Accelerating the Circular Economy with SAP Responsible Design and Production







April 13th, 2022

Adrian Wain
Gianluca De Mei

Speakers

Gianluca De Mei

Responsible Design and Production
Programme Lead Accenture

Adrian Wain

Circular Economy
S&C SME
Accenture

Agenda

01

The circular economy opportunity

02

Regulatory stimulus for circularity: EPR and plastic taxes

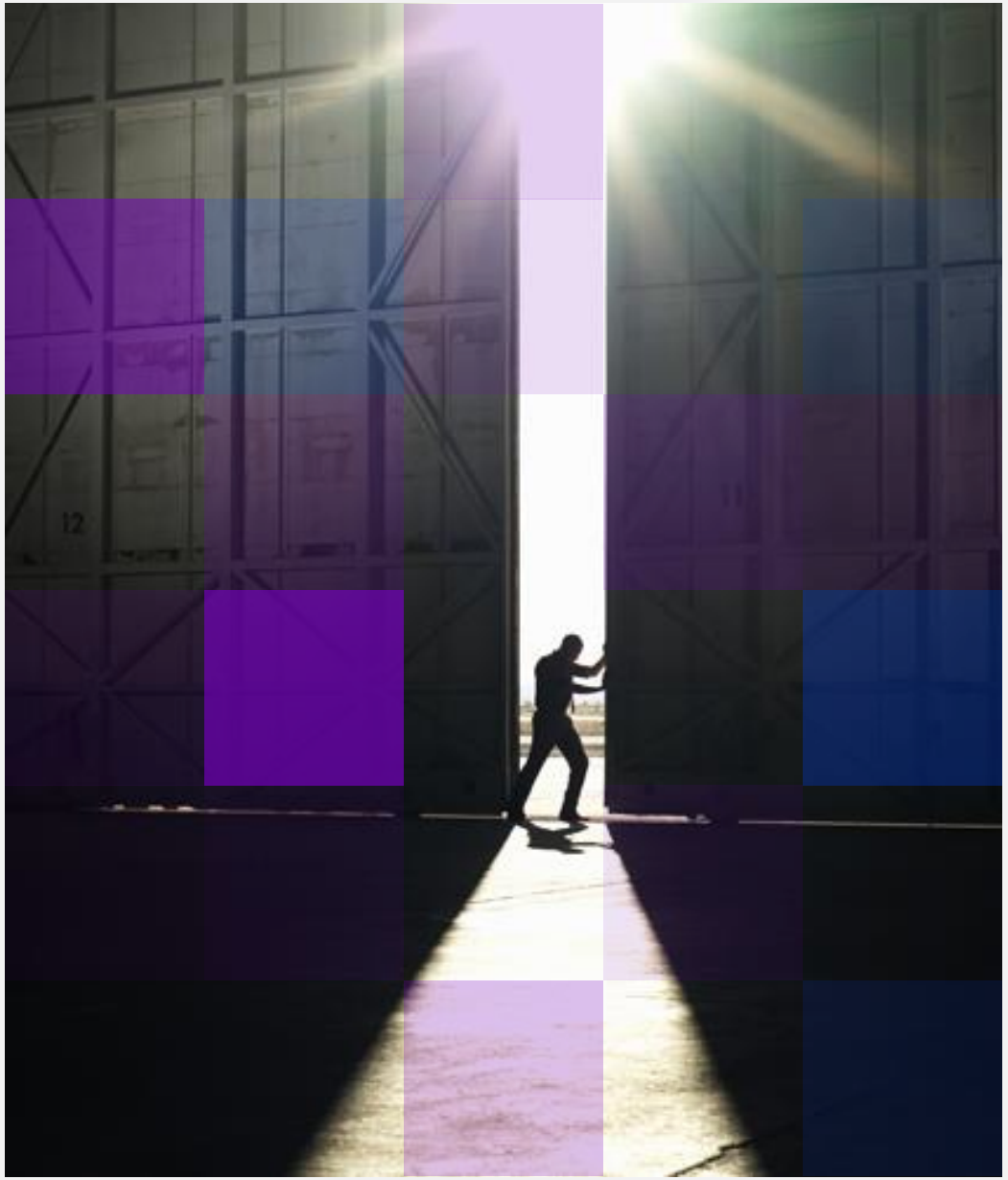
03

Responsible Design and Production as a technology enabler

04

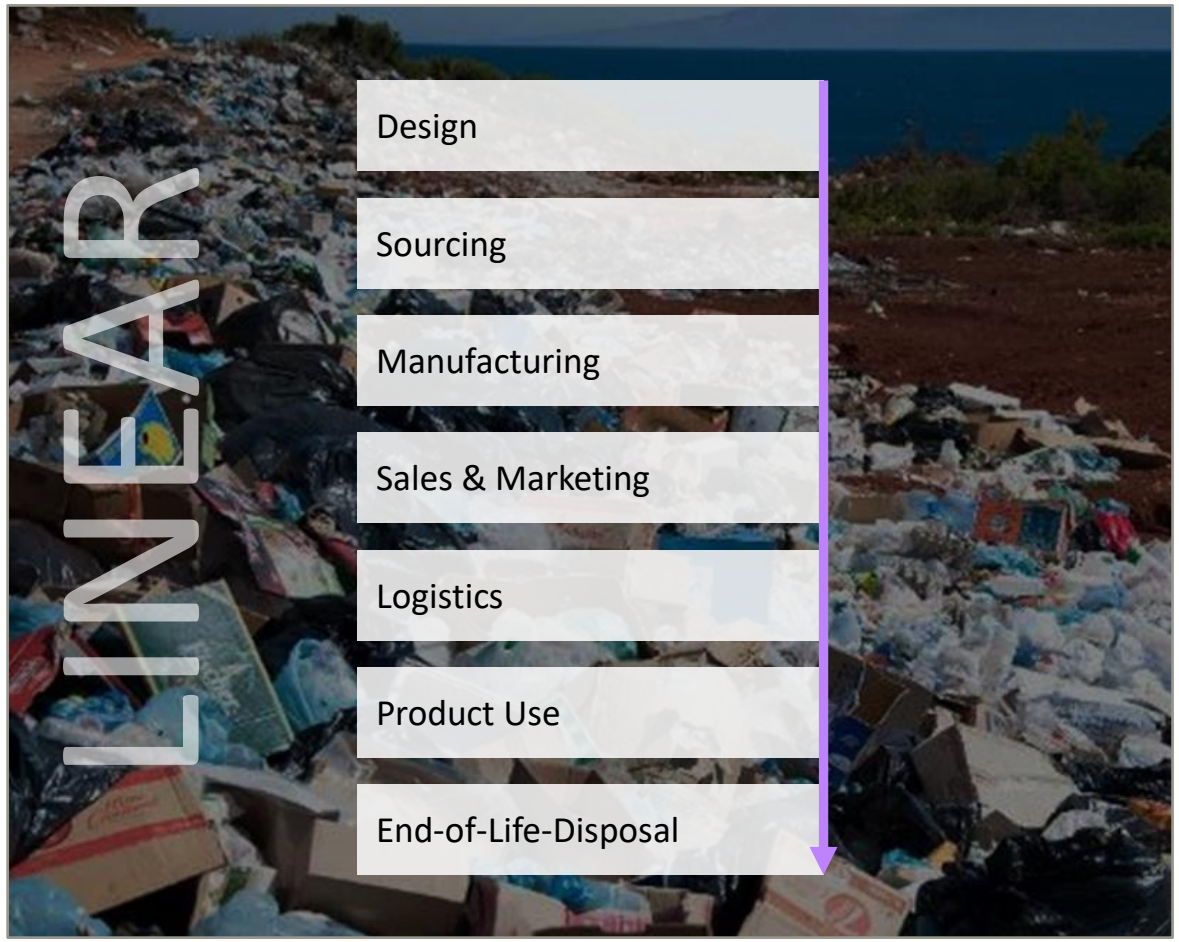
The bigger picture: A multi-faceted circular economy solution

The circular economy opportunity



We have a “take, make, waste” linear economy. It drives climate change, nature loss and inequality

‘Take, make, waste’



101
billion tonnes of raw material being extracted and used each year

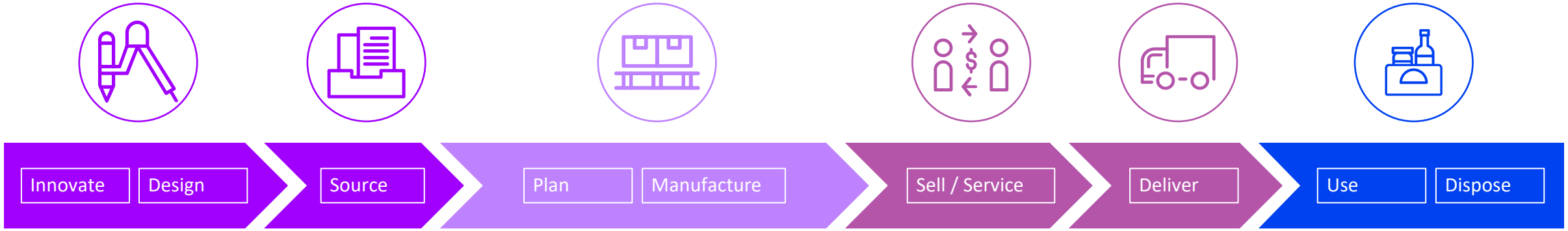
< 9%
of these 100bn tonnes is being recycled or reused

23%
of all global greenhouse gas emissions are related to the extraction and processing of raw materials

90%
of biodiversity loss due to extraction and processing of raw materials

accenture SAP

At the business level, a linear approach creates risk, cost and wasted value



Wasted resources

Use of material and energy that cannot be effectively regenerated over time, such as fossil energy and non-recyclable material

Wasted capacity

Products and assets that are not fully utilized across their useful life

Wasted lifecycles

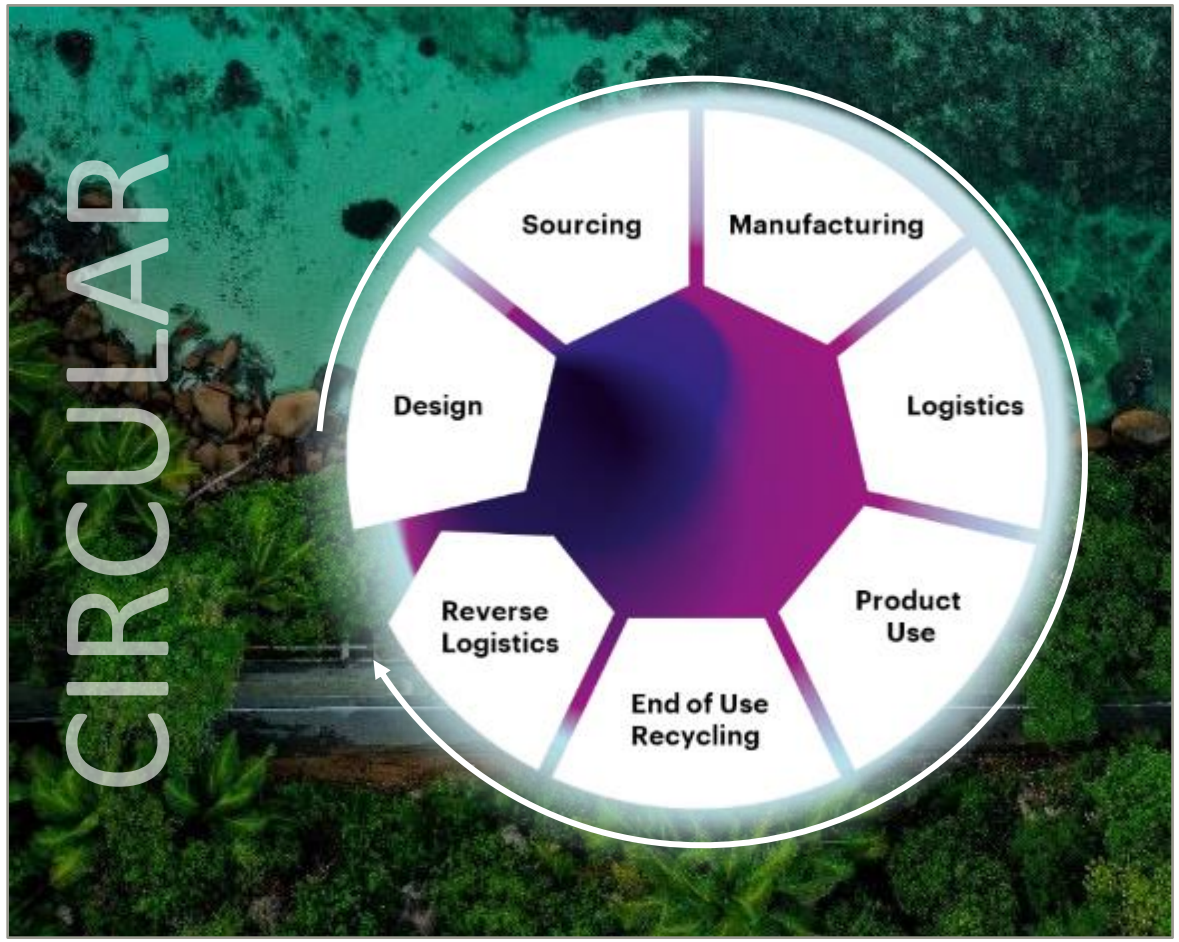
Products reaching end of life prematurely due to poor design or lack of second life options

Wasted embedded value

Components, material and energy not recovered from waste streams

The circular economy transforms value chains to create waste-less and restorative systems

‘Take, make, take, make’



Key principles of the circular economy

Eliminate

Empower business to eliminate waste

Circulate

Stimulate increase in value of materials for re-use

Regenerate

Shift from product consumption to re-use models

Source: The Circular Economy Handbook: Realizing the Circular Advantage, 2020

The circular economy requires an evolution in the way businesses operate

Circulate

6 Maintain Value & Eliminate Waste

Provide insights on downstream material flows to plan interventions and stimulate infrastructure investment

Circulate

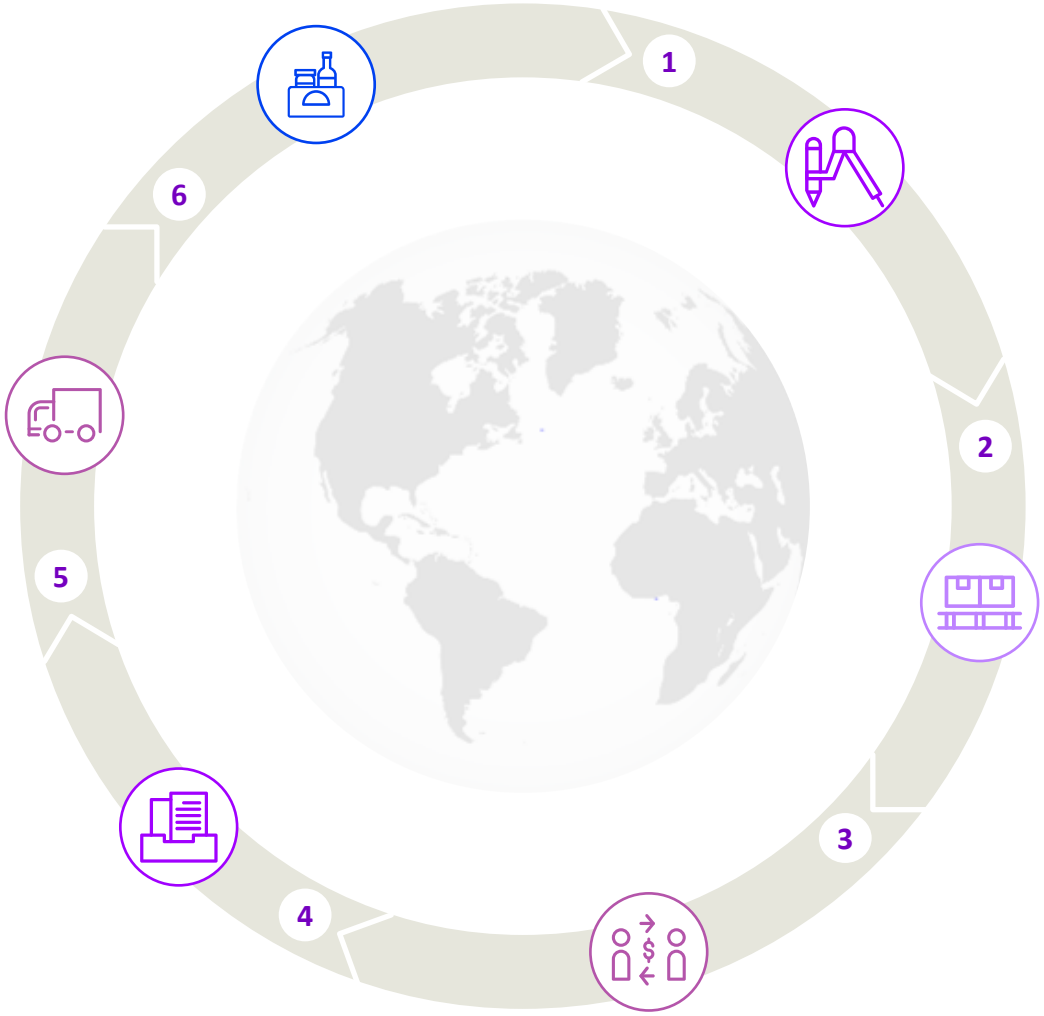
5 Manage Takeback

Digitally engage logistics providers to lower cost of return and re-use loops.

Regenerate

4 Innovate new business models

Access to modular cloud services from 27 Industry solutions to accelerate transition to sustainable business models including product-as-a-service, re-use and rental models.



Eliminate

1 Design for Circularity

Engaging designers with insights on downstream material to support product and service design process

Regenerate

2 Enable Sustainable Commerce/ReCommerce

Extending sourcing solutions to help connect to end markets for re-use and residual waste materials.

Eliminate

3 Optimize Resource Use

Providing insights on material impact to support switching in light of Extended Producer Responsibility obligations, fees and taxes.

accenture SAP

Evolving for the circular economy is driven by emerging regulatory and stakeholder pressures

Regulators & NGOs

The policy landscape is rapidly shifting and scaling fees, with packaging taxes, bans, quotas, EPR and deposit return schemes

EU

The EU's Circular Economy Action Plan and EU Plastics Strategy aims to reduce consumption footprint and double circular material use rate in the coming decade

China

China plans to introduce EPR Policy schemes by 2025 for electronics, automobiles, lead-acid batteries and packaging products

Market peers

Companies are defining circular strategies and ambitious targets

Unilever

Unilever has set a target to produce **100% recyclable, reusable or compostable packaging by 2025**

H&M

H&M has set a target to become **100% circular by 2030**

NET-A-PORTER

Net-a-Porter has committed to ensuring **100% of private label products designed for circularity by 2025**

Employees, Consumers & Citizens

Consumers and employees are increasingly pressuring businesses to increase their role in supporting circularity and sustainability

50%

of consumers would pay more for sustainable products designed to be reused or recycled

7.1%

faster growth for sustainability-marketed products

65%

of employees are more likely to work for a company with a strong environmental policy

Investors

Investors are applying stricter sustainability targets in their investment decisions

Responsible investments

US$31 trillion invested in sustainability funds X10 increase in number of private market funds for circular economy from 2016-2020

400%

2020's US ESG ETFs investments **have grown more than 400%** compared to the prior year's investments

accenture SAP

Regulatory stimulus for circularity: EPR and plastic taxes

Circular economy legislation is ramping up across the globe, with the EU setting a high bar

Canada

Overview:

Introducing policy at national and regional level in encouraging zero waste practices

Legislation:

Canada's Extended Producer Responsibility (EPR) and product stewardship programs, Ontario's Resource Recovery and Circular Economy Act

- Manages products at their end-of-life
- Encompasses a system of resource recovery and waste reduction
- Allocates responsibility to provincial/territorial or municipal governments

USA

Overview:

Establishing state-led schemes for funding waste management, to encourage zero waste practices

Legislation:

USA's Extended Producer Responsibility (EPR) in a selection of states

- A start on the structural approach to the waste problem, though the approach differentiates per state/country

South America

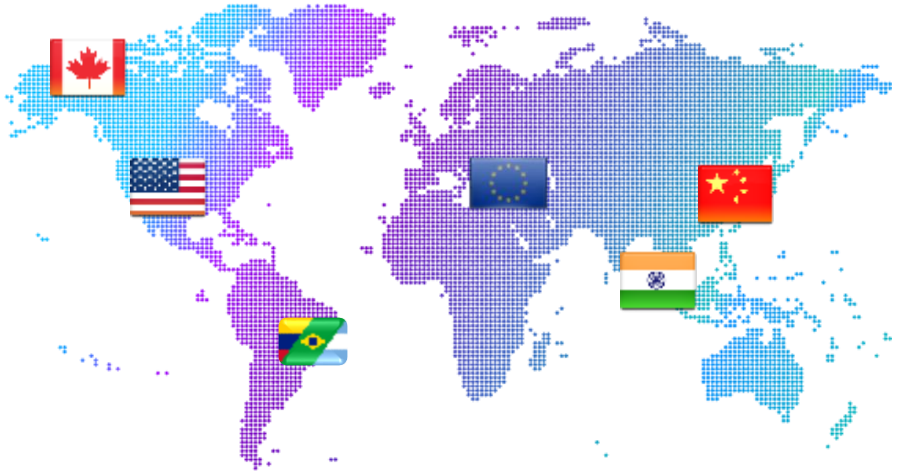
Overview:

Creating a supranational policy framework to drive the circular economy in the Americas, since 2017

Initiative:

Circular Economy Forum of the Americas

- Inform about the opportunities presented by circular economy – and how to be integrated in policy



Europe

Overview:

Leading through shared multinational circular initiatives and goals, implemented by EU Member States in line with national priorities

Legislation:

Circular Economy Action Plan (as part of European Green Deal), revised Waste Directive (incl. EPR), Plastics Strategy, Chemical Strategy, EU Sustainable Product Initiative, Eco Design Directive, Green Consumption Pledge

- An integrated product policy framework implementing measures along the lifecycle of products and to tackle resource intensive sectors

China

Overview:

Implementing strong national waste and resource efficiency laws, spurred by fear over plastics, electronic waste and air pollution, with a lack of waste infrastructure and enforcement capacity as the main barrier to implementation

Legislation:

China's 14th 5 year plan contains the Development Plan for the Circular Economy, which contains actions around recycling, remanufacturing, green product design, and renewable resources, including plans to:

- Produce 20mtons of recycled non-ferrous metals
- Increase resource productivity by 20% compared to 2020 levels
- Increase the output value of the resource recycling industry to RMB 5 trillion (US$773 billion)

India

Overview:

Dealing with commonly faced environmental challenges, in context of post covid19 economic recovery

Initiative:

EU-India Joint Declaration on Resource Efficiency and Circular Economy

- Ensures the design, planning, implementation, promotion and dissemination of policies, strategies, technologies, business solutions and financing mechanisms on resource efficiency and circular economy

Source: The Circular Economy Handbook: Realizing the Circular Advantage, 2020

Driving action on plastics and packaging has emerged as an early Circular Economy priority for regulators

Society is pushing for circular action

44%

of consumers feel retailers need to take action on reducing the amount of plastic[1]

40%

of consumers are willing to pay more for recyclable packaging[1]

Governments are responding with regulation

170

nations have pledged to "significantly reduce" use of plastics by 2030[2]

6

types of single-use **plastics will be banned** in Canada in 2021[2]

As a result, Extended Producer Responsibility (EPR) fees and plastic taxes are becoming more common

In the EU, **25 countries** have EPR in place for packaging waste[3]

Over **400 EPR schemes** now believed to be in use globally[3]

Source: (1) Kantar, GfK, EuroPanel research, (2) WEF 2020, (3) Plastics Policy Playbook

Extended Producer Responsibility (EPR) drives companies to transition to a circular economy

What is EPR?

- A policy where manufactures pay fees based on their packaging or plastic volume in a market
  (e.g. fee for 1 ton of plastic)
- Fees typically fund waste management, collection & recycling activities

Where is EPR in place?

- Most EPR models exist at a national level in developed countries
- Over 400 EPR models exist across various product categories, with over 65 focused on packaging

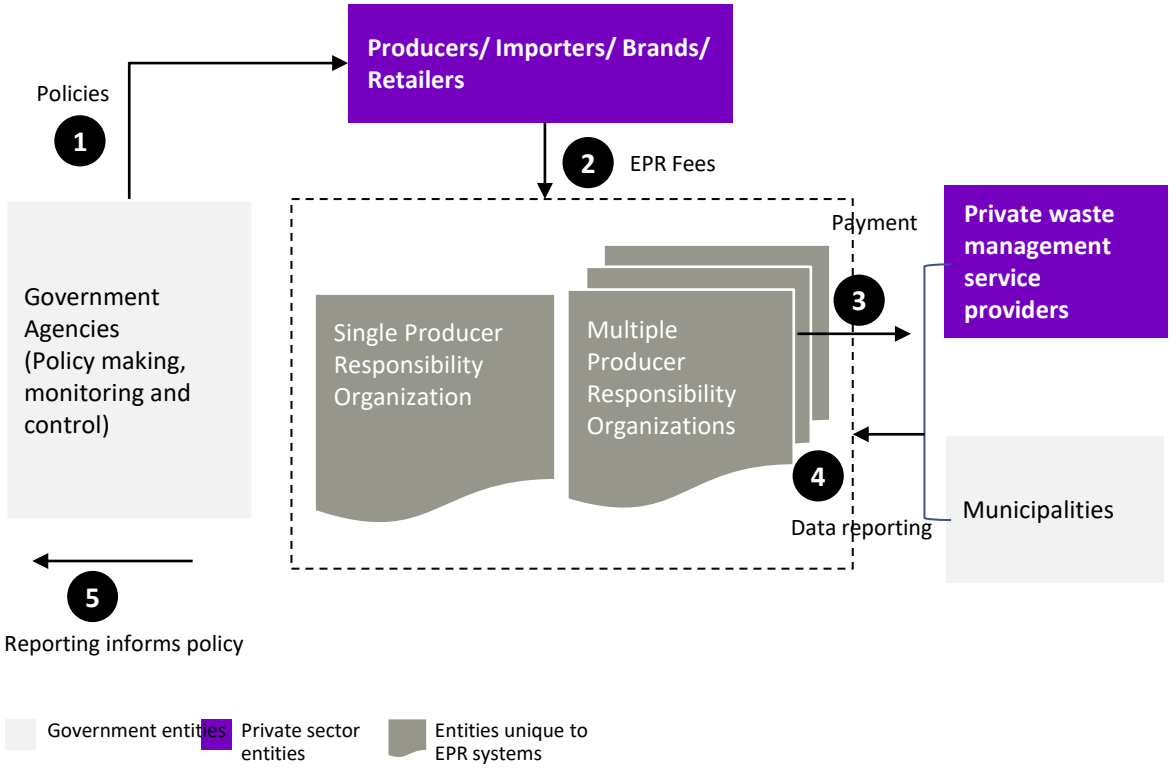
How does EPR work?

There is no single EPR model, but there are some commonalities across EPR schemes:

1. Governments set EPR policies and register companies
2. Companies pay fees the PROs per volume of plastic
3. PROs contract waste management to collect and recycle
4. Waste management and municipalities report data
5. Governments use the data to manage policies and fees

Refer to appendix for detailed EPR overview

Extended Producer Responsibility



Source: Plastics Policy Playbook

Note: EPR schemes vary by country, however this visual represents a typical EPR scheme in terms of the stakeholders involved and the process flow

The regulatory and EPR landscape is increasingly complex – manual management creates risks

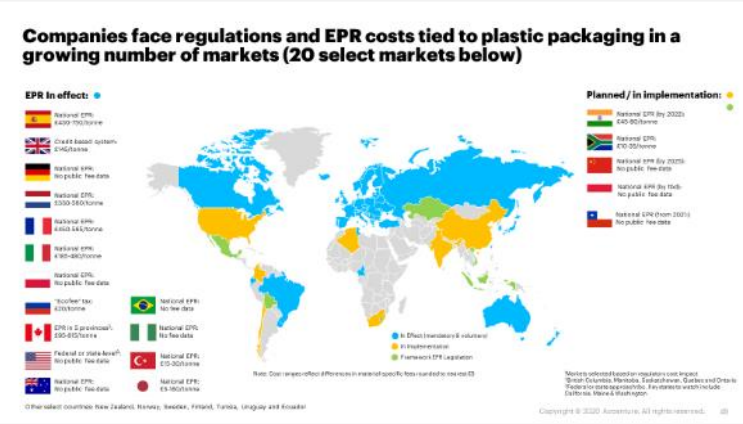
Companies face regulations and EPR costs tied to plastic packaging in a growing number of markets

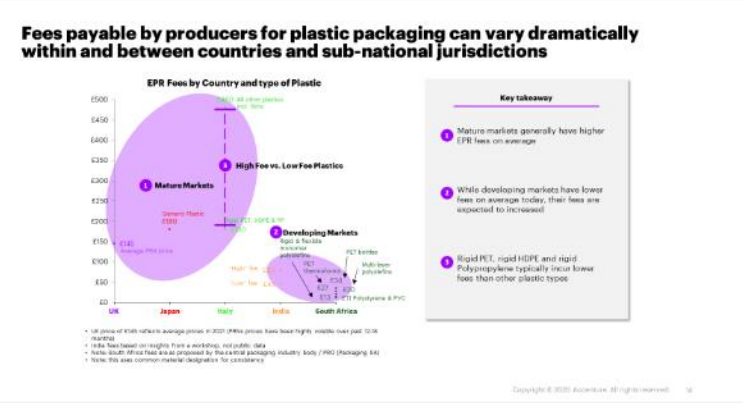
New packaging regulations are emerging, and existing regulations are increasing in several markets

Fees for producers' plastic packaging can vary dramatically within and between countries

Packaging fees vary widely based on the type of plastic material used (Rigid PET, HDPE and Polypropylene typically incur lower fees than other plastics)

Refer to appendix for detailed country overview





Current systems aren't able to manage the complexity

Lack of dynamic tracking and insights for EPR fees and tax implications by market

Manual data collection or estimation of material volumes by market

Static redesign simulations that cannot account for supplier, process, or sustainability interdependencies

SAP RDP solution as a technology enabler

SAP and Accenture are developing a holistic Responsible Design and Production solution

SAP's Responsible Design and Production solution, in partnership with Accenture will help drive circular and sustainable design of products & packaging and ensure organisations comply with the growing landscape of EPR regulations, thereby minimising their financial and reputational risks, and associated costs

What does it look like?

Lab Preview

Features and value today?

Features

- **Collation of Data** on production, recipes, batches, logistics, materials used and sales
- **Check** volumes of types of materials, assess impact KPI's
- **Measure and manage** EPR reporting forms, fees, payments and PRO's
- **Reporting** for financial reports, sustainability reports, investors and audits

Value

- **Direct Cost Savings:** reduce time, people, costs and external agency fees involved in all aspects of EPR

Features and value moving forward

Features

- **Redesign** products and packaging to be more sustainable
- **Detailed design screens** for Product Managers, Product Designers and Packaging Managers.
- **Assess impact** of changes in design using new materials

Value

- **Revenue growth:** Increase sales with more sustainable offerings
- **Indirect Risk Mitigation:** Avoid miss-steps in sustainable innovation by understanding trade-offs
- **Brand value:** Increase recognition of brand for sustainable innovation

The solution is cloud based and has extensive technical functionality

EPR cloud based Software as a Service

- **SAP Cloud Strategy and SAP Business Technology Platform** as drivers for agility and innovation
- **Complementing processes in ERP** with solutions and extended capabilities with no or low impact on core ERP systems
- Designed for **openness, security, and integration**
- **ECC and S4** Compatible

Standard EPR declaration reports

- Combined **regulatory, tax and voluntary commitments** into one solution
- **Continuous monitoring of** extended producer responsibility **(EPR) regulations and plastic taxes**
- **Insights** on material level fees and taxes made available to **support design scenario modelling** in SAP applications
- **Producers may adjust specific parameters** (e.g., prices per individual agreements with PRO) where applicable

Integration

- **Native integration** into SAP solutions enabling fast time to value including…
- **SAP PLM Recipe Development**: Relevant details from packaging specifications
- **SAP ERP:** Actual volume and destination of finished goods (products) / volume and origin of packaging components

Interfaces for packaging data from 3rd parties

- Staging area enabling the **"import" of packaging from non-SAP sources** (e.g., packaging data from co-packers/co-manufacturers, supplier of packaging material)
- Intelligent processing to ensure **quality of EPR relevant data**

Producer-specific declarations

- Usage of extensive **analytical capabilities** of SAP Analytics Cloud
- Enable access to EPR data for **preparing the declarations in tools outside the EPR platform**

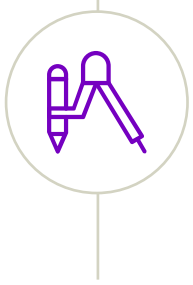
The solution is useful to a wide range of customer stakeholders

"Are we on track for our plastic commitments?"

Sustainability Managers

- Understand performance and areas of focus against voluntary commitments and corporate goals.

"What's the impact of using PET plastics in EMEA?"



Brand Managers and Packaging Engineers

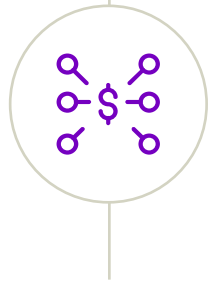
- Optimize product and packaging design based on downstream impact of material choices using analysis and scenario modelling.
- Minimize cost impact of global obligations.

"What is our global EPR exposure?"

Compliance/ EPR Managers

- Accurately calculate and pay Extended Producer Responsibility obligations.
- Data gathering to provide insights into latest EPR schemes and plastic taxes including operational and financial implications.

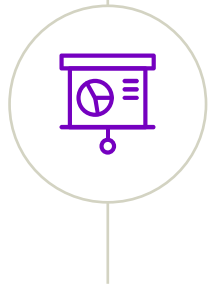
"What's the impact of the Italy plastic tax?"



Tax Managers

- Accurately calculate and pay material tax requirements.

"How do I manage this complex and growing data requirement?"



Data and Reporting Manager

- Automate collection and preparation of key data inputs needed to serve business stakeholders.

The bigger picture: A multi-faceted circular economy solution

SAP & Accenture provide a differentiated solution for managing EPR regulation across global markets

Global Scope, Robust Features, & EPR focused

SAP is a leader in enabling the **transition to a low carbon and circular economy**

Leading back-end integration partner with **77% of the world's transactions**

Only large EPR/platform player with a solution to holistically address these packaging and regulatory challenges

A solution being **designed collaboratively** with some of the **world's biggest CPG players**

The EPR module **turns large data-sets** into **actionable insight** that can be **tailored by each global market**

Through robust regulation tracking, data capture, simulations, and reporting that can **measurably decrease fees and costs**

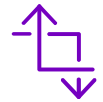
Underpinned by **Accenture's market leading sustainability, circular strategy and delivery services,** including regulatory insight

Refer to appendix for overview of Accenture circular strategy services

SAP and Accenture's joint solution extends beyond regulatory compliance to transformation

How to manage exposure to Circular Economy regulation?

How to optimize products for the Circular Economy?



How to transform business for the Circular Economy

SAP Capabilities	Accenture Capabilities
• Combined regulatory, tax and voluntary commitment tracking in one solution • Continuous monitoring of international EPR regulations and plastic taxes • Insights on material level fees and taxes made available to support scenario modelling	• Redesign products for the circular economy through design guides and tools • Identify circular supplies through connection to material marketplaces • Improve transparency of product circular performance through data	• Establish responsible, circular value chains through embedding sustainability into every stage • Develop sustainable brand and customer experiences through deep insights and technology • Transform the way people work through leadership, talent & organizational mechanisms
Meet emerging circular compliance & regulations	**Facilitate the design of circular products and packaging**	**Transform business models and value chains for circularity**

accenture SAP

Together, SAP and Accenture can design and deliver holistic sustainability transformations powered by enterprise technology

01

SDG Ambition-driven business transformation
Elevating sustainability and social responsibility on par with business metrics

02

Climate Action
Develop and operationalise business decarbonisation strategies across direct & indirect GHGs.

03

Circular Economy
Develop and operationalise resource efficiency & business model innovation initiatives

04

Holistic ESG Reporting
Streamline sustainability reporting across multiple frameworks

05

SAP.iO Accelerator
incubating new technology solutions for sustainability and building startup innovation networks

accenture SAP

Questions and Answers

Need to find out more?

Initiative's presentation
Brochures, …

Communications
Blog, news release, …

Learning resources
Webinar, training sessions, …

Contacts

Stephen Jamieson
Global Head of Circular Economy Solutions
stephen.jamieson@sap.com

Eros Cipani
SAP Sustainability
Global GTM Lead
e.cipani@accenture.com

Wesley Spindler
Circular Economy
GTM S&C Lead
wesley.spindler@accenture.com

Natasha Pergl
Global Circular Economy Lead, CPG SAP
natasha.pergl@sap.com

Susmita Das
Circular Economy
SAP Program Lead
susmita.das@sap.com

Gianluca De Mei
Circular Economy
ACN Program Lead
gianluca.de.mei@accenture.com