CEO GUIDE TO THE CIRCULAR ECONOMY

Building resilient businesses in Cape Town and the Western Cape

WESGRO
cape town & western cape
tourism, trade & investment

Western Cape Government
FOR YOU

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

GreenCape

In this guide CEOs are provided an introduction to circular economy principles, overview to the supply chain risks and end of life liabilities facing businesses, and resources to integrating circularity into business to strengthening value chain resilience and business competitiveness.

This publication has been produced by GreenCape, a non-profit organisation promoting the widespread adoption of economically viable green economy solutions in Southern Africa, and Wesgro, the official tourism, trade, and investment promotion agency for Cape Town and the Western Cape.

What will you find in this easy-to-use guide for CEOs?

Thinking global, implementing local

How businesses across the globe are acting to ensure value chain resilience.

Snapshot of the waste sector

An overview of the current state and key developments in Cape Town's waste sector.

The circular economy

Foundational framework for a resilient and competitive economy.

Circular business model

The 7-step process to improve value chain resilience against shocks and stresses.

Drivers of circularity

Mitigating against the decade of interconnected crises, risks and uncertainty.

Financing options for building resilience

A database resource, covering over 150 finance opportunities across 125 unique stakeholders plus an easy five-step process.

Context: Navigating the decade of polycrisis

Each year, the World Economic Forum publishes its Global Risks Report. This influential report draws insights from over 900 global experts and analyses global risks across three time horizons to help decision-makers balance immediate crises with long-term strategic priorities.

The 2025 edition highlights the interconnected crises that are, and will continue to, disrupt the global supply of materials, components, and products. As these crises deepen, public and private sector leaders are grappling with the challenges related to supply chain uncertainty, material security, and the shift toward a more sustainable and resilient economy.

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The circular economy offers an alternative to the traditional take-make-waste linear model. It seeks to keep materials at their highest value for as long as possible, minimising waste and the associated liabilities. By promoting reuse, repair, and recycling, the circular economy supports more resource-efficient and self-reliant systems, thus enhancing local resilience. This approach aligns closely with the Global Risks Report's call for sustainable, long-term strategies in an increasingly uncertain world.

Fact

South Africa faces mounting challenges around supply chain security and disposal liabilities. These pressures not only impact environmental and social well-being, but pose risks to competitiveness – business continuity, employee retention, and long-term investment prospects.

Act

Strengthening supply chain resilience requires collective action across the system. The circular economy approach offers a powerful framework for reducing dependence on offshored supply chains, virgin materials, improving system efficiency, enhancing local value retention, and unlocking new premium markets.

Impact

Businesses can implement practical measures to reduce exposure to supply chain disruptions. These range from circular design and internal efficiency improvements, to rethinking end-of-life strategies, and implementing voluntary or mandatory product stewardship that close material loops and boost material security.

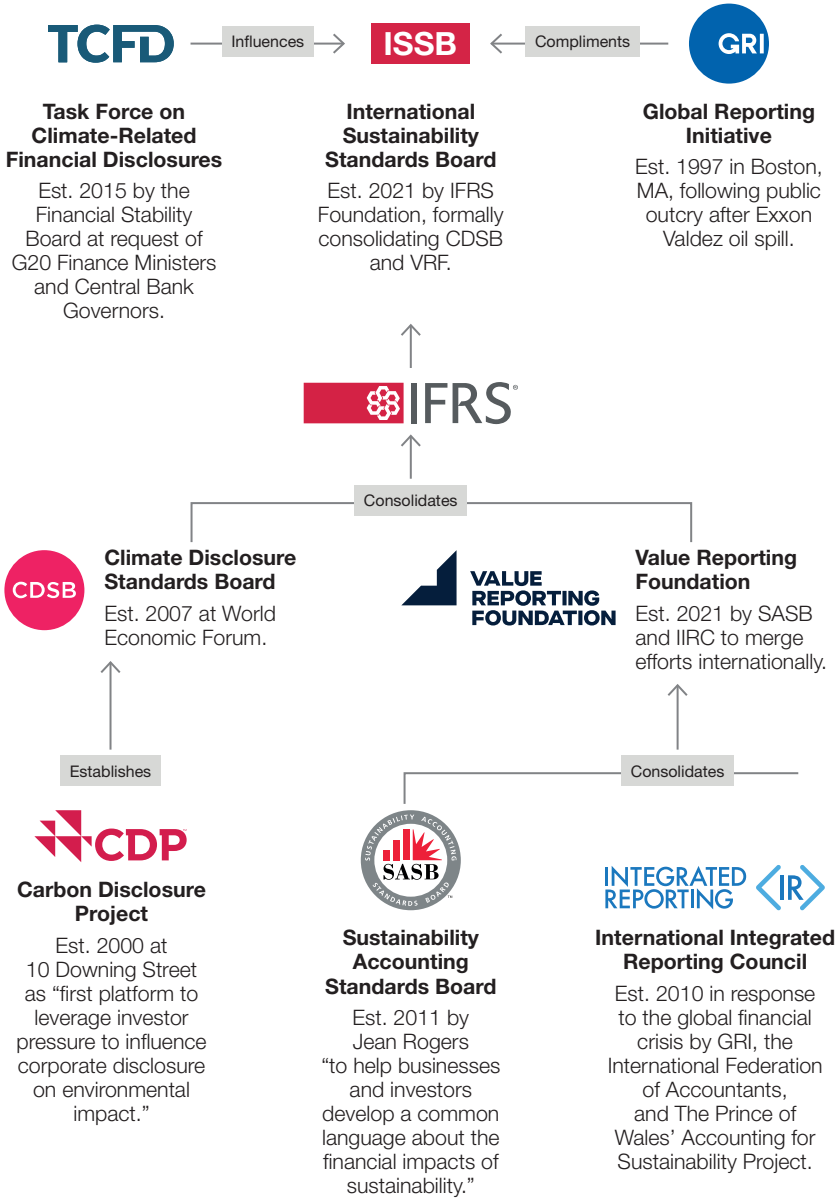
Thinking globally, implementing locally: Integrating resilience

Businesses across the globe are integrating resilience.

- Businesses are moving towards integrating sustainability into business practices.
- Reporting standards are ensuring businesses are moving away from shareholder value creation towards systems value creation.
- In 2022, 98% of S&P 500 companies reported **ESG-related information**, 51% obtained assurance over some of their scope 1, 2 and 3 GHG emissions, and 59% disclosed a net-zero/ carbon neutral commitment.
- In 2022, 17% of S&P 500 companies obtained assurance in waste related ESG reporting. This being up from 9% in 2021.
- S&P Global Sustainable, division of S&P Global, developed the **S&P Global ESG Score**: A comprehensive rating that measures how well a company performs and manages material ESG risks, opportunities, and impacts.
- Thus when considering investing in infrastructure towards sustainability and climate, financial instruments need to consider corporate balance sheets towards ESG integration.

Source: **Center for Auditing Quality (2025)**

International Sustainability Standards Board launches two standards unifying corporate climate disclosures



Source: https://auditboard.com/blog/beyond-esg-issb-consolidation-heralds-a-new-era-in-corporate-reporting-and-assurance

Snapshot of Cape Town's waste sector: End of life management

Cape Town is a regional hub for innovation

The City of Cape Town is the largest municipality in the Western Cape, accounting for 65.8% of the provincial population and 72.5% of its economic output. Its diverse economy spans residential, industrial, and especially commercial sectors, with relatively limited agricultural activity compared to neighboring municipalities.

The size of the population, coupled with the economic scale and diversity translates to diverse material inflows and complex waste outflows with varied and often challenging characteristics.

This places significant strain on Cape Town's utilities and infrastructure. Landfill capacity is of particular concern, making Cape Town a regional liability for businesses generating waste, but also a hub for circular innovation.

With the right policies in place, major infrastructure established and planned, and the diverse ecosystem of skills and solutions, Cape Town is well placed to lead the way in developing a vibrant and effective circular economy. An economy that not only reduces the negative environmental impacts often associated with traditional economic activity, but also unlock new economic opportunities across the value chain and the region.

It is for this reason that this guide places special attention on the City of Cape Town metro.

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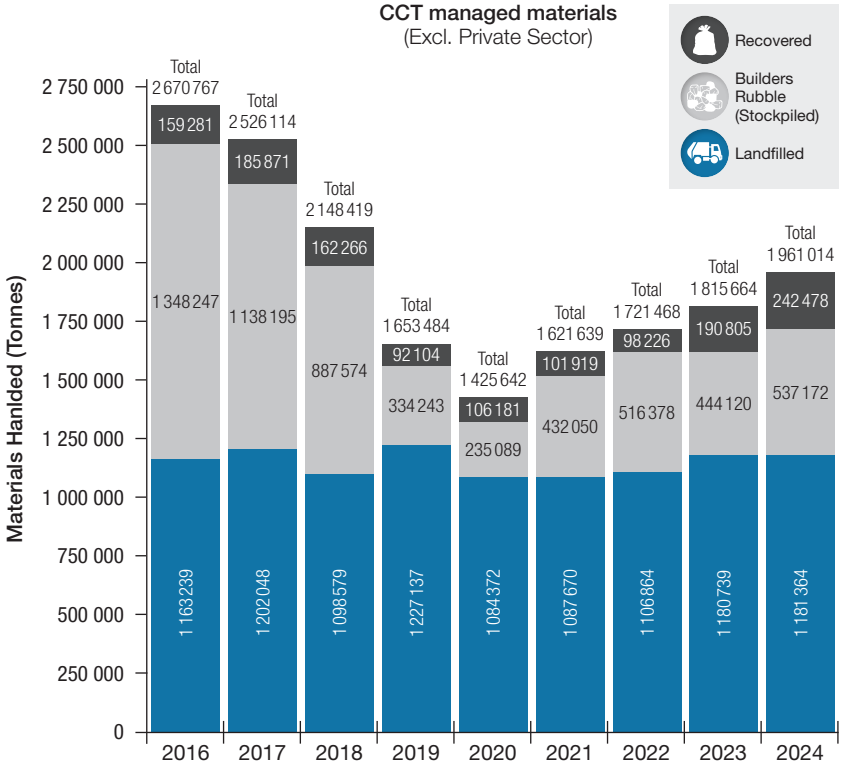
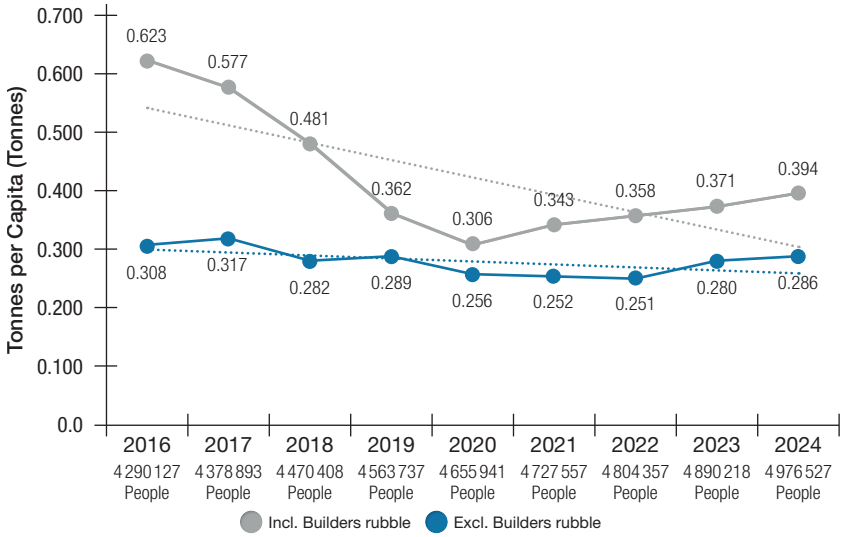
City of Cape Town waste figures

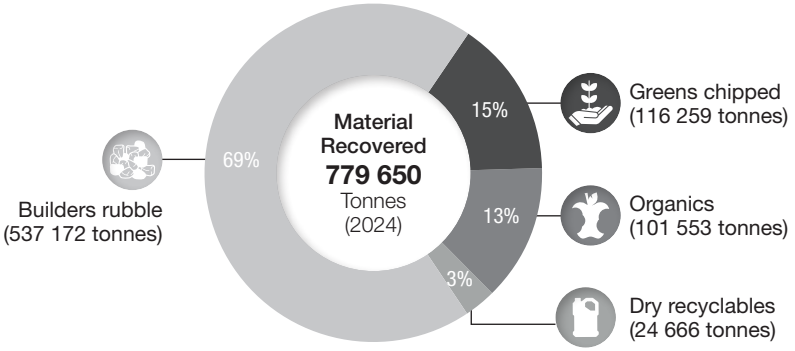
It is complex to determine the tonnages of waste generated within a city. However, it is possible to track the tonnages of waste crossing weighbridges at waste management facilities.

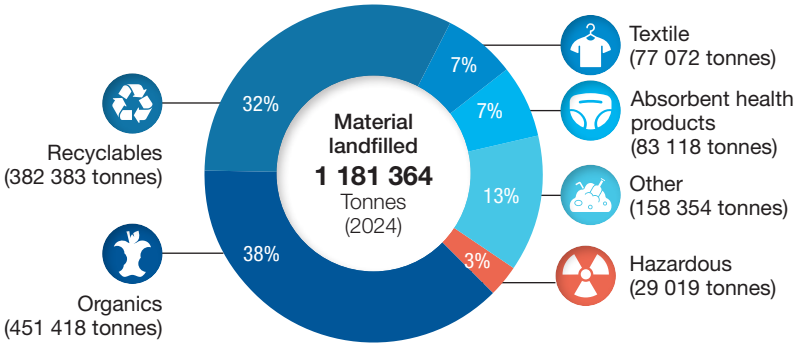
Between 2016 and 2024, the City of Cape Town (CCT) handled decreasing overall waste tonnages. If builders' rubble is excluded, tonnages remained relatively consistent. However, when adjusted for population growth, per capita waste has decreased. Over the same period, the CCT has advanced efforts to divert organic waste and recyclables from landfill.



Tonnes of material recovered and landfilled by the City of Cape Town per year (2016–2024)
Source: City of Cape Town (2025)


Tonnes per Capita (Tonnes)
0.700
0.600
0.500
0.400
0.300
0.200
0.100
0.0
0.623
0.577
0.481
0.362
0.306
0.343
0.358
0.371
0.394
0.308
0.317
0.282
0.289
0.256
0.252
0.251
0.280
0.286
2016
4 290 127 People
2017
4 378 893 People
2018
4 470 408 People
2019
4 563 737 People
2020
4 655 941 People
2021
4 727 557 People
2022
4 804 357 People
2023
4 890 218 People
2024
4 976 527 People
Incl. Builders rubble
Excl. Builders rubble


Material Recovered
779 650
Tonnes
(2024)
69%
15%
13%
3%
Builders rubble
(537 172 tonnes)
Greens chipped
(116 259 tonnes)
Organics
(101 553 tonnes)
Dry recyclables
(24 666 tonnes)

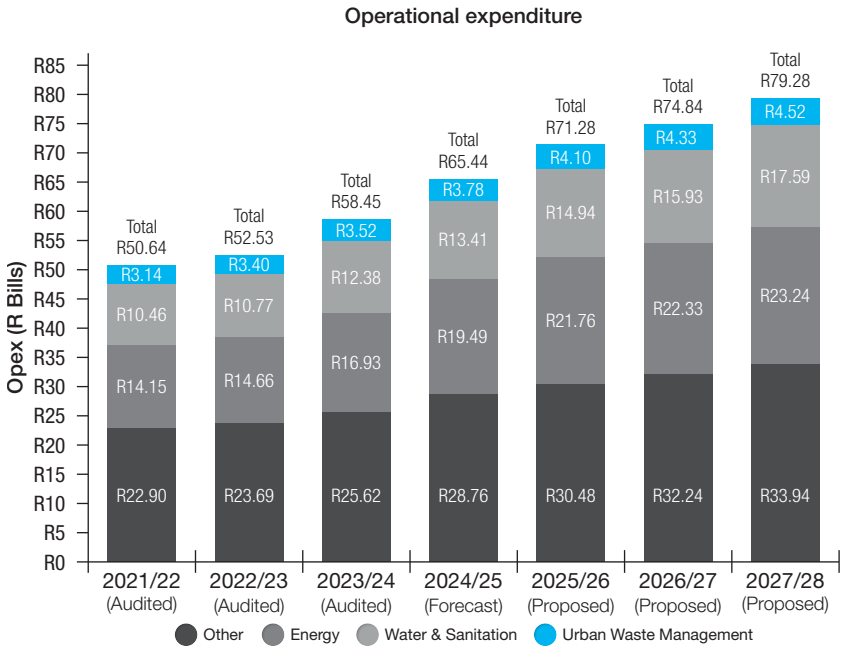

Material landfilled
1 181 364
Tonnes
(2024)
32%
38%
7%
7%
13%
3%
Recyclables
(382 383 tonnes)
Organics
(451 418 tonnes)
Textile
(77 072 tonnes)
Absorbent health products
(83 118 tonnes)
Other
(158 354 tonnes)
Hazardous
(29 019 tonnes)

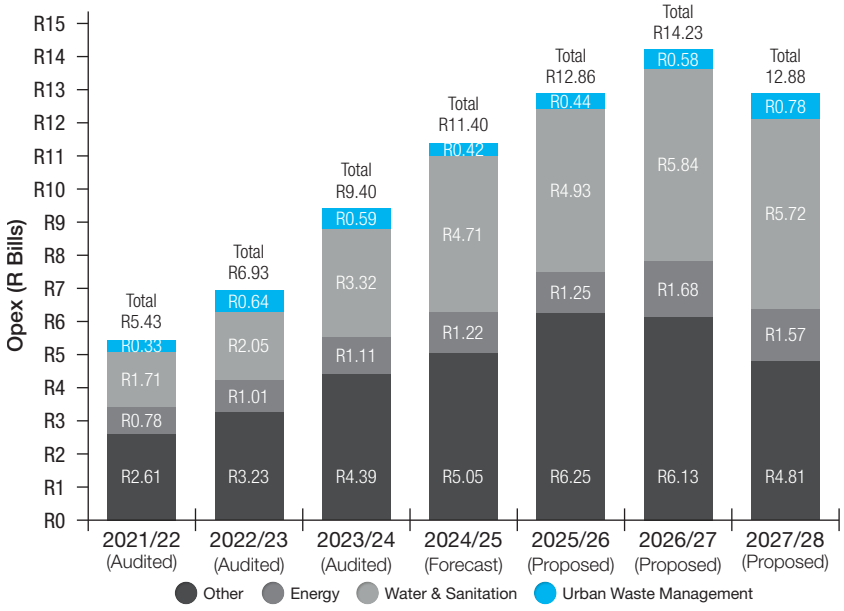
City of Cape Town waste budget

Municipal budgets are a critical tool for directing public finance towards service delivery and infrastructure that support economic growth and strengthen urban resilience against long-term risks such as climate change, infrastructure failure, resource scarcity, and dependable waste management. For businesses, these investments directly and indirectly create a more stable and efficient operating environment, reducing exposure to stresses and shocks.

The CCT has committed to progressive waste management and circularity, by investing in material recovery for ultimately private sector offtake. This is reflected in its budget allocations over the short and long term:

- **Operational expenditure:** For the 2024/25 financial year, the CCT is forecast to have spent R65.44 billion on day-to-day operations. Waste services account for ~6% of this, with a CAGR of 20% over the next three years.
- **Capital expenditure:** From 2021/22 to 2027/28, the CCT plans to invest R3.67 billion in waste-related infrastructure. This includes the expansion of material aggregation infrastructure: public drop-offs, new large material recovery facilities, door-to-door recyclables collection, organic waste treatment infrastructure, and safe disposal security.





Source: City of Cape Town (2025) – Budget 2025–26

Legislation/strategies relevant to businesses

Legislation	Application or relevance to businesses
National Environmental Management: Waste Act (NEMWA) (Act 59 of 2008)	The NEMWA is the framework for waste management in South Africa, promoting waste minimisation, recycling, and responsible disposal. It imposes a number of planning, licensing, and compliance obligations on businesses, as well as municipalities which in turn affect businesses within those municipalities.
National Waste Information Regulations (NWIR) (R625 of 2012)	Waste generators triggering certain thresholds stipulated in the NWMIR must register and report waste figures to either the national South African Waste Information System (SAWiS); or in the case of the Western Cape-based activities, the Western Cape Integrated Pollutant and Waste Information System (iPWiS).
Municipal by-laws	Municipalities may regulate how waste is managed within their boundaries through waste specific by-laws. These by-laws often provide obligations for waste generators and waste handlers that waste generators may use as a service provider. These obligations may include accreditation and reporting requirements over and above what is stipulated by national and provincial regulations.

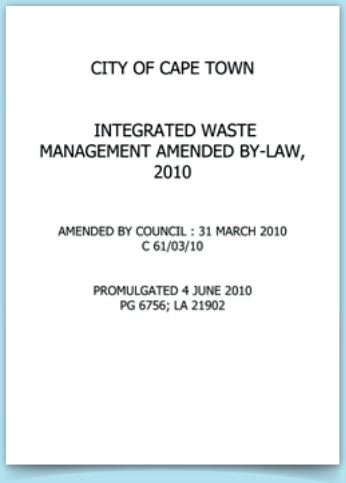
Strategies/Plans	Application or relevance to businesses
National Waste Management Strategy (2020)	The NWMS is South Africa's strategic planning instrument for implementing the goals of the NEMWA. It outlines the country's approach to waste management over the medium to long term. The NWMS provides useful insights into where national government is focusing its attention, and what obligations/liabilities may be required of businesses in the short to medium term.
Municipal Integrated Waste Management Plans (IWMP)	The NEMWA requires all municipalities to develop an IWMP as part of their Integrated Development Plan. The aim of the IWM Plan is to give effect to the municipalities waste management strategies and compliance with the goals of the NWMS and the objectives of the NEMWA. IWMPs provide businesses with insight into future liabilities and opportunities within a municipality.

Actions for waste generators

1. Where relevant, use accredited service providers.
2. Ensure end solutions used have relevant licenses.
3. Request disposal certificates from service providers.
4. Register and submit waste plans to relevant local authorities.
5. Submit waste figures to relevant local authorities and iPWiS.

City of Cape Town waste by-law

- Each municipality has its own Integrated Waste Management Bylaw (IWM Bylaw) governing waste management.
- Refer to your local municipality website for more information.
- The CCT has a comprehensive waste by-law.


CITY OF CAPE TOWN

INTEGRATED WASTE MANAGEMENT AMENDED BY-LAW, 2010

AMENDED BY COUNCIL : 31 MARCH 2010
C 61/03/10

PROMULGATED 4 JUNE 2010
PG 6756; LA 21902

Relevant to businesses:

- Section 3 of the by-law lists the obligations of waste generators.
- Businesses must **submit** integrated waste management plans outlining how waste is managed – generated, minimised, stored, collected, and disposed.
- Hospitality, and food and beverage processors must submit plans reflecting how they plan to ensure 100% diversion of organic waste from landfill by 2027.
- Businesses must submit monthly waste figures to the City. This is separate to the provincial waste submission via IPWIS.
- Business may only use waste service providers that are accredited by the City.

For more information, contact: wastewise@capetown.gov.za

What is being done to support circularity

- The City of Cape Town launched the Waste Strategy (2025), illustrates where the City of Cape Town will focus its efforts and investments in the short, medium, and long-term, of which minimising waste from the landfill is a key focus area.
- A major funder of GreenCape's Circular Economy programme. The programme seeks to facilitate waste avoidance and landfill diversion by providing investors and businesses with insights to inform investment decisions.
- Primary funder of the Western Cape Industrial Symbiosis Programme (WISP), a free facilitation programme that connects companies with unused resources with other companies that can use those resources in their production.
- The City of Cape Town's R120 billion, 10-year infrastructure pipeline (2022–2031) includes significant investment (5.8%) to waste management infrastructure, and a significant amount to infrastructure supporting the recovery of products, components, and materials for reuse, refurbish, and recycling.
- The City of Cape Town's IWM Bylaw, requires private waste generators to develop and implement waste management plans that prioritise landfill diversion. The City is increasing pressure on key sectors – particularly the food and beverage industry – to divert priority waste streams, such as organics.

Circular business model: The 7-step guide

Three guiding principles of circularity

The circular economy is an envisioned economic system where products, components, and their materials are kept in circulation for as long as possible. The circular economy tackles a number of global challenges – climate change, biodiversity and ecosystem loss, waste and pollution – by decoupling economic activities from the consumption of riskier and/or finite resources.

Eliminate waste and pollution

Stretch the life of products, components and their materials so that they are in-use, maintained, repaired, and upgraded for as long as possible.

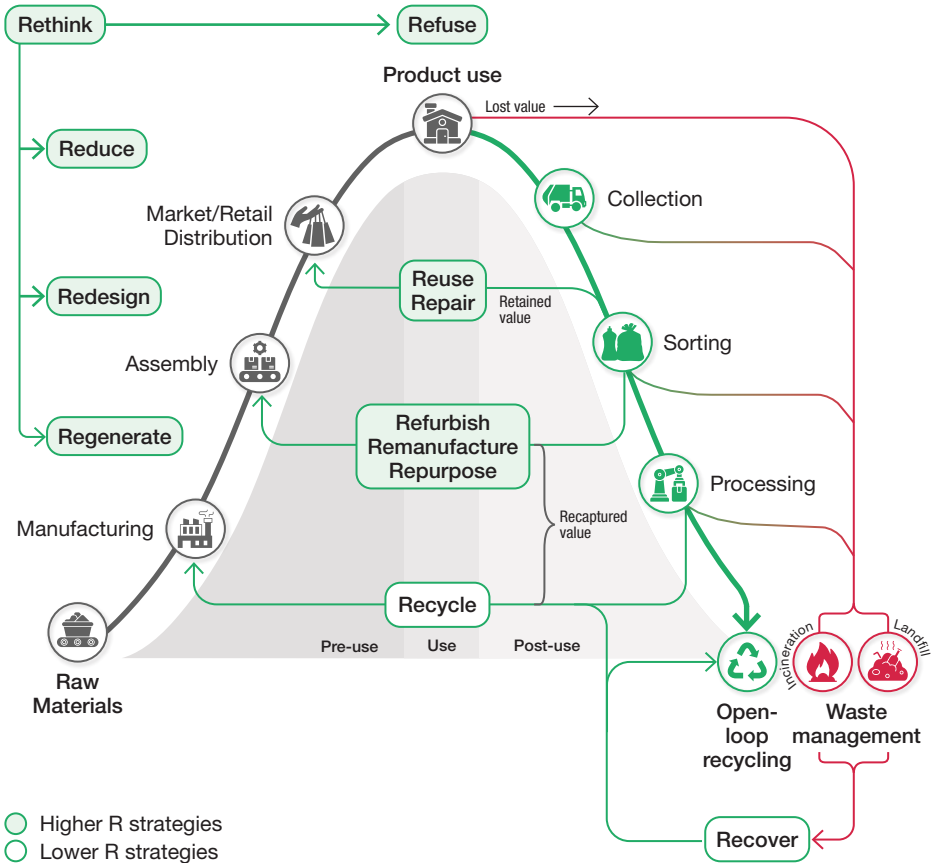
Circulate products and materials

Use waste streams as a source of secondary alternative to raw materials and recover waste for reuse and recycling.

Regenerate nature

Ensure that renewable, reusable, and non-toxic resources are used as inputs in an efficient way that does not compromise the natural capital on which the economy depends.

Value Hill

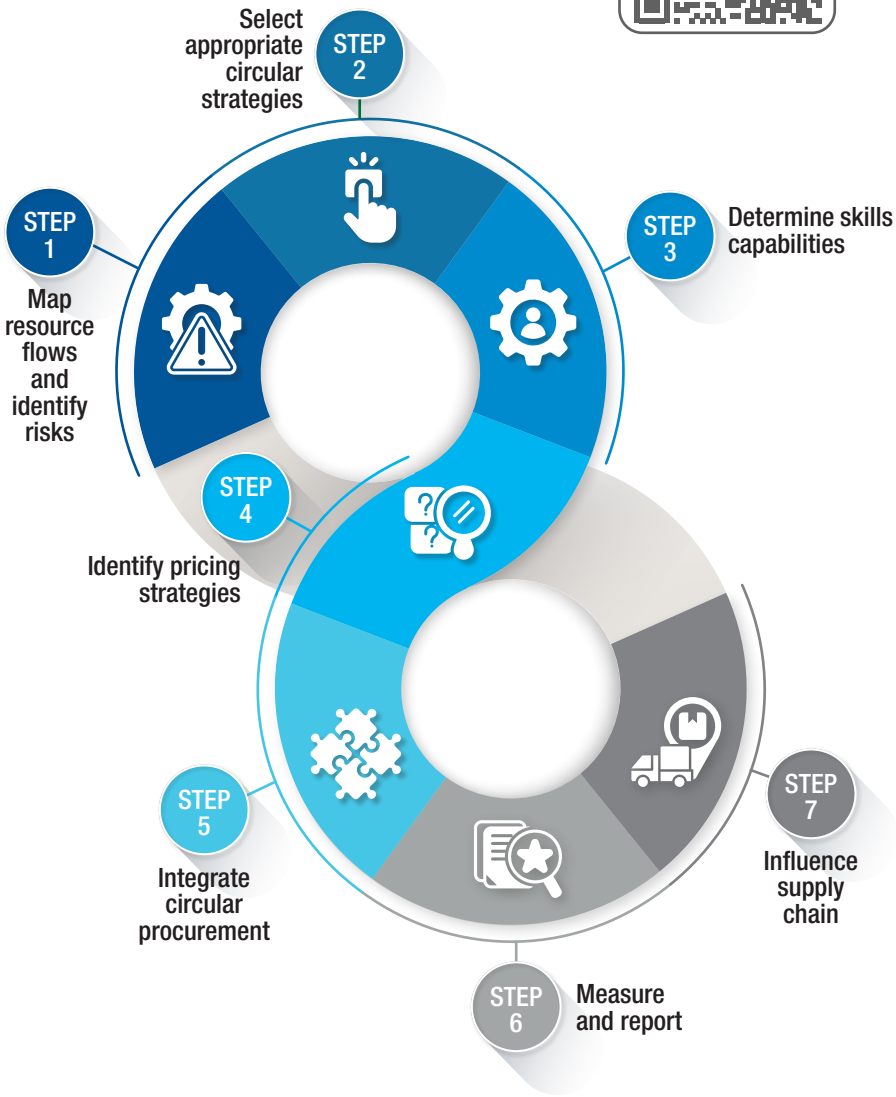


Source: Metabolic (2025)

Metabolic's Value Hill is a strategic model used to illustrate how economic value is created, maintained, and recovered across a product's lifecycle, and how different business strategies can be implemented to support a circular economy.

The 7-step guide

The 7-step process outlines what businesses can do to improve their resilience to material-related shocks and stresses within their operations and beyond.



Step 1: Map resource flows and risks

- Map inputs and outputs across the value chain.
- Identify resource-intensive and waste-generating processes.
- Assess environmental and social risks linked to material use.
- Consider lifecycle impacts, including end-of-life.
- Highlight critical, non-renewable, or hazardous materials.
- Assess supply chain risks of materials, components, and products.

Step 2: Select suitable strategies

- Evaluate the 9R strategies of circularity.
- Prioritise strategies that align with your business model.
- Assess feasibility, including technical and financial factors.
- Consider product and service-based models.
- Align circular strategies with sustainability goals.

Step 3: Determine skills capabilities

- Conduct a skills gap analysis for circular economy practices.
- Train employees on sustainable design, lifecycle thinking, and material management.
- Develop cross-functional teams for circular projects.
- Explore partnerships for skill exchange.
- Promote a culture of innovation and continuous improvement.

Step 4: Identify pricing strategies

- Define business's circular intervention need.
- Set criteria, analyse market and long-list suppliers.
- Shortlist relevant suppliers, execute, and manage process.
- Evaluate the responses and clarify proposals.
- Select supplier based on value proposition.
- Review and manage supplier performance.

Step 5: Integrate circular procurement

- Define circular intervention need.
- Set criteria, analyse market and long-list suppliers.
- Shortlist relevant suppliers, execute and manage process.
- Evaluate the responses and clarify proposals.
- Select supplier based on value proposition.
- Review and manage supplier performance.

Step 6: Measure and report

- Make use of recognised frameworks.
- Define key metrics for circularity.
- Set targets for continuous improvement.
- Track progress against targets.
- Publically report impact and achievements.

Step 7: Influence supply chain

- Develop green supplier score card.
- Communicate circular goals and expectations clearly.
- Collaborate with suppliers to design out waste.
- Prioritise suppliers with strong sustainability performance.
- Provide support and incentives for supplier practices.

Step 1: Map resource flows and identify risks

Step 1 seeks to understand how materials flow through an organisation's value chain, the impacts those material may have on strategic areas, the risks associated with those flows, and potential opportunities to maximise value extraction and retention:

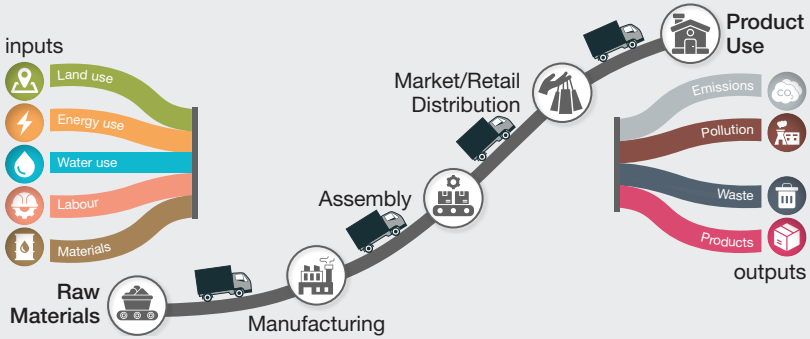
Tasks to achieve this include:

- Map material inputs and outputs across the value chain.
- Identify resource-intensive and waste-generating processes.
- Assess environmental and social risks linked to material use.
- Consider lifecycle impacts, including end-of-life.
- Highlight critical, non-renewable, or hazardous materials.
- Assess supply chain risks.

Standard tools

Material Flow Analysis (MFA)

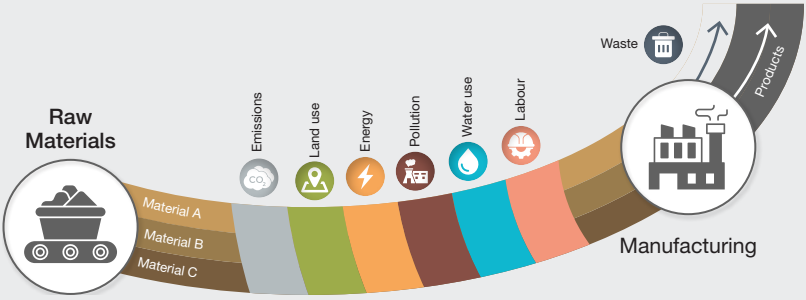
Businesses use the method to track and quantify the inputs, outputs, and accumulation of materials in their operations over time. It focuses on physical quantities to assess resource use, material efficiency, waste generation, and import dependence. MFA helps companies to identify inefficiencies and improve resource management across operations.



Standard tools

Life Cycle Assessment (LCA)

Businesses use the method to evaluate the environmental impacts of a product/service throughout its entire life span. It focuses on metrics such as carbon emissions, energy use, water consumption, and resource depletion to identify, quantify, and mitigate impacts across the value chain of the product/service. LCA helps companies make informed sustainable decisions.

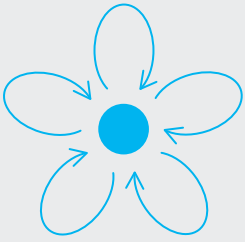


Step 2: Select appropriate circular strategies

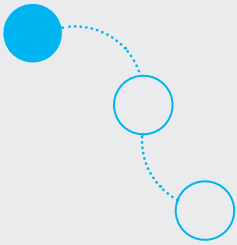
Step 2 seeks to select the most appropriate circular strategy to transform a business. There are a number of entry points to adopt circularity into your business. To achieve this, businesses must identify which circular strategies best suit their operations, considering factors like product design, resource efficiency, customer needs, and sustainability goals. This step is critical because the right circular strategies can maximise resource efficiency, reduce waste, and create new business opportunities and reduce liabilities.

Tasks to achieve this include:

- Evaluate the 9 R strategies of circularity.
- Prioritise strategies that align with the business model.
- Assess feasibility, including technical and financial factors.
- Consider both product and service-based circular models.
- Align circular strategies with sustainability goals.



Sell access rather than ownership
- Rental
- Pay per outcome
- Sharing



Monetise product life extension
- Repair and maintenance
- Reuse and refill
- Resale
- Refurbish and remanufacture

Value circular inputs
- Manufacturing with used or by-product materials
- Materials and food produced in ways that create regenerative outcomes

Waste prevention	
1. Refuse	
Circular strategies	Avoid unnecessary products or resource use.
Business actions	• Conduct input audits to identify non-essential elements. • Eliminate single-use or hazardous inputs. • Digitise documents/processes.
Tangible benefits	• Immediate cost savings on procurement. • Reduced compliance and liability risk. • Enhanced brand credibility with green credentials.
Example	The South African Plastics Pact is a industry-led initiative launched in 2020 to drive a circular economy for plastic packaging. The voluntary agreements provides a platform for collective action toward four strategic targets. The pact has secured commitments from some of South Africa's consumer brands.
2. Rethink	
Circular strategies	Use products differently and change business models.
Business actions	• Develop service-based models (leasing, subscription). • Design modular products for easy upgrade. • Develop sharing platforms.
Tangible benefits	• New recurring-revenue streams. • Stronger customer engagement and loyalty. • Higher asset utilisation rates.
Example	Sustainable Heating uses a power purchase agreement model to supply steam-as-a-service from biomass waste to clients like Aspen. Since Sustainable Heating is responsible for maintenance and performance, clients face no upfront investment or maintenance costs. This ensures optimal operation and longevity of the technology. The use of biomass waste reduces reliance on fossil fuels, promotes local value chains, and lowers emissions.

Waste prevention	
3. Reduce	
Circular strategies	Use fewer resources and minimise waste at every stage.
Business actions	• Apply lean/manufacturing-excellence tools. • Lightweight product design and packaging optimisation. • Implement energy and water efficiency programmes.
Tangible benefits	• Lower material, energy and waste disposal costs. • Improved operating margins. • Reduced vulnerability to resource price swings.
Example	Zerocrete manufactures interlocking hollow bricks using waste materials as an input. This not only diverts waste from landfills and reduces the demand for raw materials, the interlocking design eliminates the need for fillers and grout, simplifying the construction process, reducing on-site waste, and using less material. By combining recycled content with smart design, Zerocrete's approach cuts down on overall material usage.

Product life extension	
4. Reuse	
Circular strategies	Use items again without significant alteration.
Business actions	• Launch take-back or buy-back schemes. • Standardise components for multi-use. • Establish secondary-market sales channels.
Tangible benefits	• Captures value from returned assets. • Reduces outbound logistics and disposal fees. • Drives incremental sales of “as-is” goods.
Example	Clothes to Good partners with leading clothing retailers and brands to run clothing take-back programmes that help reduce disposal costs. The organisation sorts donated garments, redirecting usable items to secondary markets or donating them to vulnerable communities. A notable example is H&M’s in-store garment collection initiative, where customers can drop off unwanted clothing in return for a discount voucher.
5. Repair	
Circular strategies	Fix broken items to extend lifespan.
Business actions	• Set up in-house or partner repair centers. • Extend warranties and offer maintenance plans. • Provide DIY repair kits/documentation.
Tangible benefits	• Extend product lifecycle (lower replacement costs). • New after-sales revenue stream. • Builds deep customer trust.
Example	Taking Care of Business works with major retailers to refurbish returned or unsellable appliances. Through its repair training programme, unemployed individuals gain repair skills by fixing these items, which are then sold in second-hand markets. Since 2014, over 1 million items have been recovered. As a registered Section 18A organisation, donor partners can recover some loss by claiming tax deductions for donations.

Product life extension	
6. Refurbish	
Circular strategies	Restore old products to good working condition.
Business actions	• Create certified refurbishing processes. • Train specialised refurbishment teams. • Market “like-new” stock.
Tangible benefits	• Higher margins than raw recycling. • Access to price-sensitive customer segments. • Defers raw-material purchasing needs.
Example	PalletCycle collects, dismantles, and rebuilds wooden pallets using end-of-life pallets. All products are ISPM 15 certified for export and are available in standard or custom sizes. PalletCycle also provides pallet refurbishment services, whereby used pallets are repaired and sold back to clients at a reduced cost. Refurbished pallets offer a cost-effective alternative to new pallets and reduces waste generated.
7. Remanufacture	
Circular strategies	Rebuild products using a mix of new and used parts.
Business actions	• Implement reverse-logistics for EOL returns. • Disassemble, clean, and replace worn modules. • Test to original specifications.
Tangible benefits	• Premium pricing opportunity (as-good-as-new). • Raw-material cost savings up to 70%. • Strengthened supply-chain resilience.
Example	Barloworld Equipment, the Southern African dealer for Caterpillar (CAT), operates one of the region’s largest remanufacturing centers for heavy machinery components. Their Johannesburg facility is part of CAT’s global CAT Reman network, and aims to provide cost-effective, sustainable alternatives to new parts.

Recovery	
8. Repurpose	
Circular strategies	Use components or items for a new function.
Business actions	• Identify by-product streams for new inputs. • Partner with adjacent industries for co-processing. • Innovate circular product lines.
Tangible benefits	• Avoids landfill/tipping fees. • New revenue from upcycled goods. • Diversifies product portfolio.
Example	Sealand manufactures premium gear and apparel using repurposed materials such as yacht sails, stretch tents, truck tarps, and billboards sourced from strategic partners. This approach reduces raw material costs for Sealand and lowers disposal costs for retail partners. The durable, weather-resistant materials are combined with high-quality hardware, thoughtful design, and skilled craftsmanship to produce long-lasting gear.
9. Recycle	
Circular strategies	Recover materials to make new products.
Business actions	• Invest in automated sorting and cleaning technologies. • Forge partnerships with certified recyclers. • Incorporate recycled content targets.
Tangible benefits	• Helps meet EPR/regulatory requirements. • Lowers disposal costs. • Demonstrates end-to-end environmental stewardship.
Example	Maltento insect biotech company that converts pre-consumer food waste into high-value, functional feed ingredients for pets, aquaculture, and livestock. Maltento uses Black Soldier Fly larvae to upcycle amongst others, spent grain from the local craft brewery Devils Peak, and fruit and vegetable pulp from a large local premium agro-processor.

Step 3: Determine skills capabilities

Step 3 seeks to determine the technical, operational, and strategic competencies an organisation needs to implement circular practices. It also means assessing your current capabilities and pinpointing gaps that must be filled to enable the shift from linear to circular thinking.

Tasks to achieve this include:

- Conduct a skills gap analysis for circular economy practices.
- Train employees on sustainable design, lifecycle thinking, and material management.
- Develop cross-functional teams for circular projects.
- Explore partnerships for skill exchange
- Promote a culture of innovation and continuous improvement.

Step 4: Identify pricing strategies

Step 4 seeks to determine the pricing model to support circularity while also accounting for cost savings from resource efficiency. It involves integrating lifecycle cost analysis, reflecting circular value, and balancing profitability with competitive pricing.

Tasks to achieve this include:

- Consider pricing models that support circularity (e.g., product-as-a-service, pay-per-use).
- Account for cost savings from resource efficiency.
- Integrate lifecycle cost analysis into pricing decisions.
- Reflect circular value (durability, repairability) in pricing.
- Balance profitability with competitive pricing.

Step 5: Integrate circular procurement

Step 5 seeks to integrate circular procurement framework provides an overview of the intervention points organisations can use to make their purchasing choices more circular and engage their suppliers in circular economy conversations and collaborative circular partnerships.

Tasks to achieve this include:

- Define the business's circular intervention need.
- Set criteria, analyse market and long-list suppliers.
- Shortlist relevant suppliers, execute, and manage process.
- Evaluate the responses and clarify proposals.
- Select supplier based on value proposition.
- Review and manage supplier performance.

Step 6: Measure and report

Step 6 emphasises the importance of measuring and reporting progress. This is crucial for assessing the effectiveness of interventions and showcasing a commitment to sustainability and responsible resource management. As the saying goes, “You cannot manage what you do not measure.” It also aligns with the growing expectations of investors and stakeholders for transparency and accountability environmental, social, and governance (ESG) matters.

Tasks to achieve this include:

- Make use of recognised frameworks.
- Define the key metrics for circularity.
- Set targets for continuous improvement.
- Track progress against targets.
- Publically report impact and achievements.

Recognised frameworks

Circular Transition Indicators: measures material circularity, including resource efficiency, value retention, and waste reduction. Applicable at a product, company, or value chain level.

Circulytics: A framework assessing circularity at the organisational level. Measures enablers (strategy and innovation) and outcomes (resource use and waste).

GRI 306: Waste 2020: While GRI has no circularity specific standards, the principles are integrated into existing Topic Standards – GRI 306: Waste 2020.

ISO 59020:2023: An international standard providing principles, requirements, and guidelines for measuring circularity. Applicable across industries and scales, ensuring consistency and comparability.

Step 7: Influence supply chains

Step 7 seeks to influence change and imbed resilience across a value chain. Whilst the concept of Scope 3 is associated with greenhouse gas emissions it can be applied to other impacts beyond greenhouse gas emissions too – water, waste, landuse, biodiversity, social, and resources.

Tasks to achieve this include:

- Develop green supplier score card.
- Communicate circular goals and expectations clearly.
- Collaborate with suppliers to design out waste.
- Prioritise suppliers with strong sustainability performance.
- Provide support and incentives for supplier practices.

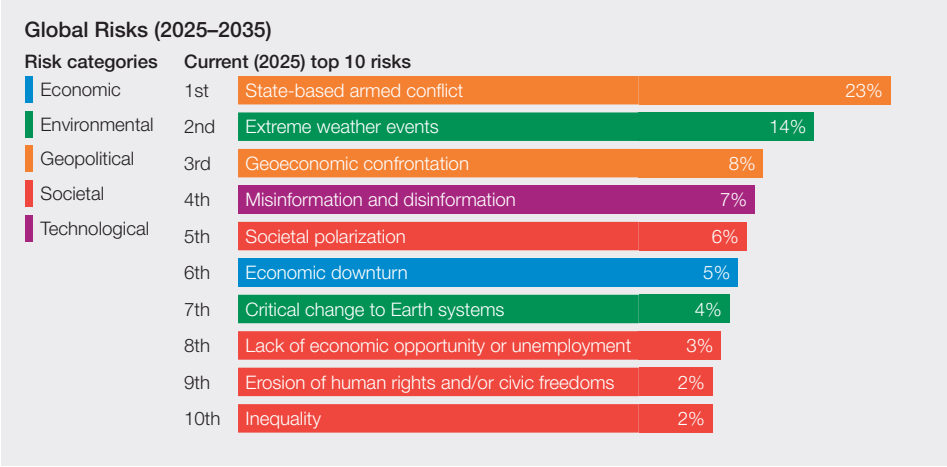
Drivers of circularity: Mitigating risks and uncertainty

Supply chain uncertainty

Whilst South Africa is a producer of key commodities, it is still highly reliant on imports of both finished goods and key sector inputs. This dependence exposes the economy to global supply chain disruptions, price volatility, and currency risks. This highlights the need to strengthen supply chain resilience.

The Global Supply Chain Pressure Index (GSCPI) tracks global supply chain stress. The GSCPI graph illustrates a number of periods indicating medium and high supply chain pressure over the last two decades.

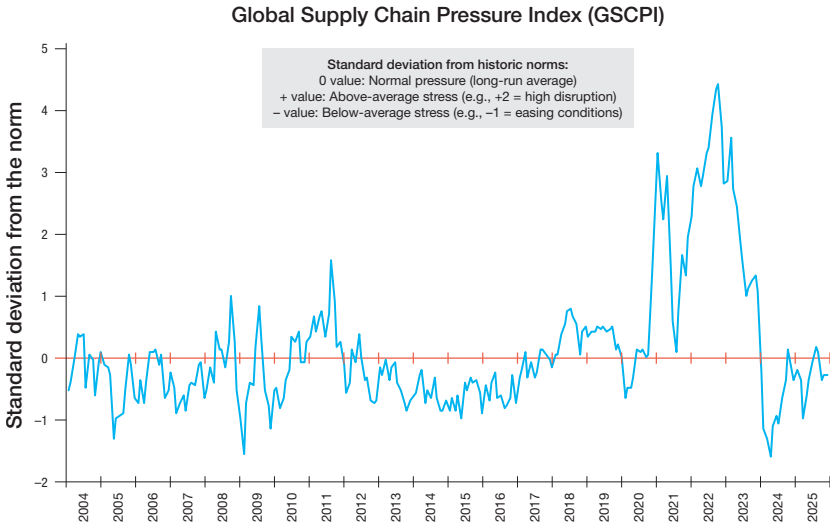
These pressures are expected to persist in the coming years. The World Economic Forum warns of a decade marked by overlapping and interconnected risks. These risks are set to amplify supply chain uncertainty.



Sources: World Economic Forum (2025)

This will drive up costs, disrupt operations, and erode competitiveness, particularly for businesses dependent on complex offshored supply chains.

To stay competitive and resilient, businesses must adopt appropriate localised, resilient, and circular supply models.



Sources: Federal Reserve Bank of New York (2025)

	2 years		10 years
1st	Misinformation and disinformation	1st	Extreme weather events
2nd	Extreme weather events	2nd	Biodiversity loss and ecosystem collapse
3rd	State-based armed conflict	3rd	Critical change to Earth systems
4th	Societal polarization	4th	Natural resource shortages
5th	Cyber espionage and warfare	5th	Misinformation and disinformation
6th	Pollution	6th	Adverse outcomes of AI technologies
7th	Inequality	7th	Inequality
8th	Involuntary migration or displacement	8th	Societal polarization
9th	Geoeconomic confrontation	9th	Cyber espionage and warfare
10th	Erosion of human rights and/or civic freedoms	10th	Pollution

Supply chain price volatility

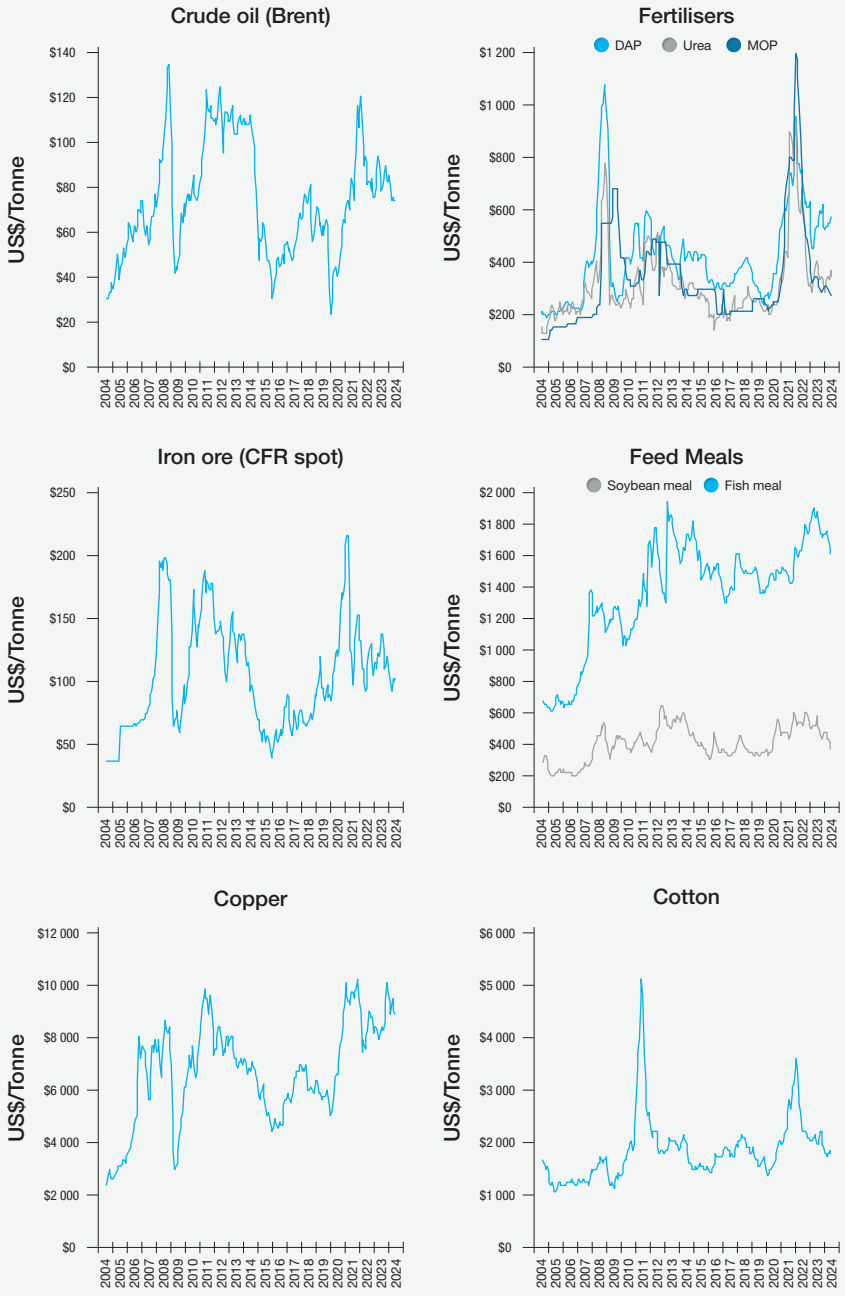
The adjacent graphs show two decades of price volatility across six key commodities that underpin modern economies and impact sectors critical to Western Cape businesses.

Crude oil fuels transport and industry; iron ore is vital for steel in construction and manufacturing; and copper is critical in electrical infrastructure, electronics, and South Africa's renewable energy transition.

Fertilisers support crop yields and feed meals are key protein sources for livestock production, forming the backbone of food security. Cotton underpins the textile industry.

With limited local production of these six commodities, South Africa relies heavily on imports, making it vulnerable to price shocks and supply chain disruptions. This dependence poses risks for businesses tied to linear, global value chains, especially in the long term.

Adopting relevant circular strategies can mitigate against rising inputs costs and reliance on raw materials and improve competitiveness.



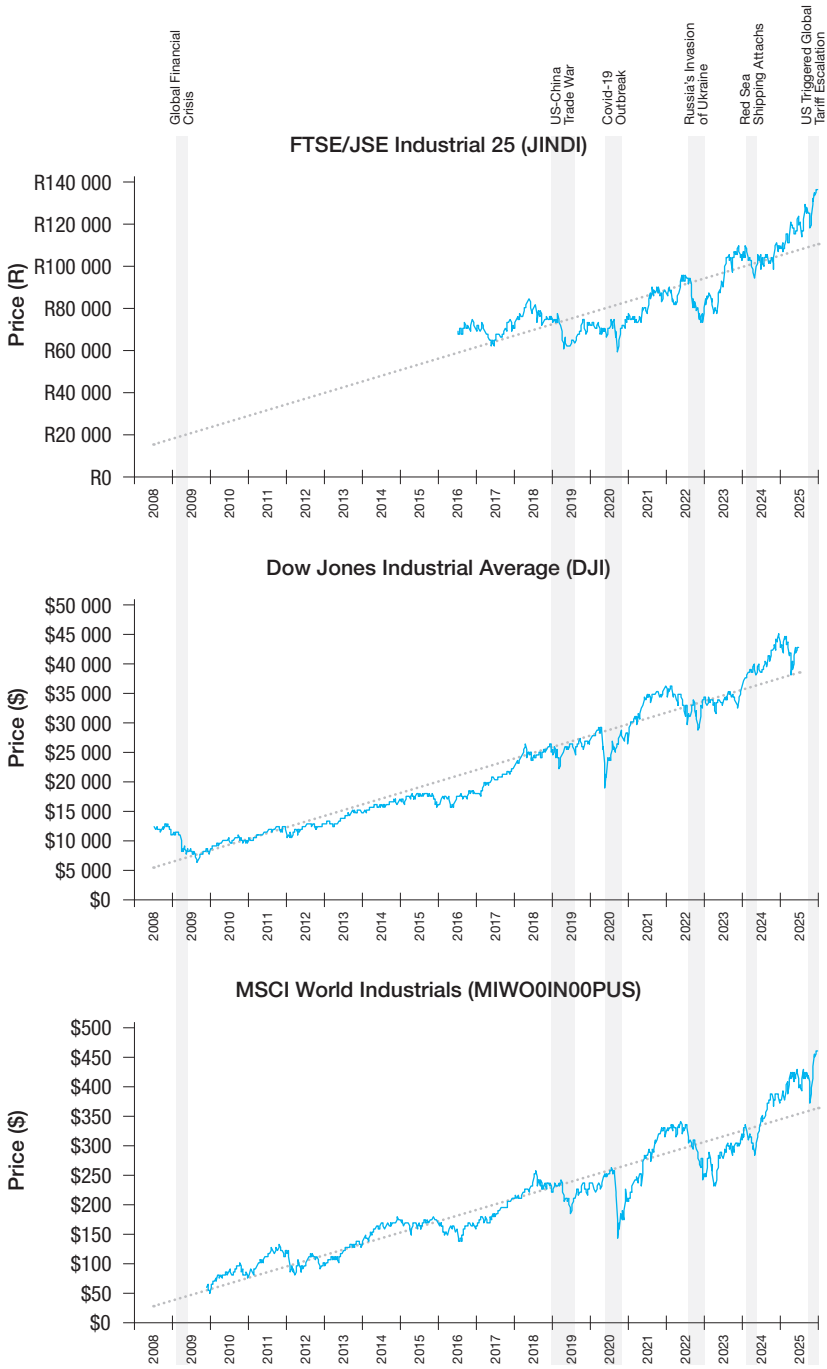
Source: World Bank Commodity Price Data (The Pink Sheet) (2025)

Industrial volatility

While not a direct measure of supply chain volatility, industrial indices can serve as a proxy to illustrate the impact of supply chain disruptions. Generally speaking, when supply chains are disrupted, industrial companies can experience production delays, increased costs, and reduced revenues. These are typically reflected in their stock prices. If the disruption is significant enough, its effects can ripple across the broader industrial sector and extend across geographies.

The adjacent graph presents two decades of industrial stock price volatility across both local and international indices. Over the past decade, there has been a notable increase in the frequency and severity of supply chain disruptions.

This trend contributes to the global shift towards government policies and corporate commitments aimed at strengthening local manufacturing and supply chains resilience. One approach to reducing supply chain uncertainty is the integration of circular economy strategies. Relevant strategies can help stabilise input availability and costs, thereby improving the competitiveness of businesses, their supply chains, and the broader industrial sector.



Source: Investing.com (2025)

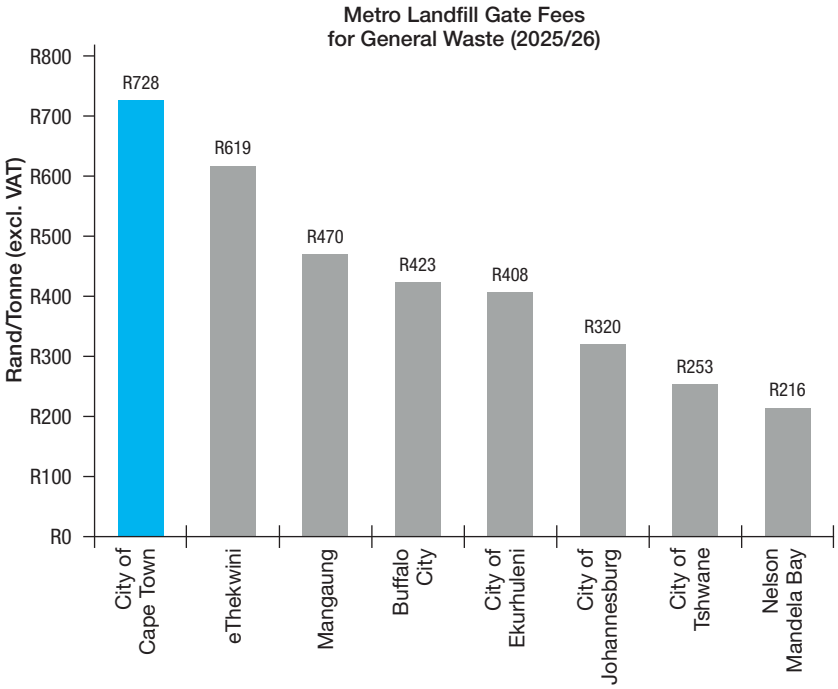
Cost of landfill disposal

Disposal of waste to landfill remains the most common method of waste management in South Africa. Waste can be disposed of at either privately owned or municipal landfills.

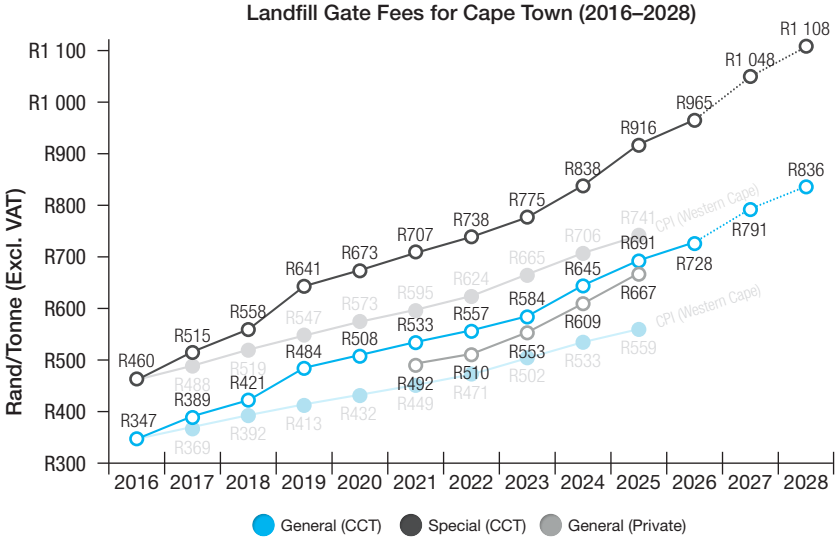
This form of disposal incurs a fee, commonly referred to as a landfill gate fee or tipping fee, which is charged per tonne. These fees are relatively low in South Africa compared to more advanced economies. Landfill disposal is the ultimate liability of business as usual linear economy, and waste generators still view landfilling as a significant overhead.

The City of Cape Town has the highest landfill gate fee for general waste compared to other South African metros. This fee has increased above inflation year-on-year and is expected to continue doing so in the foreseeable future. As landfill disposal costs rise, so too do the overheads for businesses that rely on landfilling as their end-of-life waste solution.

Companies that are able to reduce the amount of waste generated or sent to landfill, should incur lower overheads than those that rely on landfilling for waste disposal.

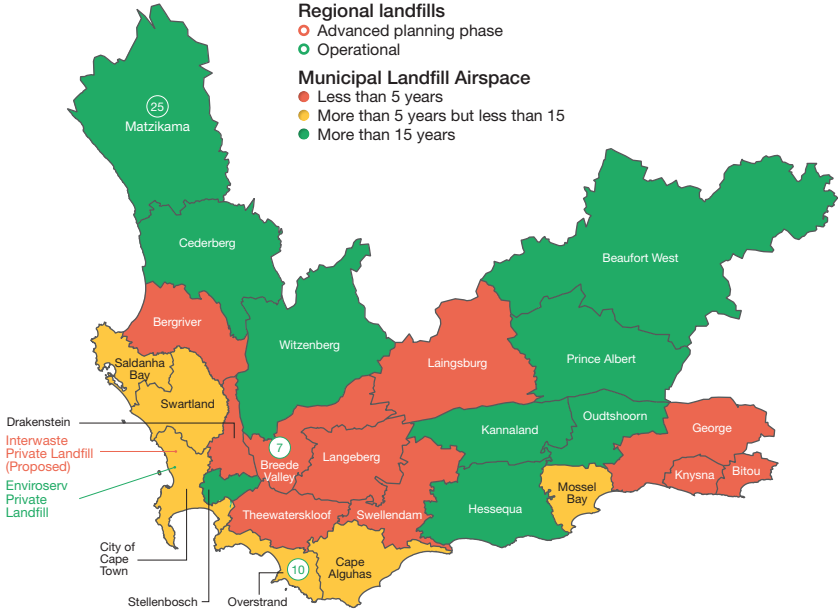


Source: Respective metropolitan tariff books for 2025/26



Source: City of Cape Town metropolitan tariff books for 2025/26; Quantec (2025), and private sector engagement

Disposal availability



Source: DEADP and municipal engagements

Old landfills are being decommissioned, and the siting of new landfills is practically challenging. The Western Cape, as with many parts of South Africa, is grappling with landfill capacity to accommodate long-term waste disposal. Some municipalities are in a more precarious situation than others, with the City of Cape Town – a major metro – expecting to run out of landfill space by 2035.

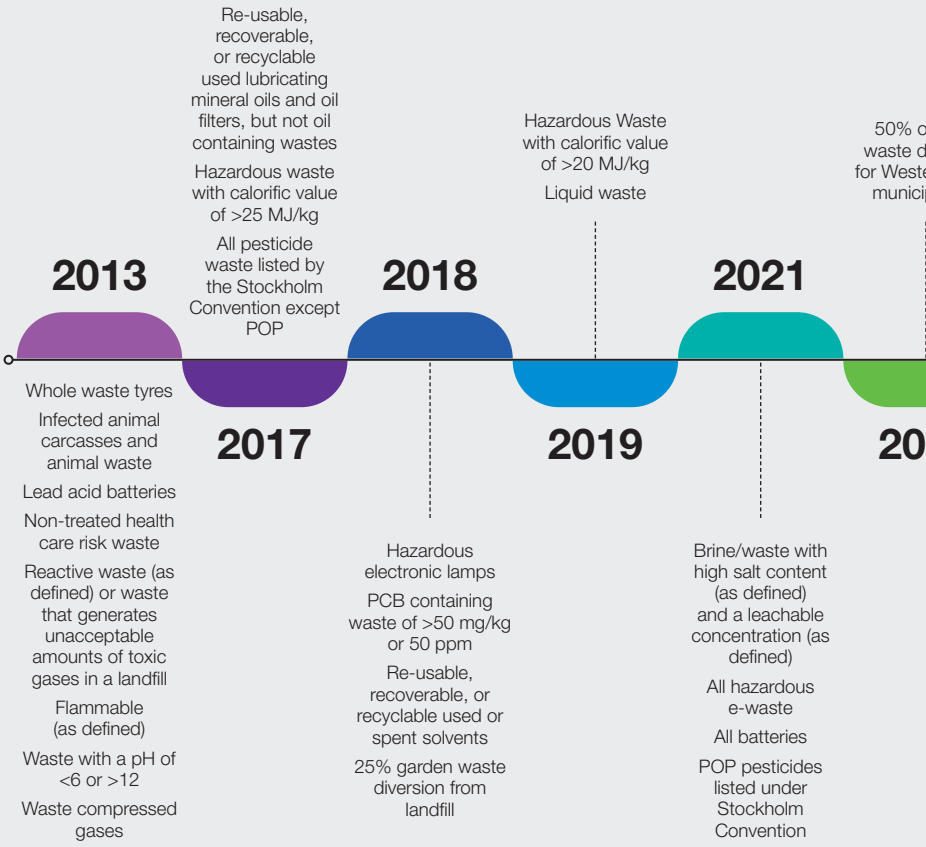
Furthermore, there are only two specialised landfills capable of handling hazardous waste, both located within the City of Cape Town and both are expected to reach capacity in the not-too-distant future.

As municipalities run out of landfill capacity or as new landfills are located further away from waste generators, waste will need to be transported over longer distances, translating into increased logistics costs and, subsequently, increased overheads for businesses.

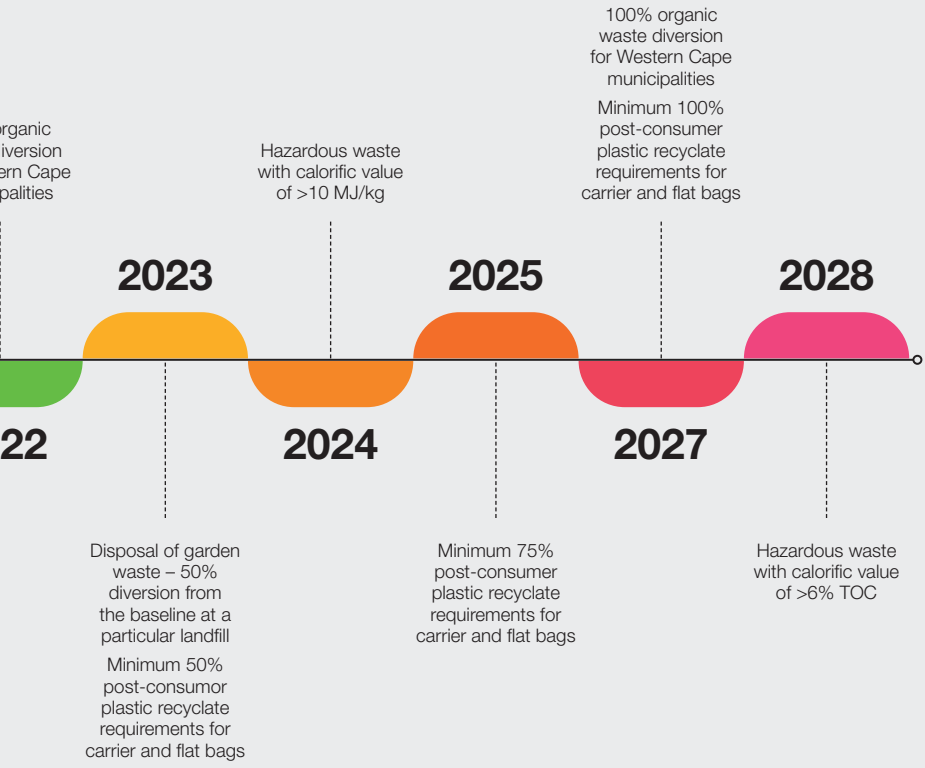
Companies that are able to reduce the amount of waste generated or sent to landfill will likely incur lower overheads than those that traditionally would rely on landfilling as a primary disposal option.

Regulatory requirements

National landfill bans: The national norms and standards for the disposal of waste to landfill (R.636 of 2013) provide directives for the disposal of waste to landfill, including a list of waste streams that cannot be disposed of at landfill. There are no restrictions expected for 2022; however, 2023 will require 50% of garden waste to be diverted from landfill. Figure 16 illustrates landfill restrictions beyond 2023. Such restrictions should increase the demand for solutions by private sector and municipalities for the waste streams.



Provincial organic waste landfill ban: As part of the Provincial Waste Management Plan, Environmental Affairs and Development Planning (DEA&DP) has set targets for organic waste diversion for the Western Cape and calls for a ban on organic waste to landfill by 2027. Businesses that generate organic waste such as restaurants, hotels, and food processing companies must submit IWMPs that reflect how they plan to reduce organic waste sent to landfill 100% by 2027.



Extended producer responsibility

Extended Producer Responsibility (EPR) is an approach where the producers of products are take on or are legislatively given significant responsibility for the end-of-life management of products and/or packaging.

Mandatory EPR: South Africa's EPR regulations came into effect in 2021. They require producers (as defined) in certain sectors to take responsibility for the end-of-life management of their products, including financing. Affected producers must register with the national Department of Forestry, Fisheries and the Environment (DFFE), develop their own EPR scheme or join EPR schemes managed by registered Producer Responsibility Organisations (PROs), meet set collection, recycling and recovery targets, and submit progress reports. The EPR regulations currently apply to the following sectors:

- Paper and packaging (GN1187 of 2020).
- Electrical and electronic equipment (GN1185 of 2020).
- Lighting (GN1186 of 2020).
- Pesticide (GN3177 of 2023).
- Lubricant oil (GN3178 of 2023).
- Portable batteries (GN3179 of 2023).

Voluntary EPR: In some cases, industry establishes their own EPR commitments, and do not have legal obligations. Such voluntary approaches allow producers to define their own goals and systems for managing products at their end-of-life. This approach is often motivated by brand reputation, sustainability commitments, or to pre-empt future regulations, such as mandatory EPR. South Africa hosts two voluntary EPR initiatives worth noting:

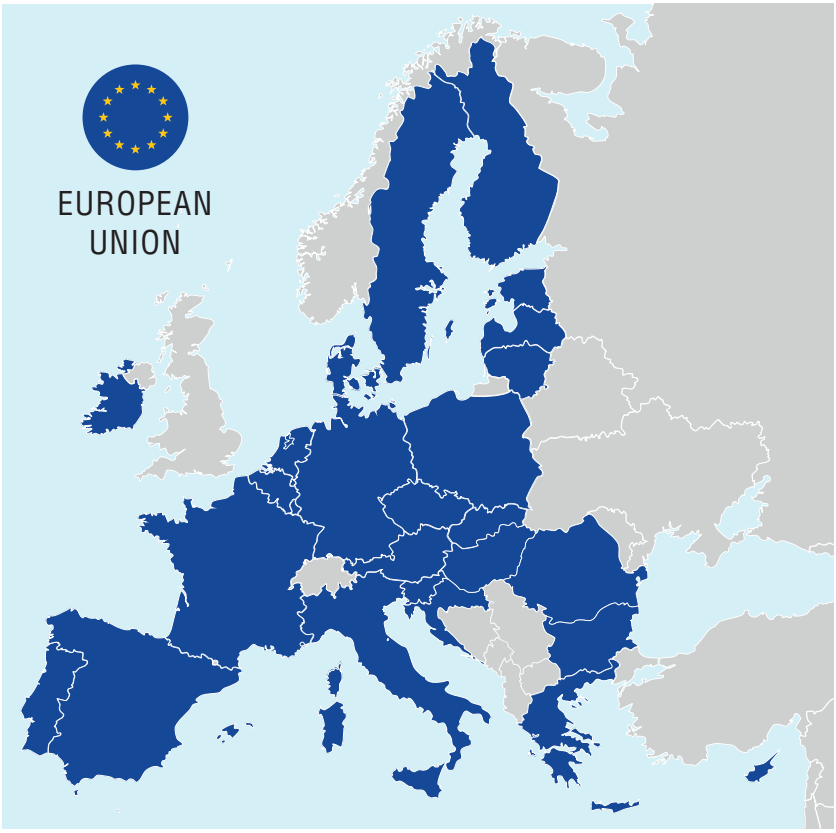
- **Plastic packaging:** The South African Plastics Pact is an industry led platform that commits and supports its core members in meeting a set of ambitious targets. The initiative is facilitated by GreenCape.
- **Organic waste:** The South African Food Loss and Waste Initiative is an industry led platform that commits and supports its members in halving food loss and waste by 2030. The initiative is facilitated by the CGCSA.

"Producer" means any person or category of persons, including a brand owner, who is engaged in the commercial manufacture, conversion, refurbishment (where applicable) or import of new or used identified products as identified.

Premium low-carbon markets

There is a trend of major markets applying regulatory trade requirements on product sustainability, carbon emissions, and circular design. Chief amongst these are the European Union, the United States of America, and the United Kingdom, all of which are major export partners for South Africa.

By adopting the appropriate circular strategies, Western Cape companies can position themselves as preferred suppliers to these strict markets that are willing to pay premium for sustainable and responsibly produced goods.



The European Green Deal is the overarching strategy guiding the EU's shift toward a sustainable economy. Several key policies and initiatives support the implementation of this vision:

- Ecodesign for Sustainable Products Regulation: Products sold in the EU must meet sustainability criteria. Manufacturers must comply with key circular design standards.
- Strategy for Sustainable and Circular Textiles: Businesses exporting textile products to the EU must adopt certain sustainable materials, eco-design, and EPR practices.
- Corporate Sustainability Due Diligence Directive: Requires EU companies to assess and manage risks in their supply chains. Suppliers will need to demonstrate environmental practices.
- Corporate Sustainability Reporting Directive: Demands comprehensive ESG reporting. Businesses linked to EU companies may be asked to provide sustainability data.
- Carbon Border Adjustment Mechanism: Certain imports into the EU will incur a carbon cost. Exporters with high carbon emission goods will face additional charges.

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CONFRONTING CLIMATE CHANGE
A SOUTH AFRICAN FRUIT & WINE INITIATIVE

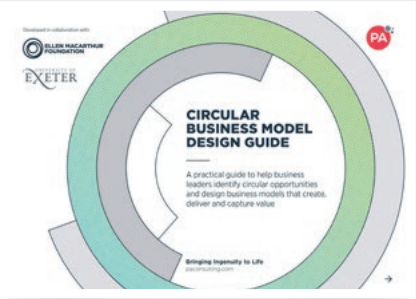
"A carbon footprinting project developed to support South African fruit and wine sectors through identifying and responding to carbon risks and opportunities"

Supporting circularity: Contacts and resources

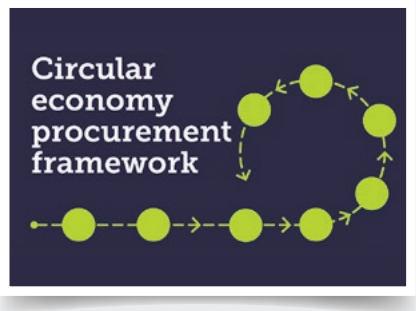
Resources/Support: Knowledge products

Frameworks/Guides:

The below guides/frameworks provide practical means to integrating circularity into the various aspects of your business.



[Circular business model design guide:](#) Helps identify circular opportunities and design business models that create, deliver, and capture value.

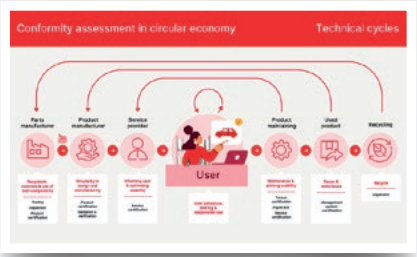


[Circular economy procurement framework:](#) Outlines key intervention points for embedding circularity into purchasing decisions and engaging suppliers in circular partnerships.

[Circulytics:](#) Supports marketers in navigating the shift to circular practices by addressing common challenges and opportunities.

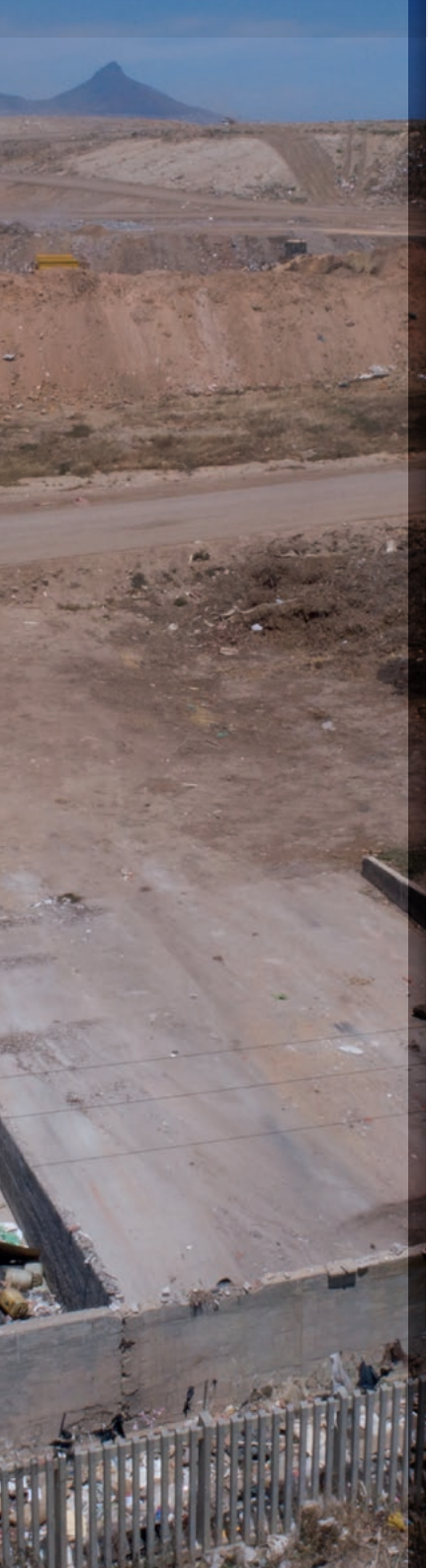
Marketing playbook for a circular economy: Helps marketing teams navigate the challenges and opportunities of shifting to a circular economy.

Building a circular supply chain: Includes nine focus areas for supply chain leaders to accelerate the transition to a circular supply chain, whilst providing case studies of success by global brands.



ISO Circular Economy standards: Includes methodologies, frameworks, and metrics for organisations transitioning to circular business models:

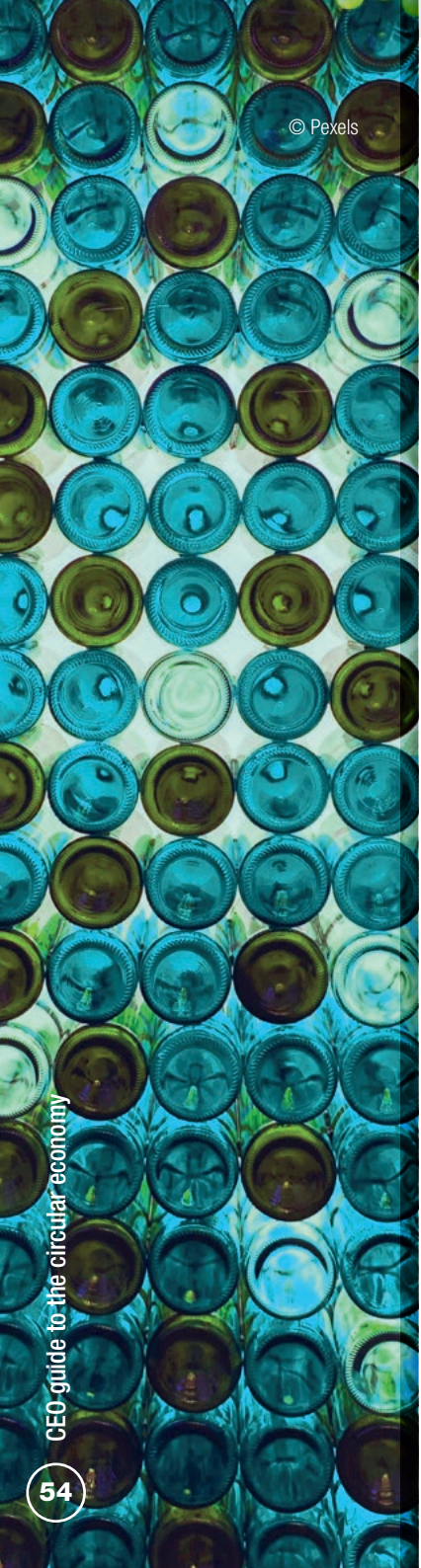
ISO 59004 (Terminology, Principles, and Implementation Guidance), ISO 59010 (Business Models and Value Networks), and ISO 59020 (Measurement and Evaluation of Circularity).



Knowledge libraries:

The below organisations/platforms offers open-source resources like case studies, tools, and frameworks developed with business partners.

- GreenCape: A non-profit supporting South Africa's green economy transition.
- EllenMcArthur Foundation: A leading UK think-tank advancing the global circular economy.
- Circle Economy: A Dutch think-tank helping cities, countries, and businesses implement practical, data-driven circular strategies.
- Metabolic: A Dutch consultancy and think-tank focused on building a sustainable, circular economy.
- Circular South Africa: A collaborative platform promoting the circular economy nationwide, serving as a hub for resources, networking, and information.
- Knowledge Hub: An open digital library sharing global circular economy knowledge, including case studies, frameworks, and tools, contributed by practitioners and organisations worldwide.



Financing circularity

The finance database

GreenCape's green economy climate finance database is the most comprehensive public climate finance database covering over 150 finance opportunities across ~125 unique stakeholders.

Easy five-step process:

STEP 1
Select the relevant source of the finance.

STEP 2
Sort sheet by sector.

STEP 3
Sort sheet by investment instrument.

STEP 4
Check alignment (size, terms, etc.).

STEP 5
Contact financier.


GreenCape
Aiding access to finance:
Green Economy Climate
Finance Database

What we see

What we don't see

Conclusion: Its about resilience

- The world is grappling with complex challenges: Climate instability, ecosystem pressures, geopolitical tensions, and isolationism.
  These challenges are set to further strain South Africa's already fragile supply chains.
- Within a landscape of uncertainty lies opportunities to innovate, adapt, and future-proof this vulnerable system.
- Central to this opportunity is the adoption of circularity principles, which offer a pathway to greater resilience in the face of mounting shocks and relentless stresses.
- Business resilience and long-term success are deeply interconnected with the systems they rely on. Embracing circularity principles is not only an environmental imperative but a strategic business advantage too.
- Building circular, regenerative value chains requires coordination, transparency, and shared goals across a diverse ecosystem of stakeholders, enabling businesses to thrive amid disruption and uncertainty.

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Thank You

Stay in touch as you navigate the next steps

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