

Circular solutions for eco-effective and sustainable businesses

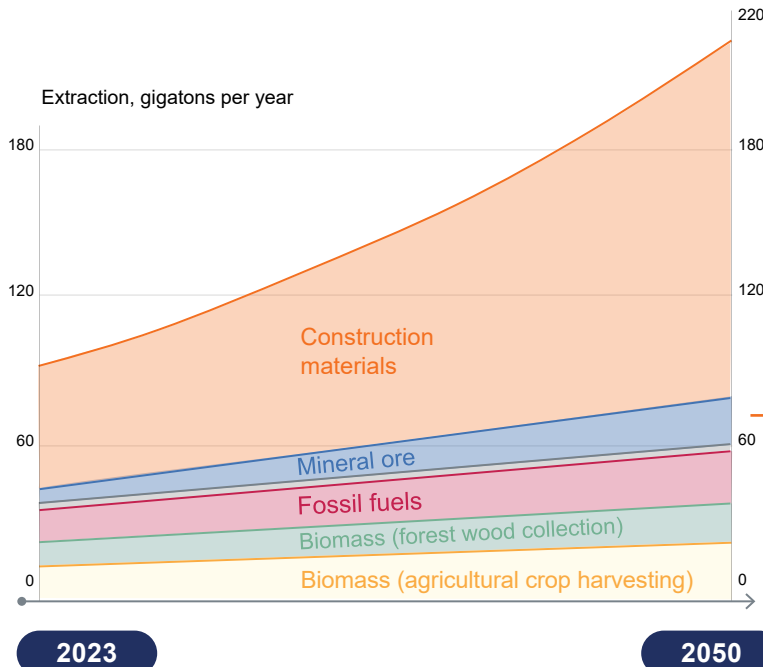


Why the circular economy concept is important



Global demand for virgin materials is rising

Material extraction forecasts, accounting for current trends



Global demand for virgin materials **will double by 2050**, based on a similar pace of extraction

200%
increase in demand for copper

60%
increase in steel demand

2023 → **2050**

92.8 billion tons → **180** billion tons

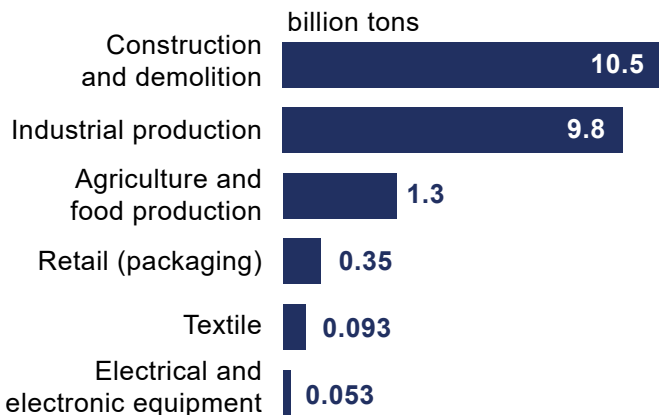
Consumption of primary material resources



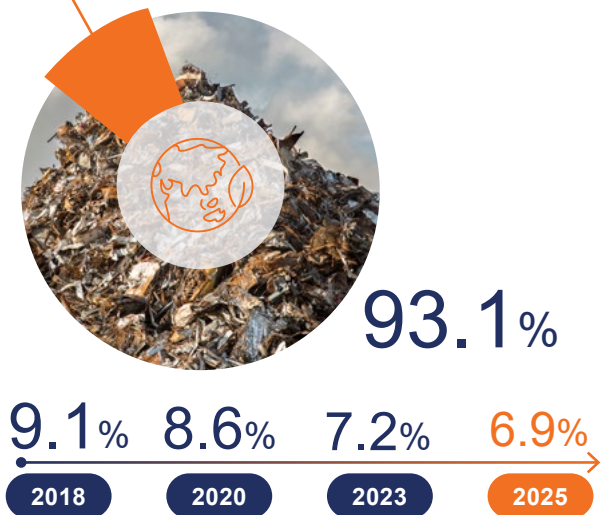
Despite sustained efforts, today's global economy is not circular and things are getting worse

Industries generating most waste

80% increase in the volume of global waste by 2050¹



Only **6.9%** of materials in the global economy are returned to the loop to be reused or recycled²



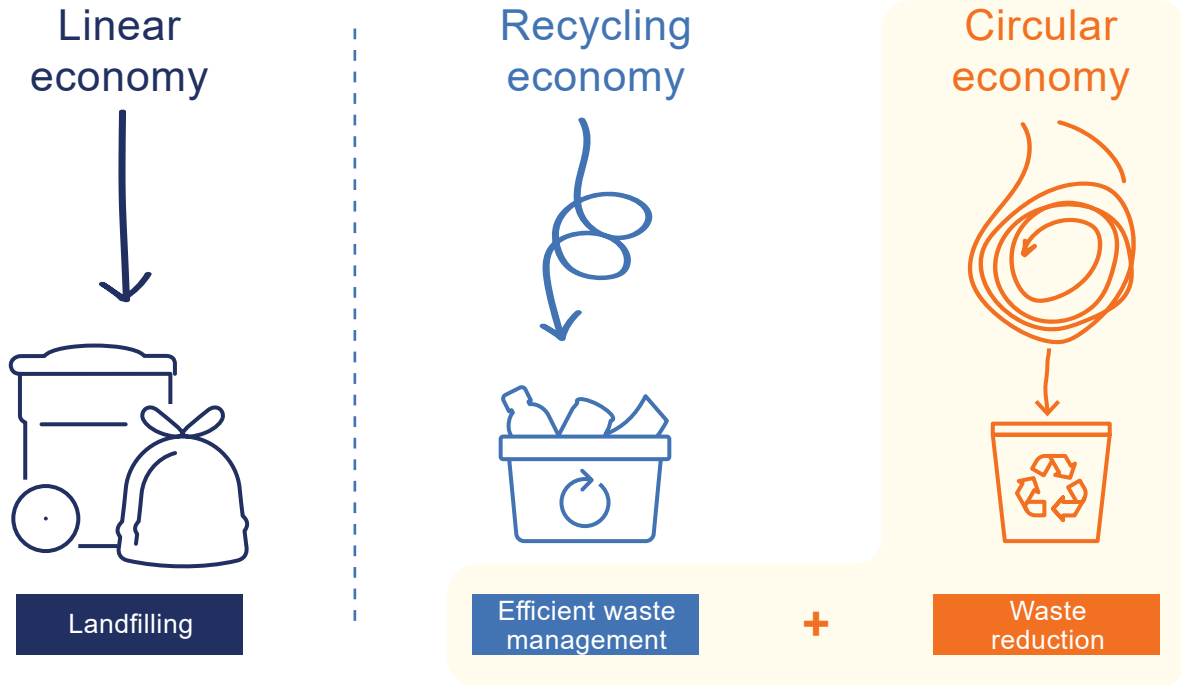
¹ Global waste projected to rise more than 80% by 2050

² Circular Economy Gap report 2025

• Circular economy – a growing trend



Circular economy – more than just finding better ways to recycle



A circular economy allows businesses to boost efficiency and reduce their environmental footprint



3%

potential increase by 2030 in resource productivity by embracing circular economy principles (Europe example)¹



€600

billion per year

could have been saved by implementing circular economy approaches by 2030 (Europe example)¹



40%

potential reduction in global GHG emissions through harnessing circular economy strategies²



A total of up to

\$640

billion

in savings is expected in the manufacturing sector by 2050 due to global circulation strategies, to be achieved by reducing raw material use and boosting efficiency³



A circular economy is an economic system that uses a systemic approach to maintain a circular flow of resources, by recovering, retaining or adding to their value while contributing to sustainable development.

¹ ISO 59004:2024 Circular economy – Vocabulary, principles and guidance for implementation.

Aim: ↪

to ensure that the needs of everyone are met within the limits of the planet by separating the value creation from the extraction of raw materials. A Circular economy is regenerative by design and retains materials' maximum value in society for as long as possible.⁴

¹ Mapping the benefits of a circular economy, McKinsey

² The environmental, economic and social benefits of the circular economy, 2025

³ What is circular economy and why does it matter, UNDP, 2023

⁴ Ellen MacArthur Foundation

The UAE's national goals are aligned with a circular economy

Efficient waste management is an integral part of the UAE's national policy, connecting various sectors, including energy, FMCG, retail, and construction, as a unified development priority.



The UAE has a high rate of per capita waste generation, with most waste landfilled



Achieving circularity is a key component of all the UAE's strategic goals



4.7 million tons

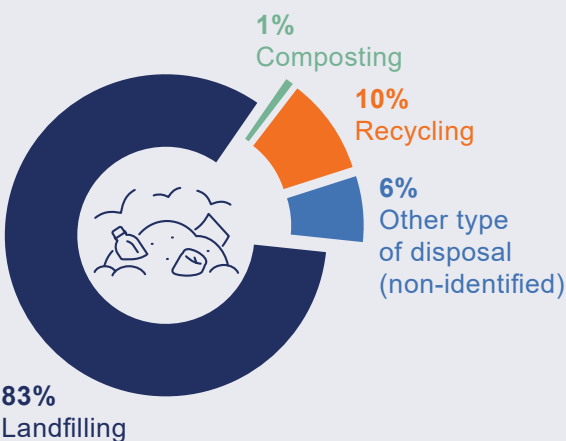
municipal solid waste (MSW) generation in the UAE¹



2.3 kg / day

per-capita waste generation rate in the UAE² (64% more than in the EU)

Currently, most municipal solid waste generated in the UAE is sent to landfills¹



The UAE aims to reduce the adverse environmental impact of cities, on a per capita basis, paying special attention to municipal and other types of waste management.

The UAE's target indicators to be achieved by 2031:



80% municipal solid waste (MSW) treatment rate³

Areas for development and the relevance of the agenda are set forth in the documents:

The UAE Circular Economy Policy (2021-2031)

National Agenda for Integrated Waste Management

The UAE's Green Agenda 2030

National Climate Change Strategy Plan of the UAE 2017–2050

The UAE Energy Strategy 2050

Reducing waste sent to landfills and increasing recycling are priority waste management development areas in the UAE

¹ Statistical data on waste generation and disposal in the UAE, 2023

² Waste Management in UAE: 5 Strategies for a Zero-Waste Future

³ National Agenda for Integrated Waste Management supports circular economy in UAE, 2024

Dubai is embracing a gradual shift to a circular economy

The implementation of new waste management regulations by the Dubai Municipality will require significant action from all sectors — commercial, residential, industrial, and institutional — who are obliged to comply with the new regulations.



Dubai has implemented new waste management regulations that set ambitious goals

The current waste management situation in Dubai



36% of all waste in the UAE is generated by Dubai¹



10 million tons of waste was produced in Dubai in 2023³



x3.6 increase in total landfill area in Dubai by 2041 in the absence of strategic measures (5.8 million sq.m)²



3.2 million tons of waste was diverted from landfills in 2023 (32%)³



1.9 million tons of waste was converted into electricity for 135,000 homes after the Warsan Waste Management Centre was opened in 2024



Dubai Integrated Waste Management Strategy 2021–2041

Goal: to reduce waste generation and completely divert all waste from landfills by 2041



100% diversion from landfills⁴

New Dubai regulations require the implementation of a minimum three-colour bin system for waste separation for residential, commercial, institutional, general public waste generators⁵

Material Colour Codes 3 Bin System



Recommended KPIs⁵:

- Percentage of buildings with compliant waste chute systems
- Percentage of contaminated waste
- Number of awareness campaigns
- Recycling rate

Thus, all types of waste generators will face new **challenges** in implementing waste management practices across the city to achieve the set municipal goals and comply with new regulations*.

* New waste management regulations will come into effect from 2027.

¹ Statistical data on waste generation and disposal in the UAE, 2023

² Dubai launches new green strategy

³ Dubai Sustainability Report 2023

⁴ Dubai Integrated Waste Management Strategy 2041

⁵ Mandatory source segregation policy

SW Tenet helps governments and businesses unlock value in a circular economy

Our approach to circular economy services is grounded in our in-depth knowledge of global trends and solutions, our extensive ties with international experts, and our years of experience in sustainable development projects in the MENA and CIS regions.



Systems and trend analysis

As-is

ASSESSMENT

Assessment of the current situation and potential for strategic development in the circular economy and the waste management sectors at city, regional, and country levels including circular city indices

BEST PRACTICES

Benchmarking the best global practices for implementing circular economy practices and waste management solutions

To-be

REGULATORY FRAMEWORK REFINEMENT

Advising the regulator on ways to improve the development of:

- Regulations, policies and strategies
- Guidelines for stakeholders
- KPIs, metrics
- Incentives for various stakeholders to implement circular solutions

DATA COLLECTION AND MONITORING SYSTEMS

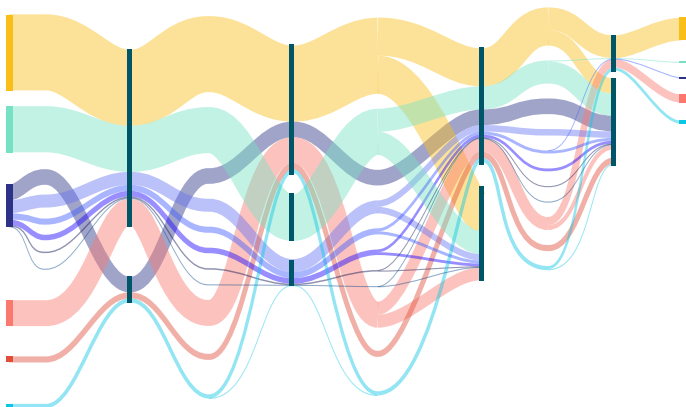
Assistance in developing a data collection tool covering all relevant parameters in waste management, as well as setting up a waste management monitoring system at the company, regional, city or national level

EXTENDED PRODUCER RESPONSIBILITY (EPR)

Development of a target-oriented EPR mechanism and recommendations for its implementation, including differentiated fees for different types of materials, and methodology for calculating eco-collection rates



Material flow analysis for regions/industries/organisations



As-is

Analyse existing material streams using Sankey diagrams, etc.:

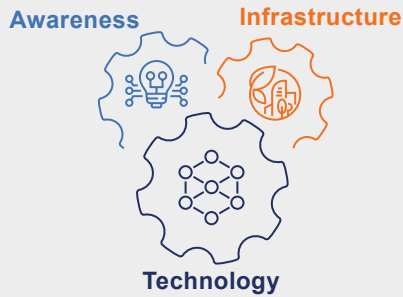
- Current morphology of waste generated
- Waste segregation effectiveness
- Waste treatment (type/ facilities)

To-be

- Elaborate deep-dive scenarios for potential material streams
- Visualise preferred material flows using Sankey diagrams



Waste management strategy / Circular economy strategy



A strategy and action plan to establish an effective waste management system and ensure compliance with regulatory requirements while fostering leadership in the circular economy. Relevant for:

- Urban Development to meet regulatory requirements and
- Entities seeking to implement circular economy principles into their business processes

As-is

ASSESSMENT OF COMPLIANCE WITH UPCOMING REGULATIONS

- Assessing the current waste management system to ensure alignment with the waste management requirements for waste generators
- Assessment of demand and supply for material resources

BENCHMARKING

- Benchmarking the best global practices for implementing circular solutions by enterprises in a specific sector
- Selecting practices relevant for the client

To-be

VISION AND KPIS

- Creating a vision of development that aligns with circular economy principles.
- Determining custom KPIs, preparing flowcharts and compliance reports
- Elaborating corporate policies and documents

WASTE MANAGEMENT SOLUTIONS

Assistance in implementing a coherent system for separate collection of municipal solid waste from residents and businesses. Ensure the availability of infrastructure for:

- Organic waste (food waste and plant residues)
- Recyclable waste (plastics, paper and cardboard, glass, metal)
- E-waste, batteries, hazardous waste

OPERATIONAL MODEL AND FINANCE

- Monitoring the system, including smart digital tracking system for waste streams, tools to control compliance of different stakeholders
- Financial model (CAPEX/OPEX) for integrating waste management solutions

ROADMAP FOR IMPLEMENTATION

- Action plan and roadmap for transitioning business models to a circular economy.
- Selection of suppliers in accordance with circular economy principles.

AWARENESS PROGRAMMES

Trainings, educational materials and awareness campaigns for employees and stakeholders



Our contacts



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