

A wide-angle photograph of a modern city skyline. In the foreground, there is a lush green park with a small pond. The sun is low in the sky, creating a bright lens flare effect. Several high-rise apartment buildings are visible, including a prominent curved glass skyscraper on the left and several other multi-story buildings in the center and right. The sky is a clear, bright blue.

CLEAN TECHNOLOGY AS ENABLER FOR CIRCULAR ECONOMY IN EUROPE

Carine Van Hove – Karl Vrancken

FROM SCIENCE
TO APPLICATION

WORKING ON THE SUSTAINABLE DEVELOPMENT GOALS



VITO CONVERTS
IDEAS INTO REALITY

VITO IN NUMBERS

784 EMPLOYEES

34 NATIONALITIES

> €170 MILLION
TURNOVER

MORE THAN 400
PATENTS

25 NEW
PATENTS
EVERY YEAR

91 PHD'S AND
POSTDOCS

227 scientific
publications

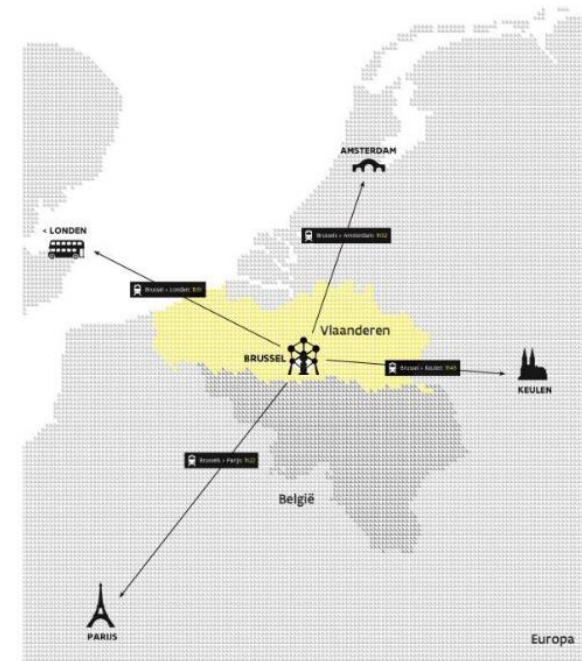
- Experts
- Projects
- Experts and Projects

Flanders – Northern region in Belgium – Europe’s most important CHEMICAL hub



Population: 6 M
 Area: 13.599 km²
 Provinces: 5
 Municipalities: 308
 Inhabitants/km²: 445

Densely populated
 Highly industrialised
 Regional environmental policy



RESEARCH THEMES



ENERGY



CHEMISTRY



MATERIALS



HEALTH



LAND USE

We Tackle the materials' grand societal challenges

Growing consumption



Increasing supply scarcity



Huge amounts of waste



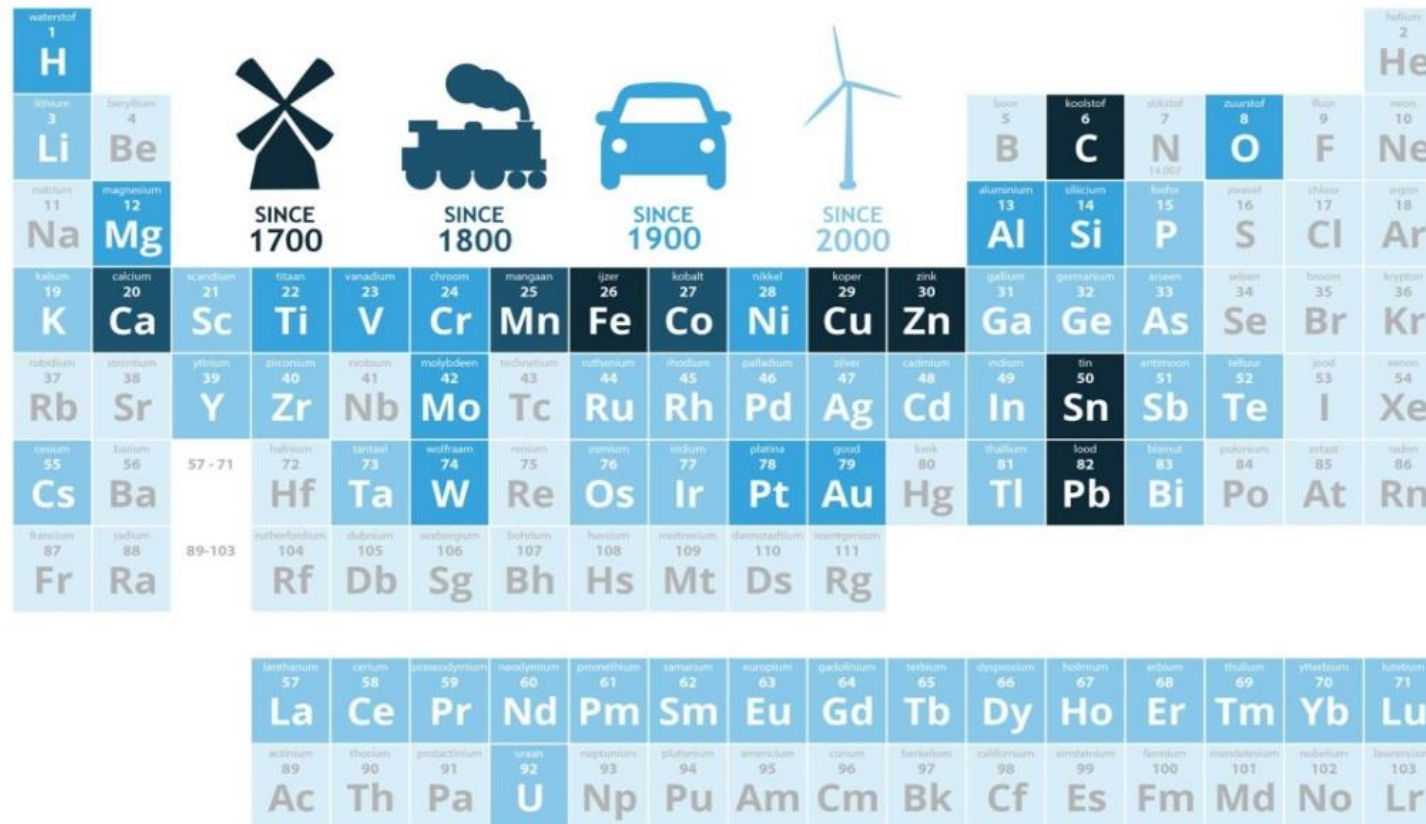
TO ACCELERATE THE TRANSITION TO THE CIRCULAR ECONOMY





More elements are crucial for our (cleantech) products

- Demand side



periodic table: <http://www.britannica.com/blog/the-periodic-table-of-the-elements-in-adobe-illustrator-format/>

Europe- highly dependent on imports

Lithium

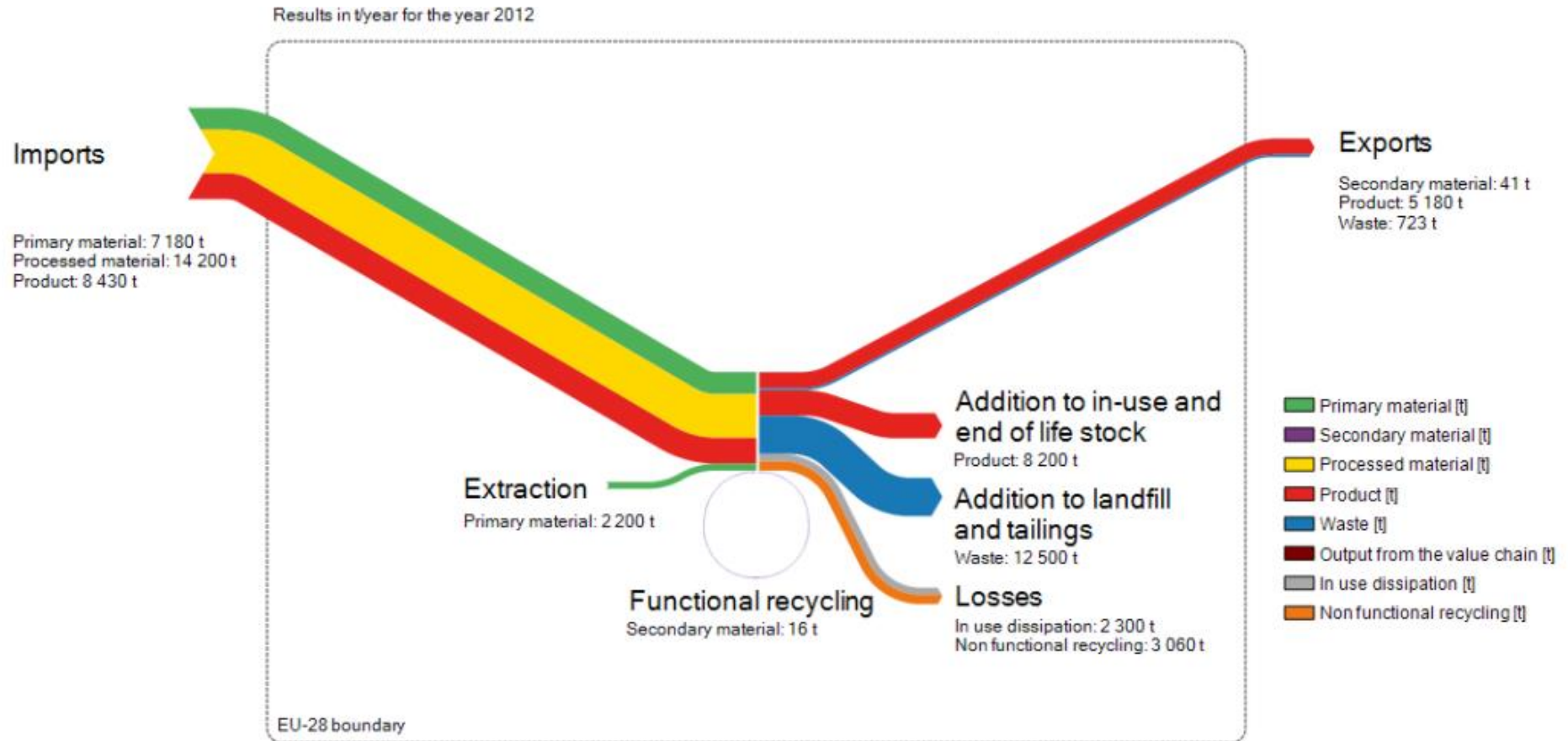
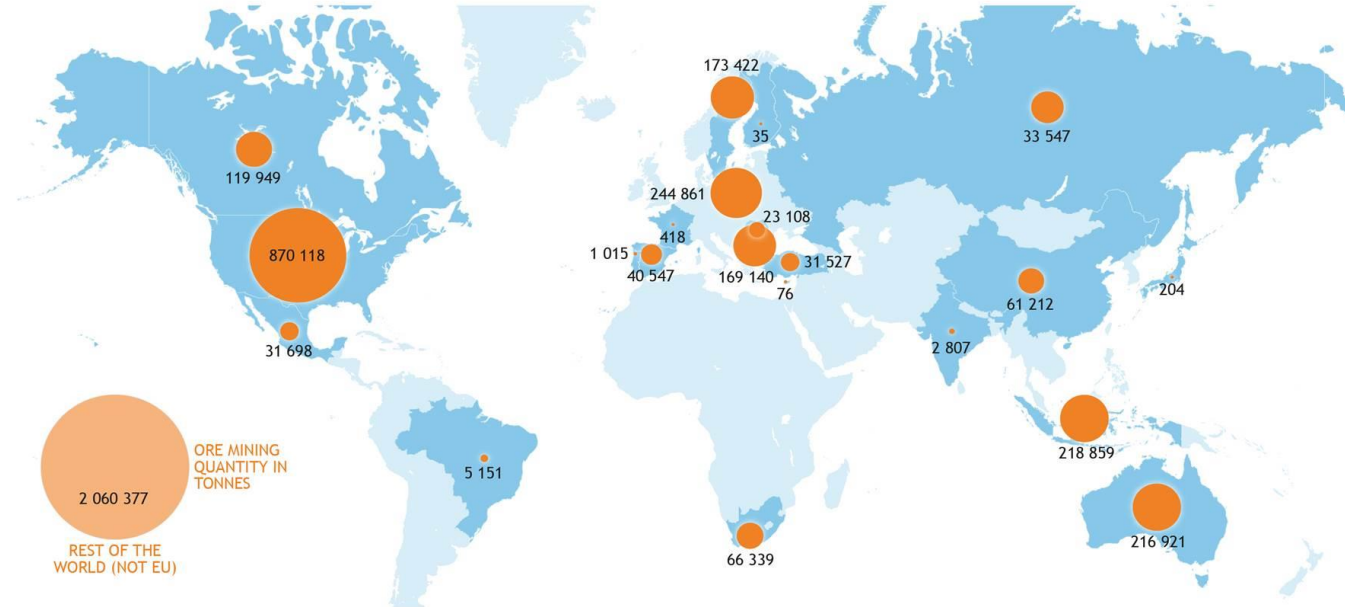


Figure 55: Simplified Sankey diagram for lithium

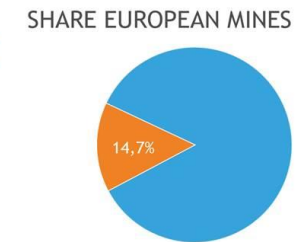
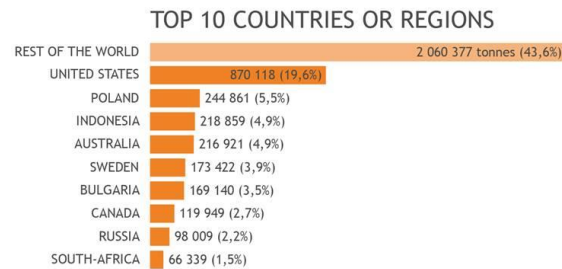
Flanders (BE) – highly dependent on imports

■ Copper

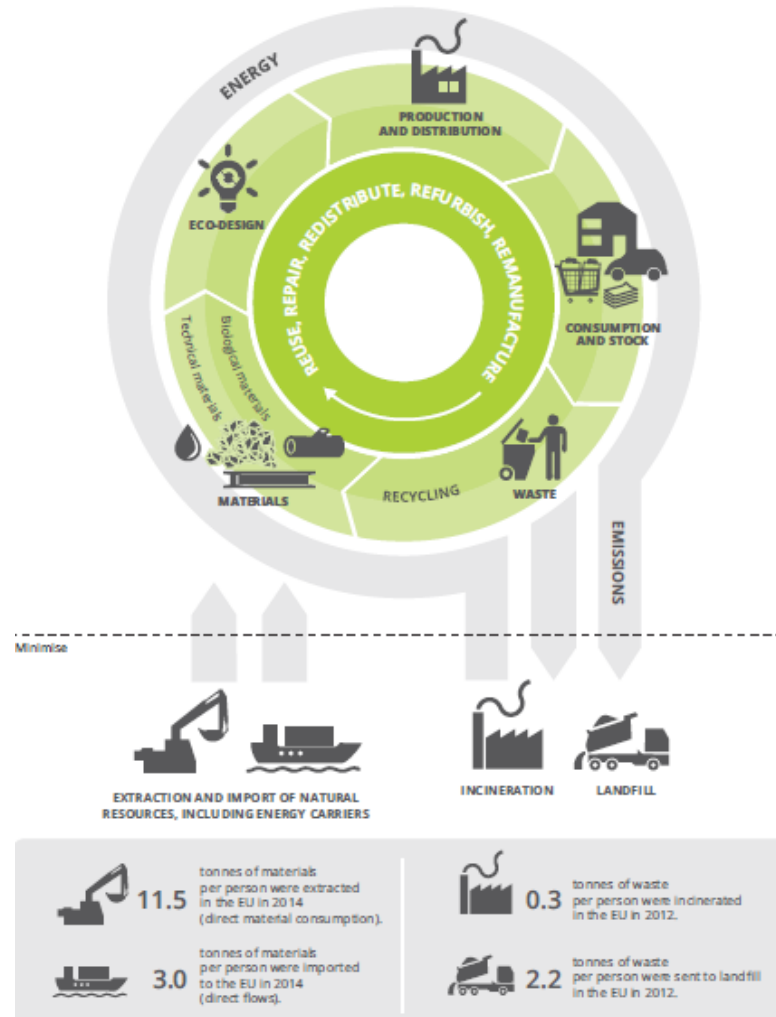


TOTAL MINED IN ONE YEAR (2007):
4 435 792 TONNES

PER PERSON IN FLANDERS:
716 KG/⚖️



Circular economy simplified representation



Source: EEA based on Eurostat, 2015b, 2015c.

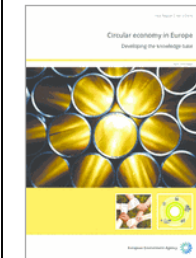
- Slowing
- Narrowing
- Closing material loops

Circular economy in Europe — Developing the knowledge base

Publication — Created 07 Dec 2015 — Published 18 Jan 2016

Topics: Resource efficiency and waste

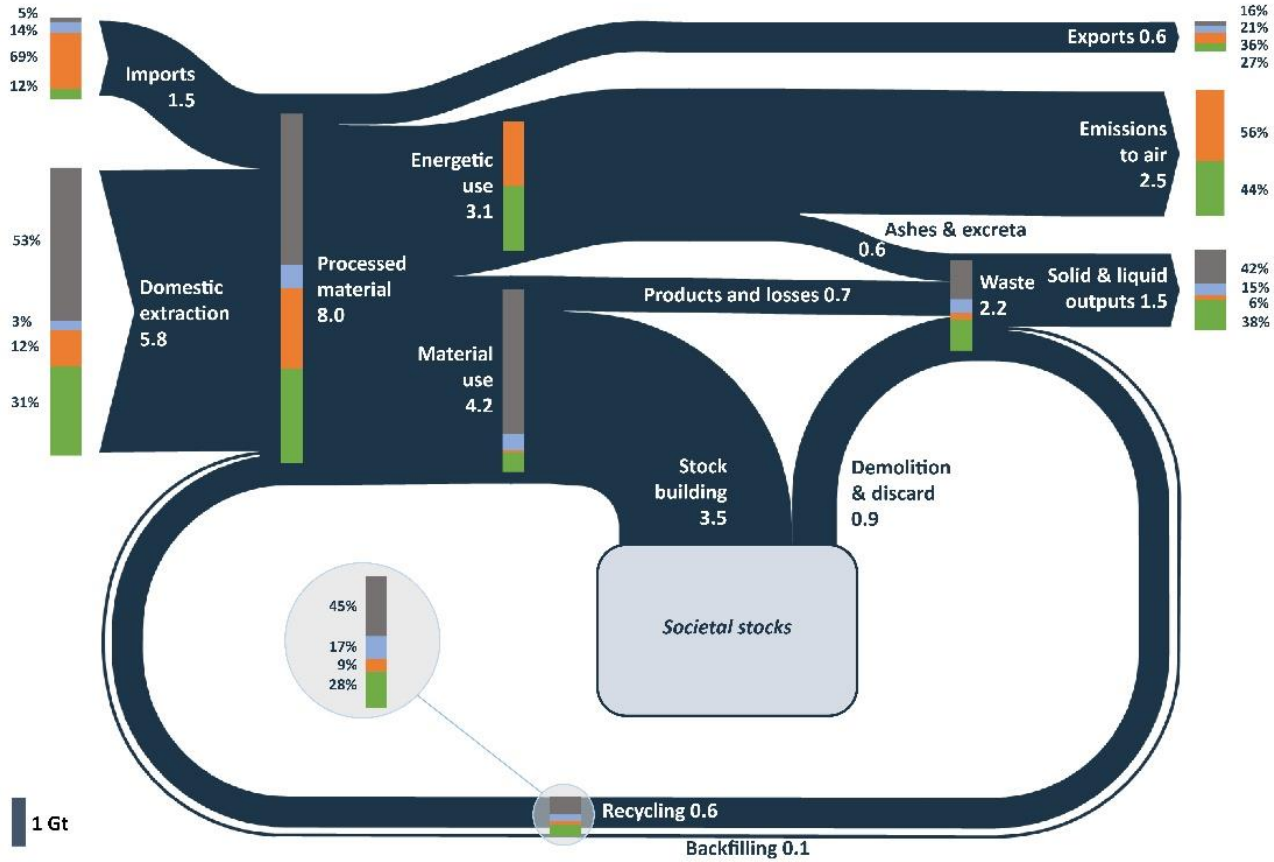
EEA Report No 2/2016



The report describes the concept of the circular economy and outlines its key characteristics. It draws attention to both the benefits and challenges in transitioning to such an economy and highlights possible ways to measure progress.

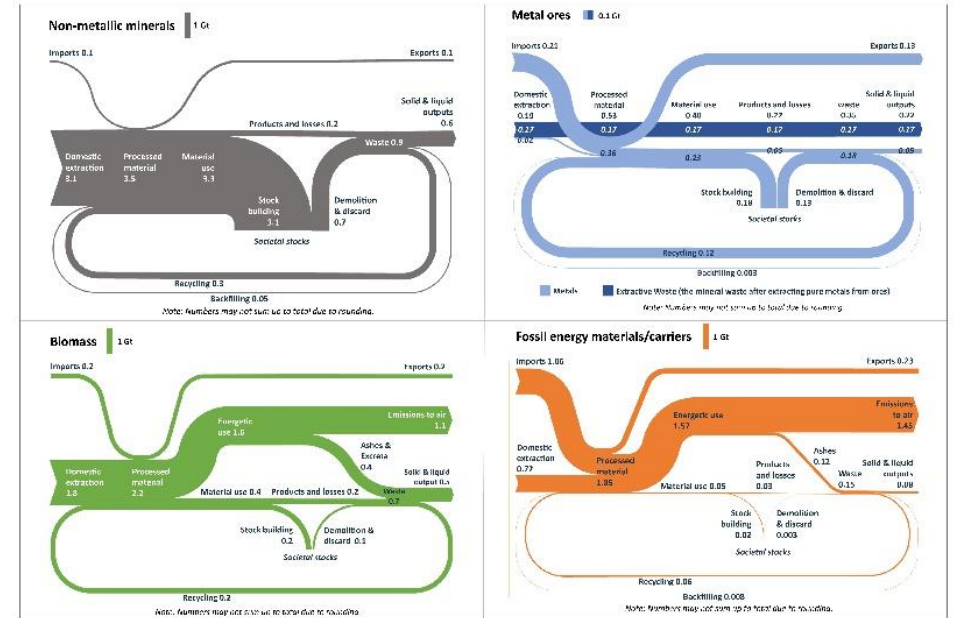
VITO for European Environment Agency

EU monitoring framework



Material flows true to scale in Gt/year (billion tons/year) in 2014 ■ Non-metallic minerals ■ Metal ores ■ Fossil energy materials/carriers ■ Biomass

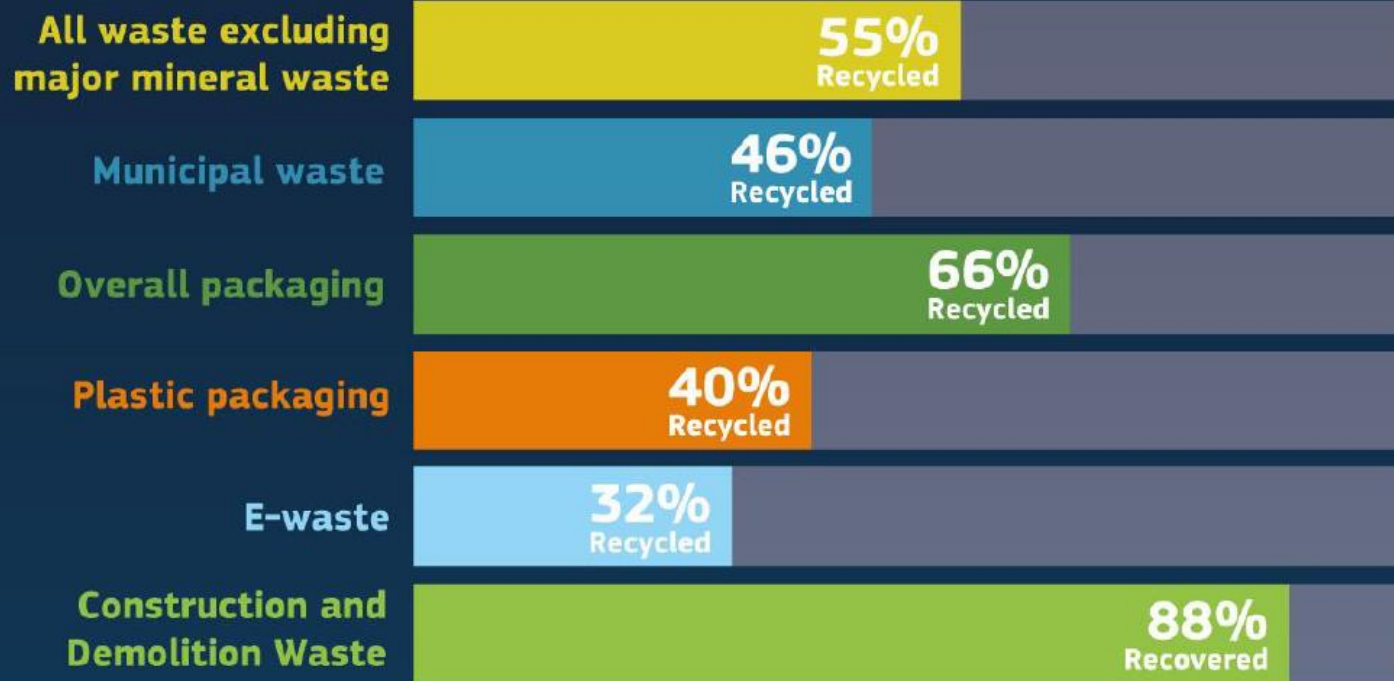
Note: Numbers may not sum up to total due to rounding.





Recycling practice

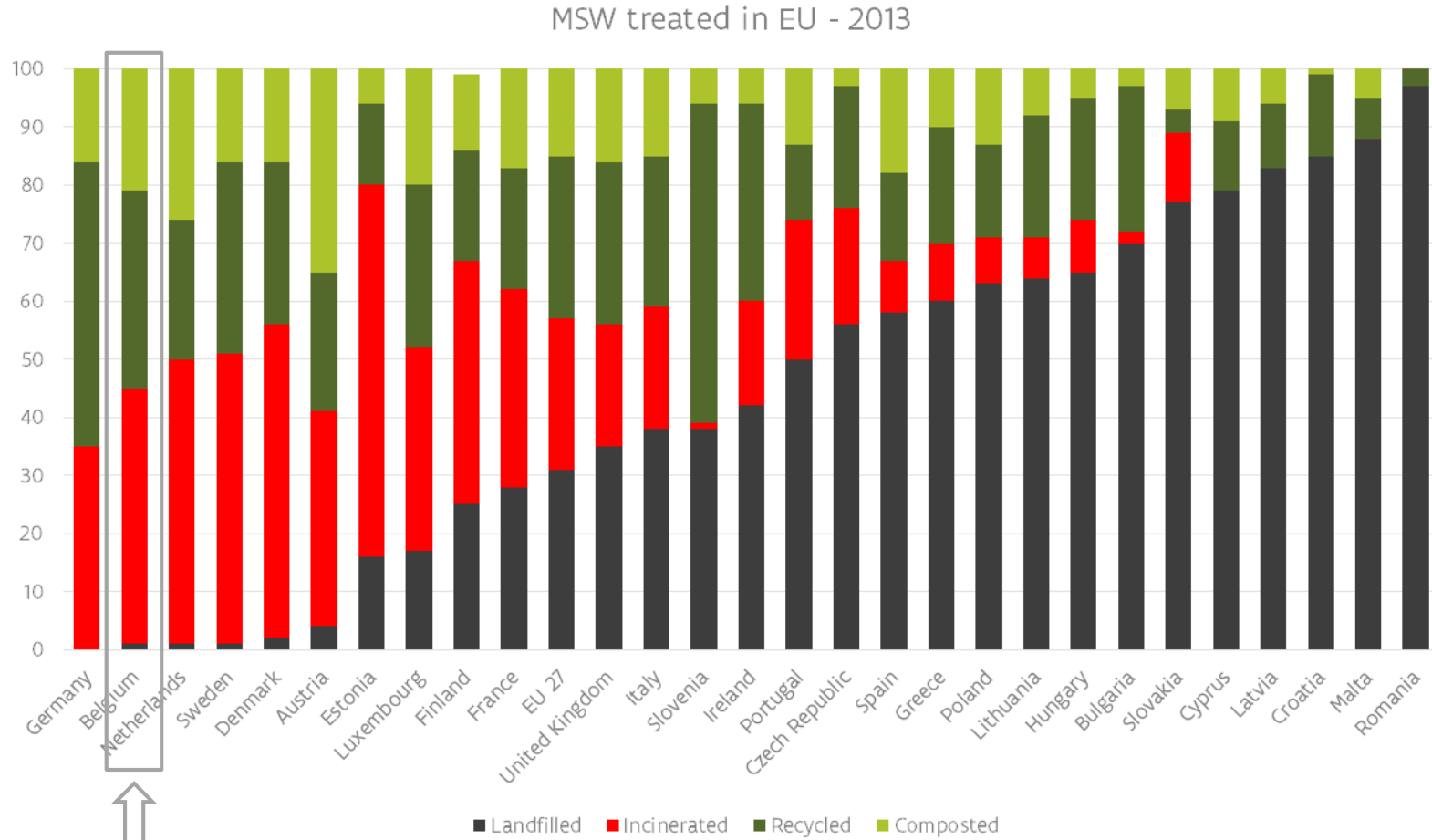
Overview **recycling rates** of different waste streams



Source: Eurostat



MSW treatment in the EU Member states, vs Belgium



Source: Eurostat news release 26.03.2015

CIRCULATOR

THE CIRCULAR BUSINESS MODELS MIXER

EXPLORE THE ARCHETYPES

We have identified four archetypes that each represent a specific business focus as the main entry point for developing a circular business model.

Focus on relationship with the customer – From product to service



Companies within this archetype focus on providing a service that directly addresses the needs of their customers, rather than on selling a product. They typically put a strategic focus on business s...

[read more](#)

Focus on the product or process itself – Circular product or process design



These companies put their main focus on improving the circularity of their products and/or production processes by directly addressing the sustainable materials management strategies. This archetype ...

[read more](#)

Focus on relationship with the value network – Building circular value networks



To master the circularity of a product without having control over all stages of a product's lifecycle, collaboration with other companies downstream and upstream the value chain, and/or with custome...

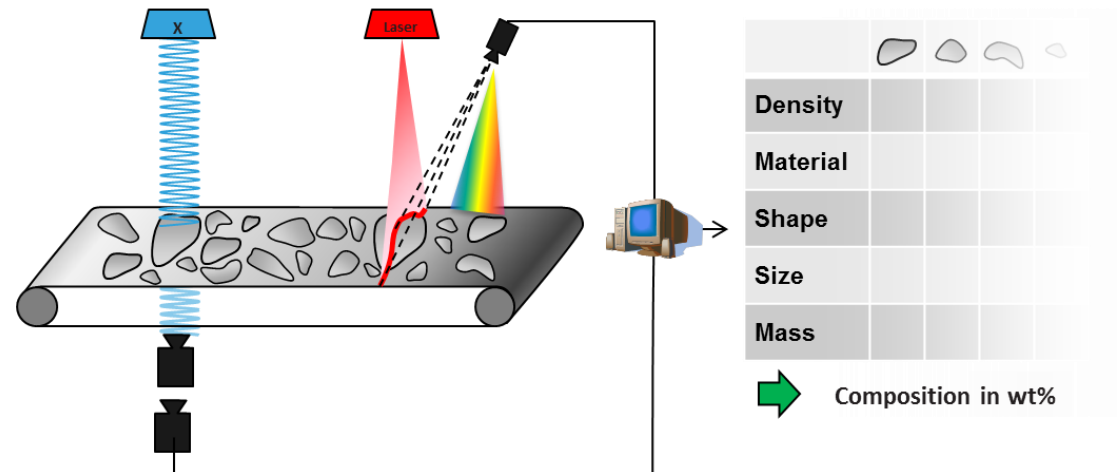
[read more](#)

Focus on sustainable identity – Circularity as a unique selling proposition



Webtool to explore real life circular business cases that match your strategic context
<http://Circulator.eu>

Characterise to Sort



Technological needs for CE

- advanced collection, sorting and recycling technologies,
- efficient materials processing technologies,
- production technologies that support design for circularity
- interactive platforms for enhanced connectivity.



Focus topics GSTIC 2018

- Advanced Sorting and Characterisation
- Virtual Product Chains
- Mapping Urban Metabolism

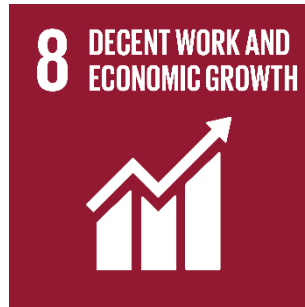


G-STIC 2018 – industry involvement

Demonstrate your leadership in sustainable development

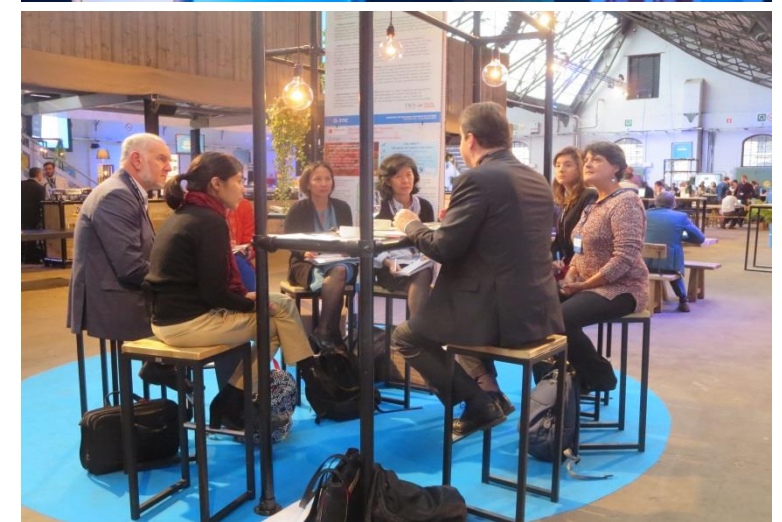
Carine Van Hove

Partner Relations Manager









G·STIC





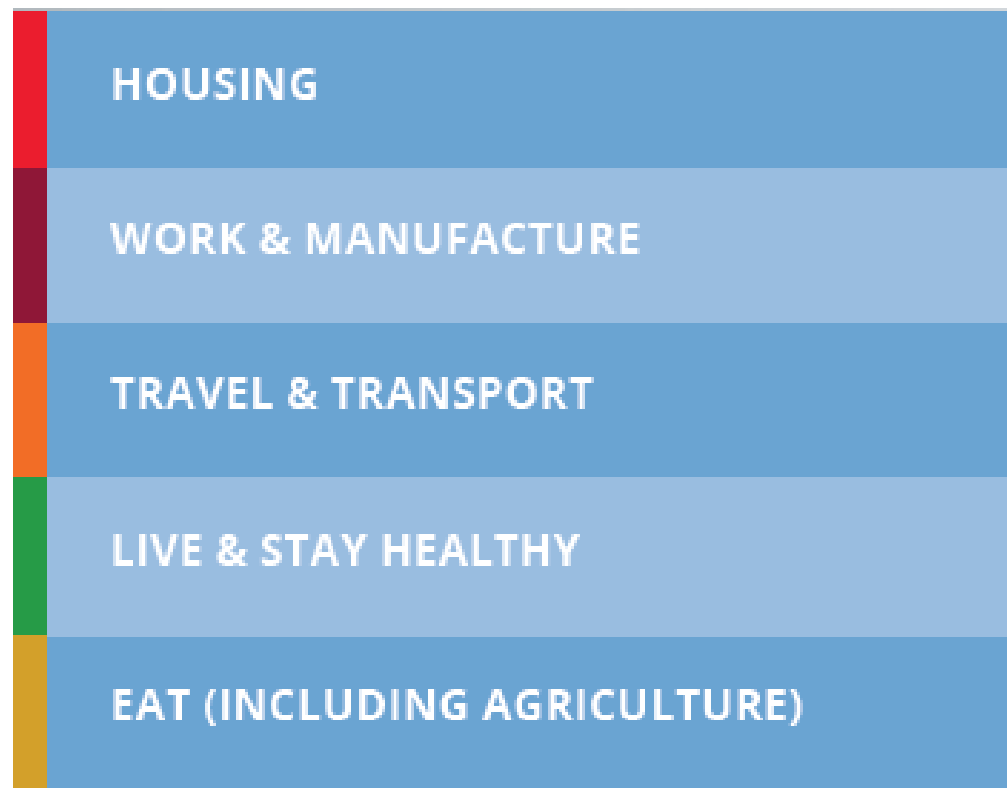
G-STIC2018 – TECHNOLOGY THEMES - EXHIBITION

	AGRICULTURE & FOOD
	CIRCULAR ECONOMY
	ELECTRIC MOBILITY
	ENERGY POSITIVE COMMUNITIES

	ICT
	OCEAN INDUSTRY
	SUSTAINABLE BUILDING
	WASTE WATER AS A RESOURCE



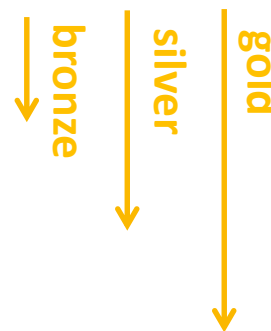
G-STIC2018 – SOCIETAL THEMES – INTEGRATED SOLUTIONS IN ACTION





FORMULA 1 – “STRATEGIC PARTNER” – NON-TECHNOLOGICAL

- Who non-technological
- Impact testify your leadership in sustainable development and the accelerated implementation of the SDGs
- Benefits outreach
Keynote presentation in parallel sessions
Free slot at speakers’ corner/Theatre
Sponsor a Societal or Technological Theme
- Format BRONZE / SILVER / GOLD
- Price 20.000 € / 40.000 € / 50.000 €





FORMULA 2 – TECHNOLOGY EXHIBITION

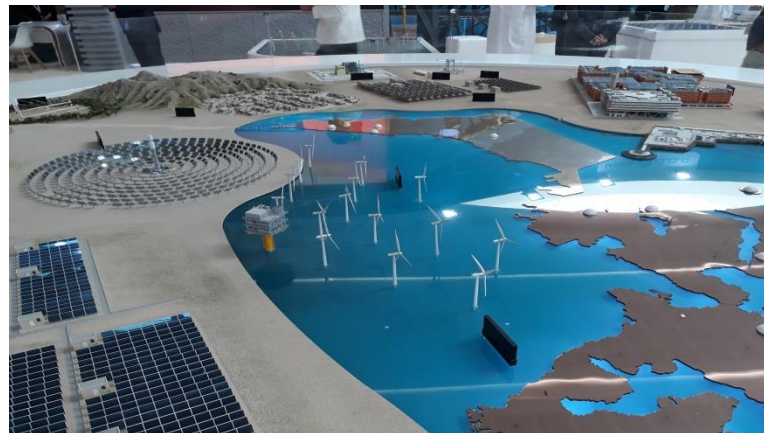
- Who Market-ready and globally scaleable technologies related to G-STIC Themes
- Impact show your products and technologies to a global network of influential individuals, policy makers, investors and businesses in an exhibition booth of your own design, situated in the G-STIC Main Network Area
Fit with TECHNOLOGICAL THEMES
- Benefits Depending on the chosen formula
 - 16m² --- 6.400 € --- 2 Exhibitor passes --- 1 Conference pass --- 20 Invitation passes for Exhibitor Night
 - 24m² --- 9.600 € --- 3 Exhibitor passes --- 2 Conference passes --- 30 Invitation passes for Exhibitor Night
 - 32m² --- 12.800 m² --- 4 Exhibitor passes – 3 Conference passes --- 40 Invitation passes for Exhibitor Night



FORMULA 3 – “INTEGRATED SOLUTIONS IN ACTION”

- Who Companies that experienced the power of integration, both in existing global markets and as part of a technology stack, system approach or integrated solution
- What Show the power of integrated technology concepts and system thinking within the scope of SDG implementation
Fit with SOCIETAL THEMES
- Format Applications in cooperation from at least 3 companies
Assessment by a G-STIC Committee
Compliance with G-STIC2018 Framework
AFFORDABILITY – ACCESSIBILITY - IMPACTFUL
- Benefits Exposure and attention in the G-STIC Main Networking Area
- Price 2.000 € / SME ----- 4.000 € / Corporate

INTEGRATED SOLUTIONS IN ACTION --- SOME INSPIRATIONS ...



TIMING

- Application deadline
→ May 31th, 2018
- Feedback
→ June 20th, 2018
- Event
→ November 28th – 30th



THANK YOU

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G-STIC2018

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