **Marine debris**

Resource efficiency aim

- **Analysis of the EU aim for resource productivity**
- **Report on the resource efficiency progress**

Management under the Europe 2020 Strategy

- Aim: to separate the **economic growth from resource consumption** and related impact on the environment, which will not be possible without a shift to a low-carbon green economy, in which resources are used efficiently, while circular economy is central to the achievement of a **well thought-out, sustainable and inclusive growth**
- **the three key elements** for achieving economic growth
 - **smart growth**, stimulating knowledge, innovation, education and digital society
 - **sustainable growth**, which simultaneously stimulates competitiveness and a resource-efficient production
 - **inclusive growth**, increasing the inclusion in labour markets and acquisition of skills, preventing poverty

Management under the Europe 2020 Strategy

- **Annual growth report in the European Semester**
 - **Fiscal responsibility:** transferring the tax burden from labour towards the environment, removing incentives harmful for the environment
 - **Growth, employment and investment:** green economy potential – energy efficiency, waste and water management; low-carbon technologies, resource efficiency promotion in SMEs, encouraging eco-design and eco-innovation, improving the efficiency in the building design and construction sector, and reducing energy dependence, as well as making public procurement and EU funds spending green
- **Europe 2020 medium-term review**
 - **Pressure on resources and care for the environment:** One of the long-term trends affecting growth
 - **Council conclusions on the environment** (October 2014)
 - EC proposals for a review of the Europe 2020 Strategy (beginning of 2015)

Council conclusions on the Environment (October 2014)

- reinforcing the environmental dimension of the Europe 2020 Strategy, especially the better integration of **resource efficiency as a potential for green growth and employment**;
- taking advantage of the potential of the European Semester as a tool for stimulating the necessary structural changes, and for the implementation of green growth strategies;
- reinforcing the instruments related to the implementation of the “**polluter pays**” principle, green public procurement, eco-design and eco-innovation, development of green infrastructure
- promoting the inclusion of circular economy and the green employment potential into the **annual economic policies coordination cycle**, preferably from 2015 onwards;
- introducing the **optional aspiration aim of resource efficiency** in the context of the Europe 2020 Strategy revision and the European Semester;
- introducing an indicator of **resource efficiency** as a potential candidate in the form of the relationship between the GDP and **raw material consumption (RMC)**, or, alternatively, **domestic material consumption (DMC)** as appropriate for the monitoring of the progress towards resource efficiency;
- strengthening the **role of environmental ministers** in the European Semester.



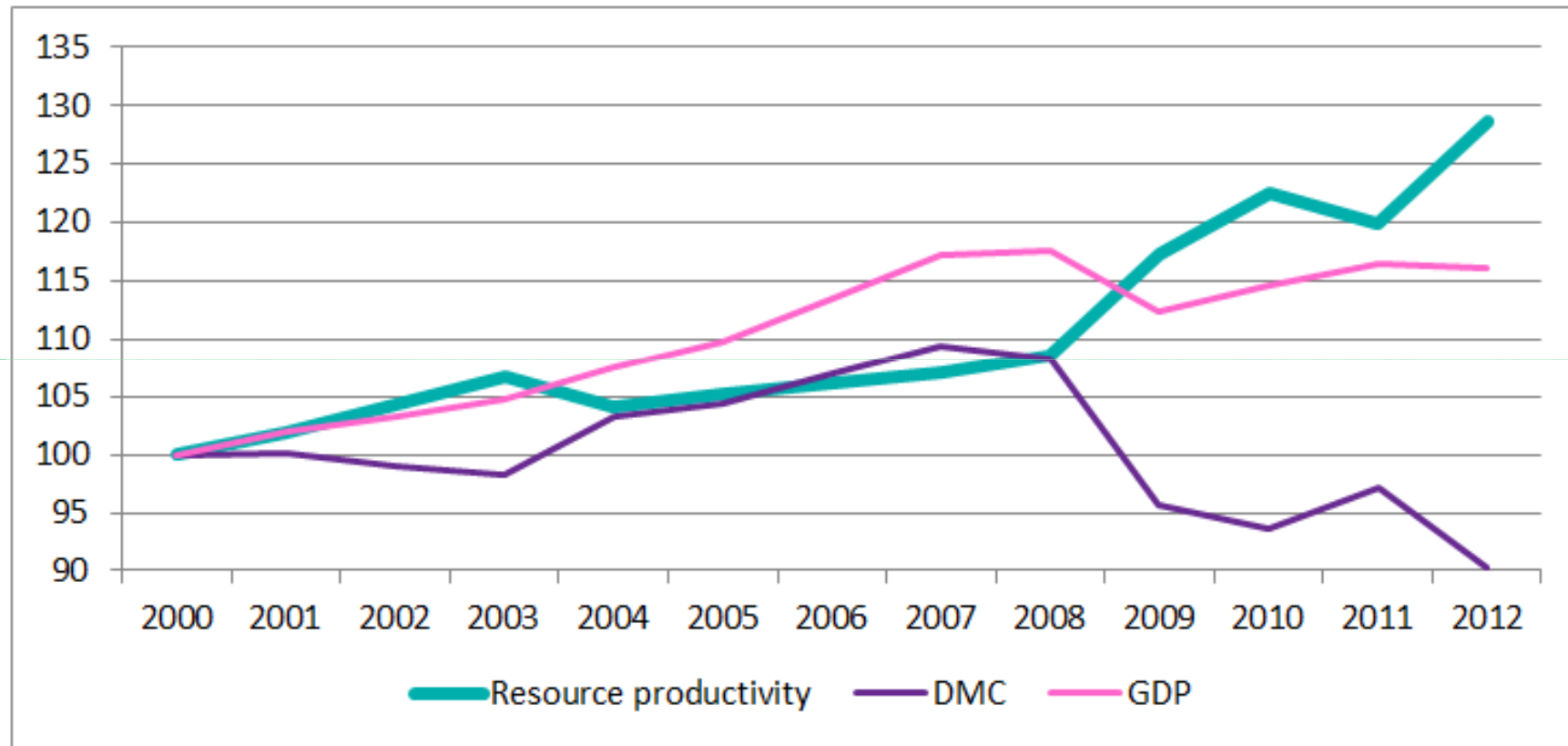
Resource efficiency indicators

- it is necessary to further develop and apply those tools for **monitoring and reporting** – Eurostat
- taking into account the **structural differences of the MS economies** and other national specificities, as well as the scarcity of resources, and their renewal and recycling potential
- **“resource productivity”** is calculated as GDP divided by raw material consumption (RMC), as a candidate for an aggregated indicator measuring the overall progress towards resource efficiency, alt. DMC
- resource productivity in the EU **increased by 20 %** in the 2000-2011 period; compared to a scenario in which the framework conditions remain unchanged (BaU), maintaining that rate would lead to an additional **30 % increase by 2030**, with a simultaneous opening of more than **2 million jobs and a growth of the GDP by 1 %**

Resource productivity (GDP/DMC)

Resource productivity in comparison to GDP and DMC, EU-27, 2000-2012

(Index: 2000=100)

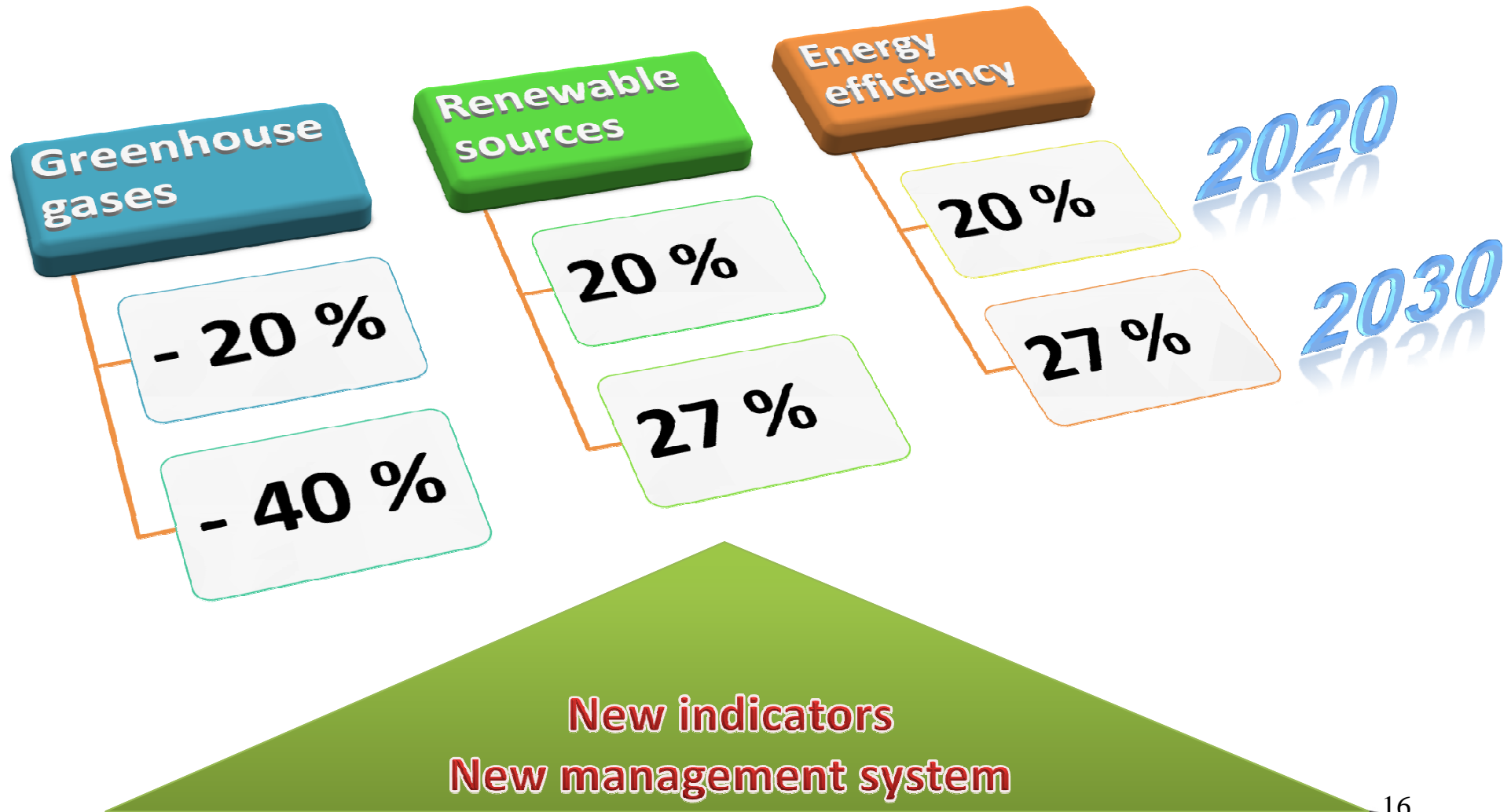


⁽¹⁾ GDP (= Gross Domestic Product) in chain-linked volumes, reference year 2005

⁽²⁾ DMC = Domestic Material Consumption

Source: Eurostat (online data code: [nama_gdp_k](#), [env_ac_mfa](#))

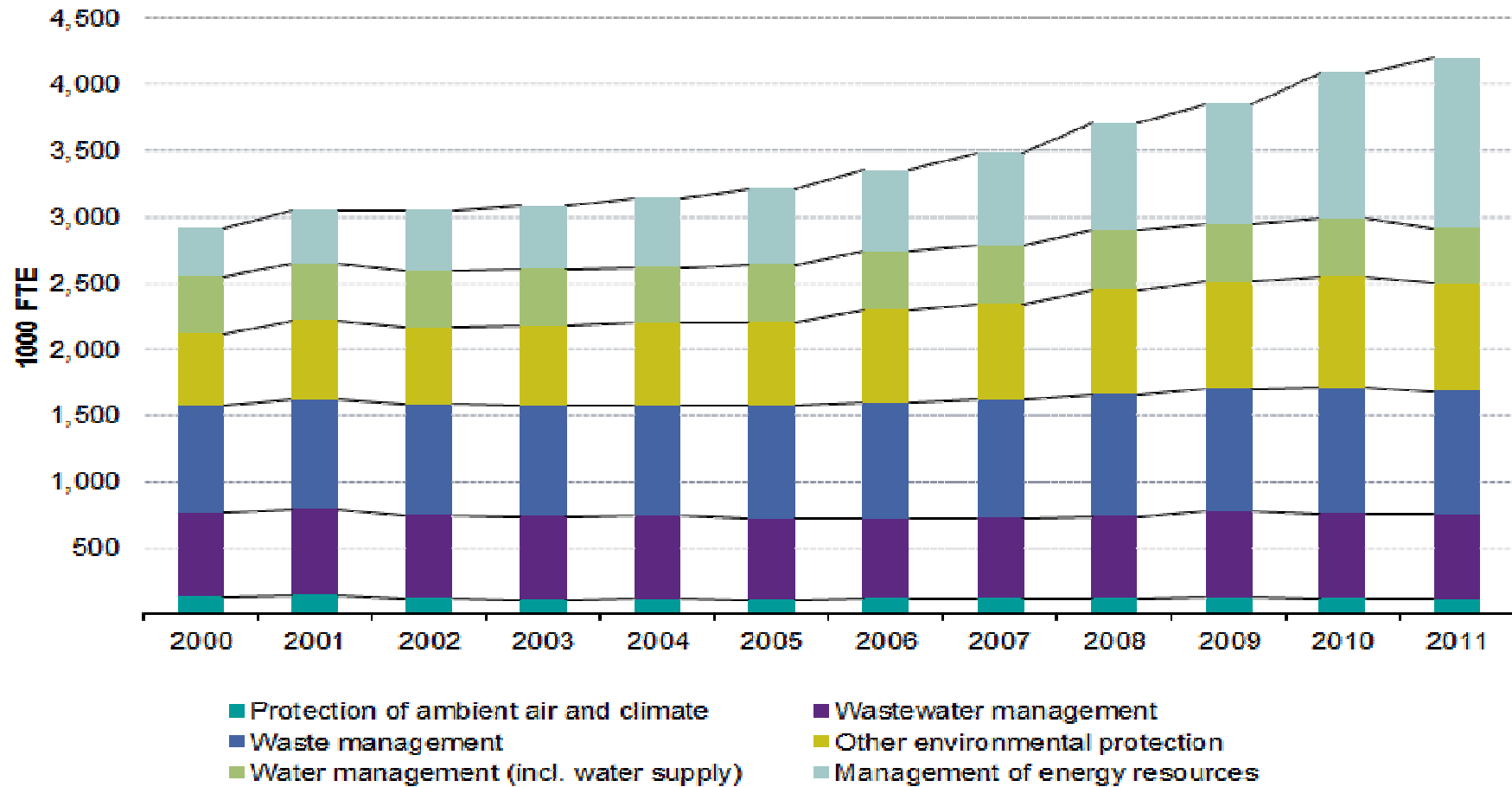
Determinants of the 2030 Climate and Energy Policies Framework



CE and green employment

- Pursuant to the **Communication on Green Employment**, a framework was created for the possibility of new jobs in a more circular economy, in which resources are used efficiently
- Action **should be focused on:**
 - obtaining the necessary skills,
 - anticipating changes, ensuring and promoting workplace mobility,
 - supporting the creation of new jobs,
 - improving the quality of data.

EU-28 green job structure



Source Eurostat ([env_ac_egss1](#))



GREENET
EURO NETWORK SUPPORTING INNOVATION FOR GREEN JOBS

CE activities and challenges in Croatia

- recognised **investments** in energy, energy efficiency, climate activities, promoting resource efficiency by improving the waste and water management infrastructure, and green infrastructure development as a potential for the creation of new jobs and improving competitiveness
- in 2011 the **Strategic Determinants for the Development of Green Economy** were adopted, directing the development of states towards “green economy”
- a series of **economic and development documents** were adopted or were in the process of adoption in the sectors of waste management, energy efficiency improvement in building design and construction etc.
- the drafting of the **Low-Carbon Development Strategy**, as the overarching economic, development and environmental strategy, to be created by the middle of the next year is crucial

Green job potential in Croatia

- **potential** for contributing to sustainable development and creation of jobs – recognised areas:
 - eco-innovations
 - sectors of waste management,
 - renewable energy sources and energy efficiency, especially projects connected to building design and construction, industry and services; in that context energy efficiency refurbishment of the buildings for the public, residential and catering sectors are being implemented
 - stimulating energy efficiency and a reduction of greenhouse gases in SMEs and transport sector

Green job potential in Croatia

- the importance of the development of an education system **adapted** to the needs of the new technologies and green economy, which should be the basic driver of youth employment and ensure “**new knowledge for new employment**”
- The Croatian experience has shown that energy efficiency refurbishing of buildings currently represents a great challenge for the construction sector and the accompanying industries, particularly due to a lack of trained construction workers and a **lack of institutionalised education and training schemes**
- further **obstacles** are also the slow introduction of changes into the educational system, the financial instability of the market, a lack of interest for such education in SMEs, an insufficient coordination between undertakings and vocational training, and a lack of statistical data on the current status and worker education needs

Green job potential in Croatia

- the development of the worker education and training system in Croatia is also stimulated by regulations on the use of renewable energy sources, in which the **establishment of certified technicians** dealing with renewable energy sources is mandatory
- the potential of the need for energy efficiency and renewable energy sources might result in the **creation of 80,000 new** (direct or indirect) green jobs by 2020
- According to the long-term strategy on the incentives for investment in the refurbishment of the national fund of buildings by 2020, the expected impact on employment might amount to **23,000-39,000 new jobs**
- Pursuant to the new Act, the new sustainable waste management system might double the number of jobs in that sectors in several years, from **today's 6,000 to 12,000**, within the system of separate waste collection and recycling, as well as future waste management centres
- the **natural heritage** also represents a great potential for economic growth and development through green forms of the economy, tourism, recreational tourism and eco-tourism

Working Group for CE

- the multidisciplinary nature of CE includes the need for **coordination** and **unification** of the positions of multiple policies and authorities
 - The Ministry of Environmental and Nature Protection has launched the procedure for the **establishment** of the Working Group for the Circular Economy
 - Representatives: The Ministry of Environmental and Nature Protection, Ministry of Economy, Ministry of Finance, Ministry of Agriculture, Ministry of Construction and Physical Planning, Ministry of Labour and Pension System, Union of Autonomous Trade Unions of Croatia, Croatian Chamber of Commerce, Croatian Employers' Association
-
- Scope of RS:
 - expert support in the drafting of the **positions** of the Republic of Croatia connected with CE,
 - coordination of intersectoral issues in the area of CE connected with the **greening** of the European Semester and Europe 2020 **Strategy**,
 - expert support in the work of the **expert and political bodies of the EU** related to CE,
 - consideration of the possibilities of **applying the CE concept** when drafting and adopting strategic, legislative and planning documents of certain line ministries in the Republic of Croatia.

Low-Carbon Development Strategy

- The EU has adopted the **Roadmap for moving to a competitive low-carbon economy** in 2050,
- the indicative aims of the Roadmap are a **40 %** reduction in greenhouse gases emission **by 2030**, 60 % by 2040, and 80-95 % by 2050
- The Ministry of Environmental and Nature Protection is therefore implementing activities for the creation of the Croatian low-carbon development **strategy** for the period up to 2030, with a perspective until 2050, with the accompanying action plan
- **Aim:** greenhouse gases emissions reduction, environmental protection, stimulating economic development under the principles of sustainability, creating opportunities for new jobs, and directing the society towards sustainable development
- It involves: **2030 and 2050 scenarios, modelling for the sectors** of energy, transport, industry, agriculture, forestry, waste; assessment of the impact of the scenarios on the environment, society and the economy, as well as measures and instruments, a 5-year action plan and communication plan
- The measures will be focus on technologies that can be developed **“at home”**, which offer the greatest potential for **employment** and greenhouse gases emissions reduction

Final considerations 1/2

- CE horizontal policy, its success depends on the **coordination of policies and intersectoral cooperation**
- The EU: **promoting the inclusion of CE and green employment potential** in the annual economic policies coordination cycle, and the introduction of the optional aspiration aim of resource efficiency in the context of the Europe 2020 Strategy review and the **European Semester**
- The challenge of green growth and the **opportunity for the labour market and skills**; the transition will lead to changes: new jobs will be created, some jobs will be replaced by new ones, some will be defined anew
- a better definition of **aims and an adjustment of the measures and tools for the labour market** are crucial for the creation of the necessary conditions for supporting green employment, resolving the problems of the lack of skills and employees, and anticipating changes in the need for human capital

Final considerations 2/2

- **Financial sources:** structural funds, Operative Programme, Plan for the use of financial resources from emission trading, market mechanisms
- The role of **RS in the circular economy:** reinforcing the administrative capacities, and institutional connection of the economic community, social partners and the public sector in the realisation of the CE concept
- Improving the existing and introducing new innovative legislative, economic and other implementing instruments/measures under the principles and elements of the circular economy in order to achieve the aim – **to increase the resource efficiency and create new opportunities for entrepreneurship and employment, i.e. a simultaneous boost of production, competitiveness and employment**

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<http://www.mzoip.hr>

