



PUTTING CIRCULAR
ECONOMY CONCEPTS
INTO ACTION



MEASURING SUCCESS

Wednesday, 20 January, 2021
11:30 a.m. – 1 p.m.



BACKGROUND

- Established in 1978 as Recycling Council of Ontario with a focus on solid waste
- Instrumental in facilitating partnership between government and municipalities to create the Blue Box program
- Unique membership: spans entire value and supply chains
 - government, industry producers, sellers, collectors, processors, educators, academia, researchers
- Policy and Advocacy | Resources and Services | Programs and Pilots



PLASTIC
ACTION
CENTRE



Canada's Commitment to Rethink Plastics



BACKGROUND



- Launch: June 2020
- Focus: acceleration of Canada's circular economy
- Expanded lens beyond end of life management
- Support innovation in all aspects of production and consumption
- Partnerships, piloting, practice
- National mandate

PUTTING CIRCULAR
ECONOMY CONCEPTS
INTO ACTION



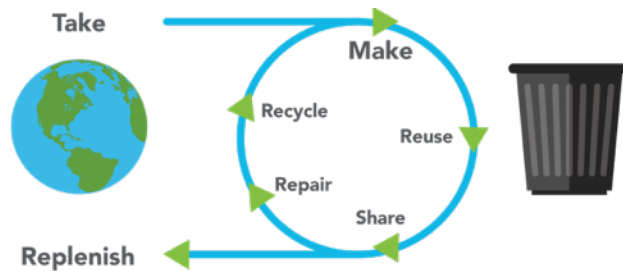
MODELS OF CONSUMPTION

LINEAR ECONOMY



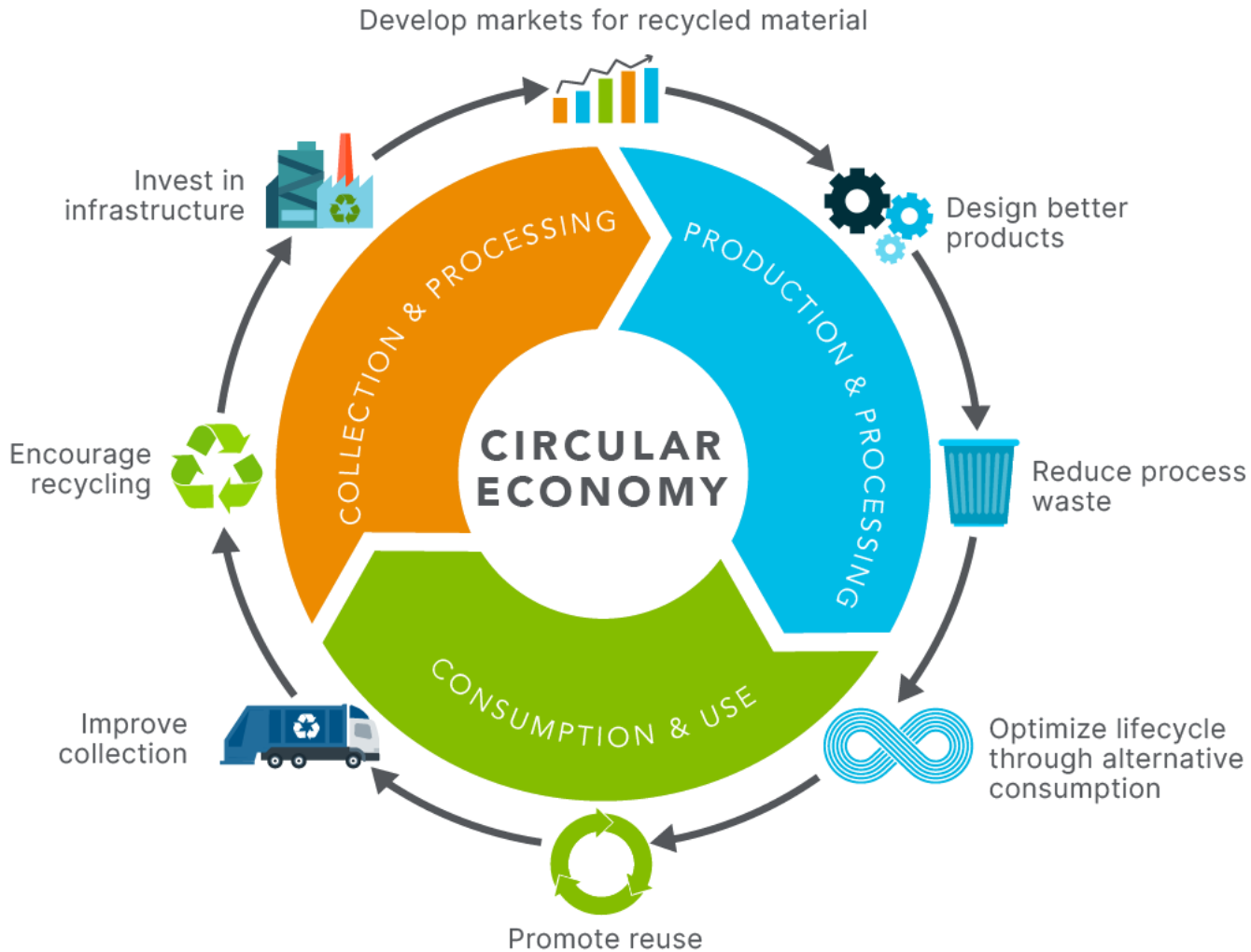
Sustainability improved by focusing efficiency within “take-make-waste”- model: **maximizing economic value with a minimized environmental impact.**

CIRCULAR ECONOMY

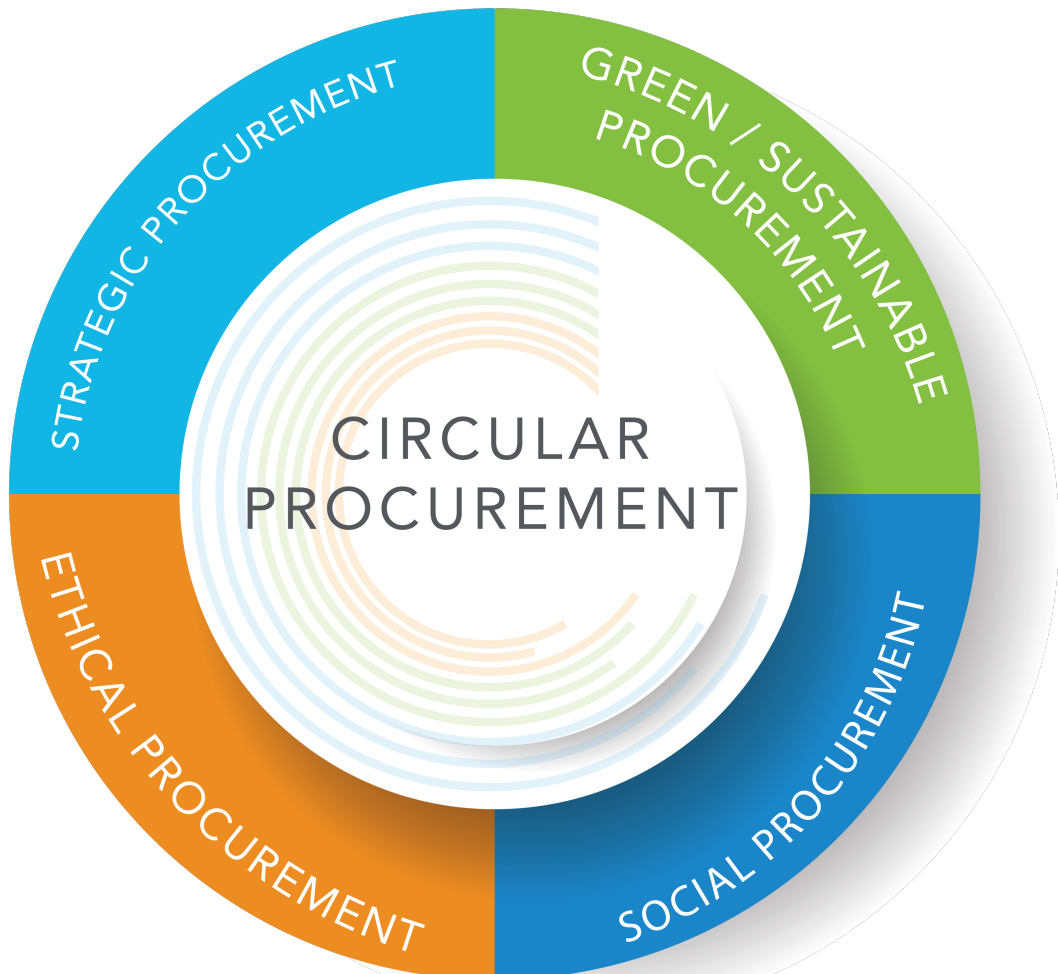


Restorative and **regenerative** by design, and aims to keep products, components, and materials at their **highest utility and value at all times.**





TYPES OF PROCUREMENT



FIVE BUSINESS MODELS OF CIRCULARITY

Circular Supplies



Supply fully renewable, recyclable, or biodegradable resource inputs to support circular production

Resource Recovery



Eliminate material leakage and maximize economic value of product return flows

Product Life Extension



Extend the current lifecycle of a product: repairability, upgrading, reselling

Sharing Platforms



Stimulating collaboration among product users

Products As Service



Products are used by one or many customers through lease or pay-for-use arrangements





WEBINAR

FEATURED GUESTS

BUYING CHANGE
2 NOVEMBER 2020



SELLING CHANGE
16 NOVEMBER 2020



IDENTIFYING OPPORTUNITY
30 NOVEMBER 2020

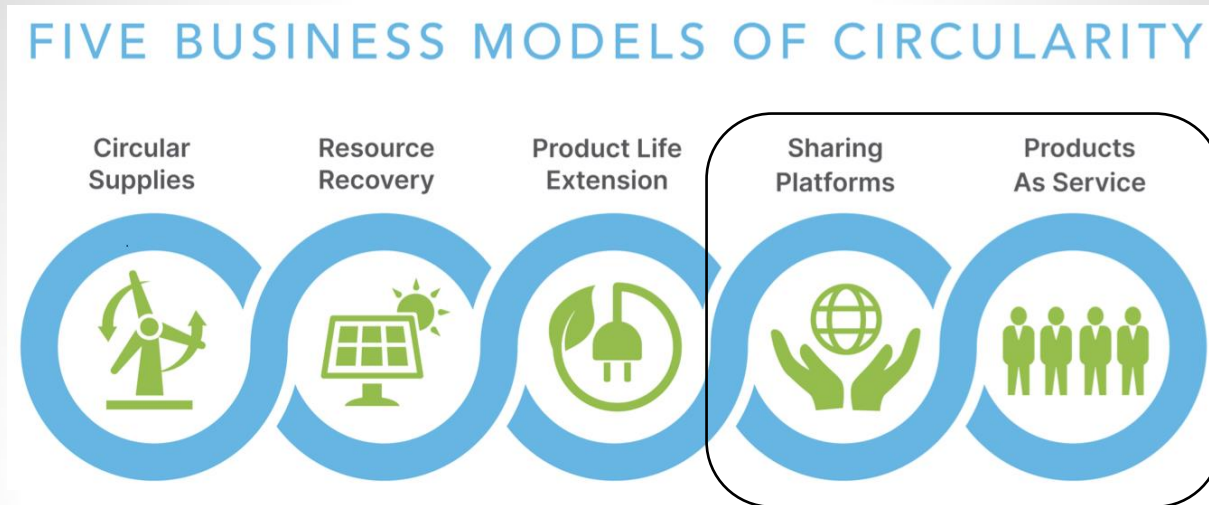


CIRCULAR PROCUREMENT: DEFINING VALUE AND MEASURING SUCCESS



bobwillard@sustainabilityadvantage.com

PRE-PROCUREMENT QUESTIONS



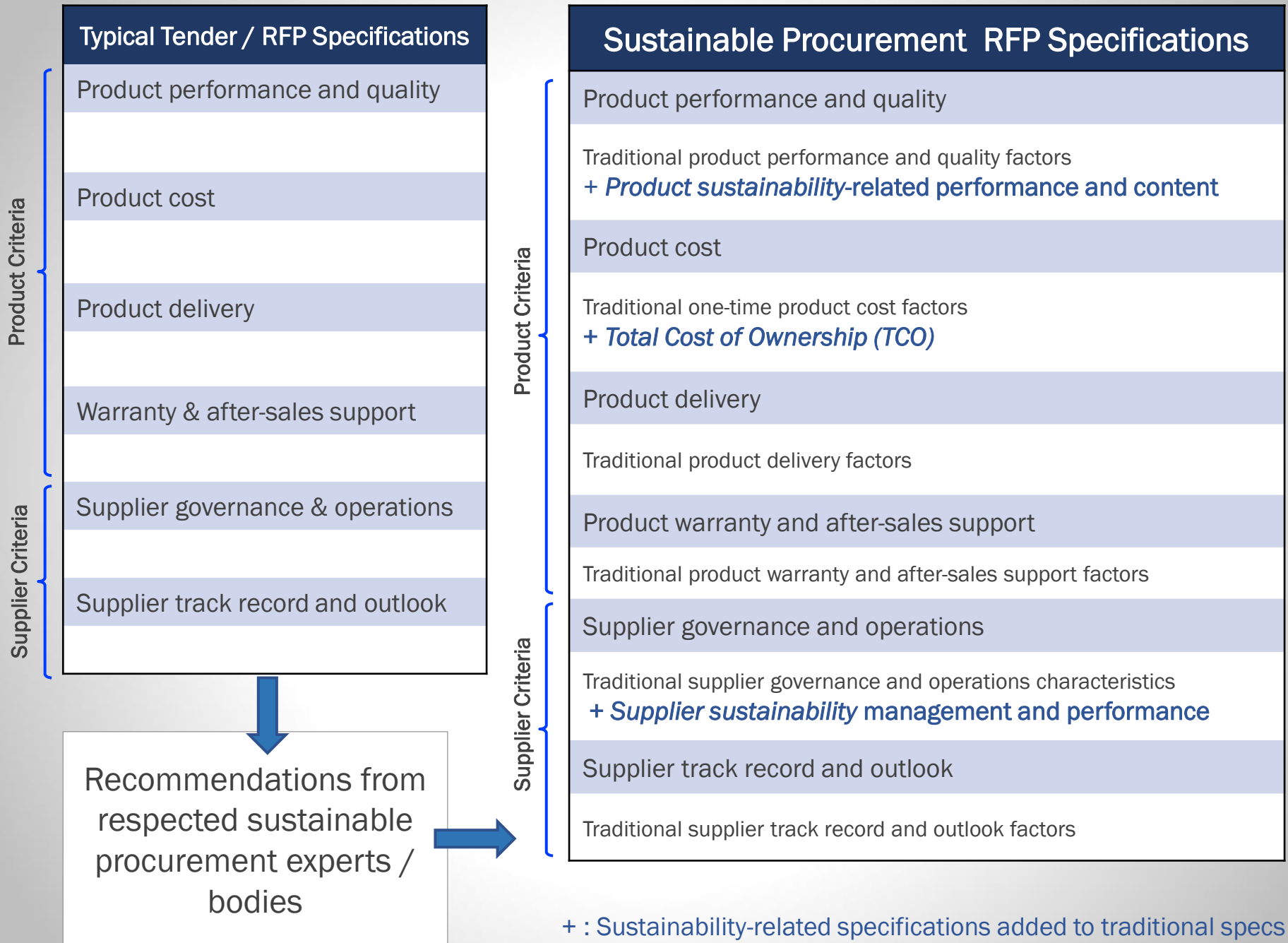
- **Is the *product function* really still required?**
E.g., Desktop printers → online documents and files
- **Could the product be *collaboratively shared*?**
E.g., Desktop printers → convenient, shared, secure printers
- **Is *Product-as-a-Service (PaaS)* a viable option?**
E.g., Managed print services for company printer fleet
- **Could the product be provided by a *pay-for-use service*?**
E.g. Occasional specialized print requirements can be jobbed out
- **Are other “access over ownership” options viable?**
E.g., Leasing, renting, borrowing, bartering

SUSTAINABILITY PROCUREMENT TOOLKIT

Three free, open-source tools to help *implement* an SP system.



- **RFP Specifications Template** – outlines traditional and new sustainability product and supplier specifications / criteria
- **Total Cost of Ownership (TCO) Tool** – calculates all direct and indirect costs and benefits of using the product during the evaluation timeframe
- **Bid Evaluation Tool** – uses a CFO-recommended multi-criteria analysis approach to evaluate supplier bids



SAMPLE *PRODUCT* CRITERIA

Product *performance* criteria

- Energy efficiency ... ecolabels
- Water efficiency
- Waste / emissions
- GHG emissions generated
- Supplies efficiency
- Impact on user / worker health and safety
- Design for accessibility, data security, privacy
- Other ...?



Product *content* criteria

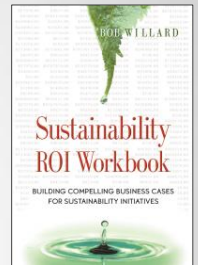
- Circular economy design (reuse, repair, upgrades, take-back, disassembly)
- Circular-economy content (recycled, remanufactured, renewable, biodegradable)
- Imbedded carbon, energy, water
- Harmful materials (toxic materials, harmful chemicals)
- Traceability / chain of custody certifications
- Packaging (materials, minimization, reusability, recyclability)
- Other ...?

TOTAL COST OF OWNERSHIP (TCO)

It helps determine if initially paying more for a better, more sustainable product from more sustainable suppliers is a smart business decision.

Definition

Estimate of all **ongoing** direct and indirect costs and benefits associated with the purchase of supplies (materials, goods, equipment, contracted services)



Based on ...

Benefits

- Making lease vs. buy decisions.
- Identifying "hidden" costs of ownership.
- Finding potential long term costs before they become problems.
- Budgeting & financial planning.
- Managing assets – depreciation schedules.
- Determining service cost / chargebacks to user departments.

Total Cost of Ownership (TCO)	Year 1	Year 2	Year 3	Year 4	Year 5	...	Year x
One-time acquisition and start-up costs							
<i>All prices, taxes, fees, start-up costs, etc., – Any incentives for sustainable products</i>	\$						
Ongoing operating costs							
Utilities, fees, supplies, floor space insurance, personnel, maintenance, etc.	\$	\$	\$	\$	\$	\$	\$
On-going revenue-related impacts / value							
From improved reputation / brand value	\$	\$	\$	\$	\$	\$	\$
Ongoing employee-related impacts / value							
Hiring and attrition savings Productivity gains	\$	\$	\$	\$	\$	\$	\$
Cost of disposal at end-of-life							
Cost of disposition – Trade-in value							\$
Annual cash flows	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
NPV of annual cash flows	\$\$\$\$\$						
Balance sheet impact	\$\$\$\$\$						
Avoided costs of NOT procuring the product	\$\$\$\$\$						

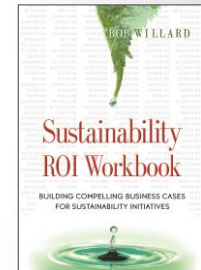
		Sustainable Procurement Bid Evaluation Tool		Score (1-5)	Weighted Score
Product Criteria	% Weight	Product performance and quality			
	% Wght	Traditional product performance and quality factors + Product sustainability-related performance and content		Score	Weighted score
		Product cost			
	% Wght	Traditional one-time product cost factors + Total cost of ownership (TCO) + Acquisition alignment with Purpose, Values, Strategies		Score	Weighted score
		Product delivery			
	% Wght	Traditional product delivery factors		Score	Weighted score
		Product warranty and after-sales support			
	% Wght	Traditional product warranty and after-sales support factors		Score	Weighted score
Supplier Criteria		Supplier governance and operations			
	% Wght	Traditional supplier governance and operations characteristics + Supplier sustainability management and performance		Score	Weighted score
		Supplier track record and outlook			
	% Wght	Traditional supplier track record and outlook factors		Score	Weighted score
	100%	<i>“Best business deal/value” has the highest weighted score</i>			Total

SUSTAINABLE PROCUREMENT TOOLS

- ✓ **Sustainable Procurement Toolkit**
Tools to help *implement* sustainable procurement



- **Sustainability ROI Workbook**
A CFO-friendly way to *justify* sustainable procurement



- **Basic Sustainability Assessment Tool**
Supplier *sustainability self-assessment* tool



CIRCULAR PROCUREMENT: DEFINING VALUE AND MEASURING SUCCESS



bobwillard@sustainabilityadvantage.com

Defining value and measuring succes

Circular procurement webinar #4

January 20th 2021



powered by:



vlaanderen-circulair.be





Circular Flanders





The Government of
Flanders selected
7 transition priorities:



Circular Economy



Circular procurement



- Create a positive impact with spend volume
- Demand is key

LINEAR ECONOMY



RECYCLING ECONOMY



CIRCULAR ECONOMY



APPROACH

6 thematic agendas

Public-private collaborations with specific dynamics, targets, lead partners and actions



circular construction



chemistry & plastics



water loops



bioeconomy



food chain



manufacturing

Roadmap Circular Economy

7 strategic levers

Accelerators for overcoming barriers and spreading good practices

Policy and policy measures

Circular procurement



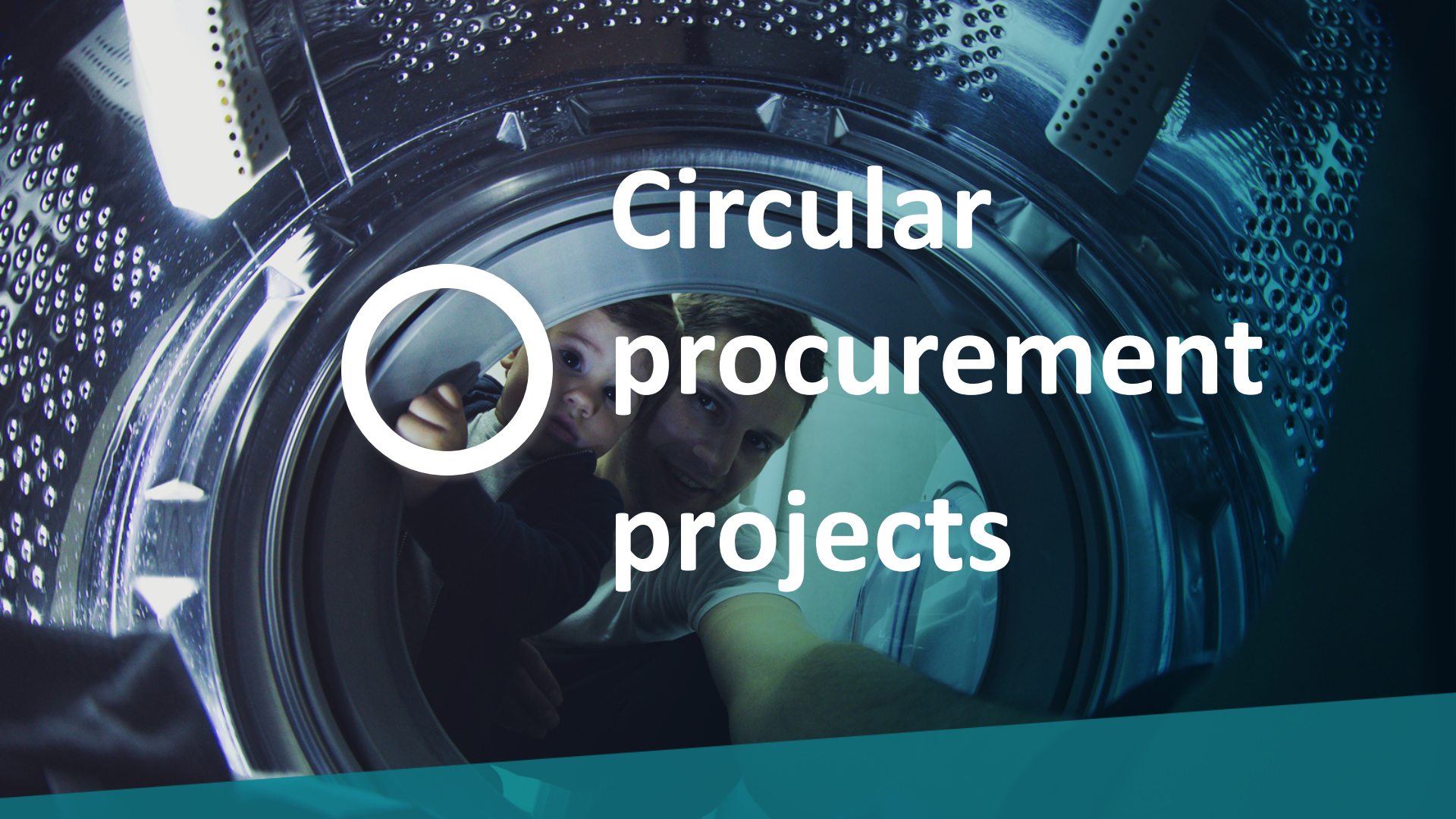
Communication

Research

Innovation & entrepreneurship

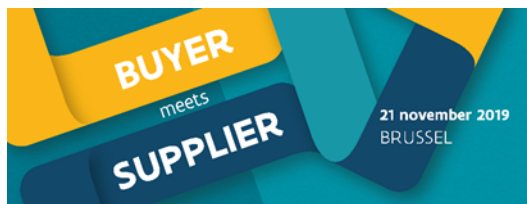
Financing

Jobs & skills

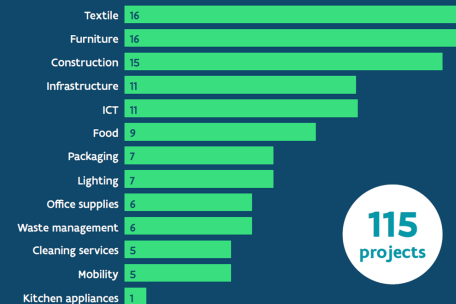


Circular
○ procurement
projects

Green Deal Circular Procurement

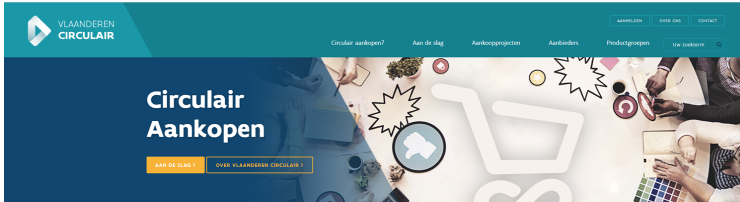


Topics of the GDGP projects

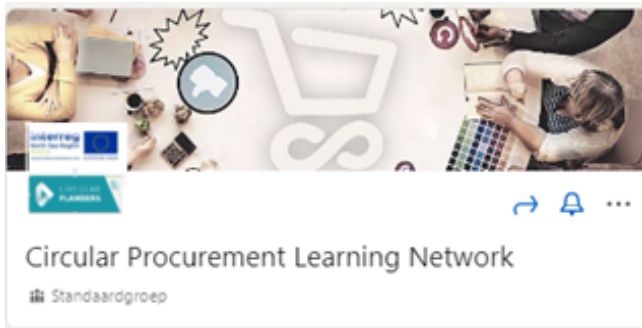







115
projects

Green Deal Circular Procurement



www.circularprocurement.be



A	B	C	D	E
 Reduce total amount of materials	 Reduce amount of virgin inputs	 Extend the useful life	 Maximise the reusability of a product or component	 Maximise the reusability or recyclability of materials
A 1 Internal sharing	B 1 Understanding the share of recycled, biobased and virgin materials present	C 1 Extending guarantees	D 1 Design for Disassembly	E 1 Design for recycling
A 2 Renting or peer to peer sharing	B 2 Increasing the amount of recycled content	C 2 Contractual arrangements for maintenance and repair	D 2 Modular design	E 2 Understanding materials
A 3 Reuse, refurbishing or upgrading	B 3 Increasing the amount of biobased content	C 3 Upgradable products	D 3 Standardised design	E 3 Contractual arrangements for take back and recycling
A 4 Minimal use of materials in design		C 4 Design for longevity	D 4 Understanding the internal composition and connections	E 4 Reducing or banning toxicity
A 5 Less waste		C 5 Repairability and maintainability	D 5 Contractual arrangements for take back and reuse	E 5 Biologically degradable / compostable
		C 6 Modular/change oriented design	D 6 Stimulate circular business models	E 6 Stimulate circular business models
		C 7 Contractual incentives for extension of useful life		
		C 8 Supplier guidance for use optimization		

GOALS AND STRATEGIES FOR CIRCULAR PURCHASERS

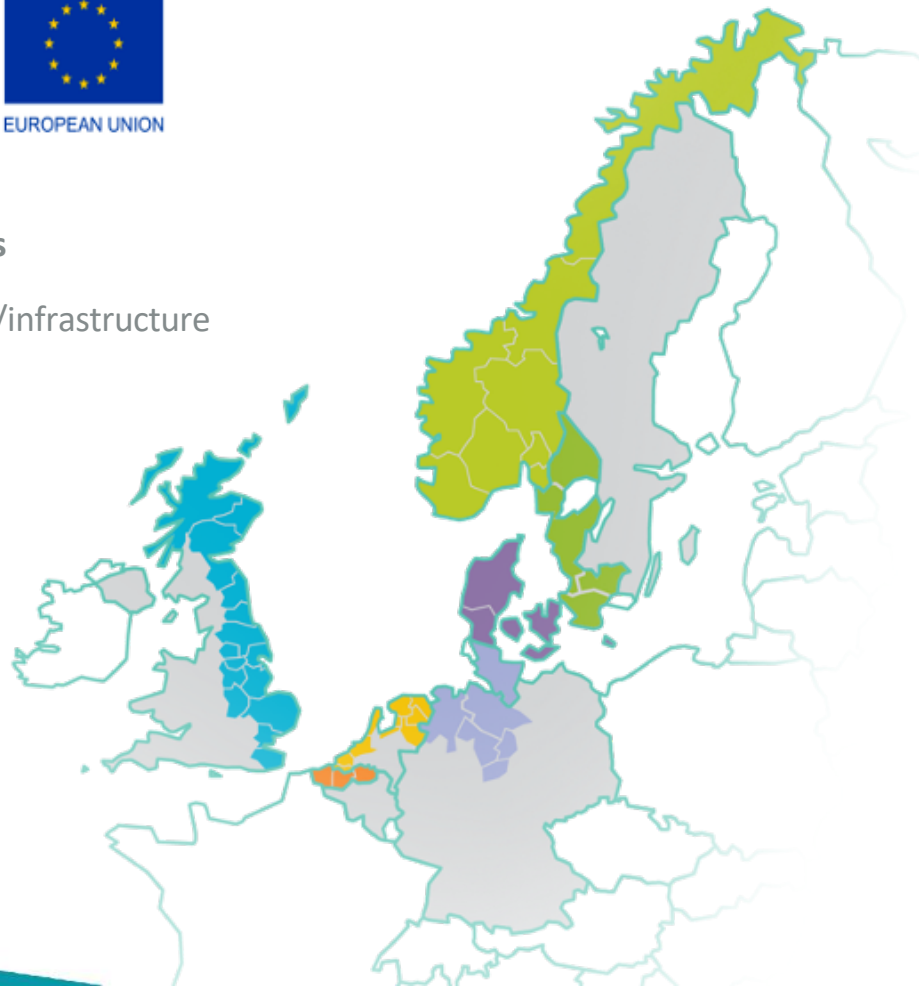
VLAANDEREN CIRCULAIR

CC BY NC ND



Targeted sectors

- Construction/infrastructure
- Furniture
- ICT
- Textiles



UK

- Zero Waste Scotland
- Businesses in the Community

Netherlands

- Rijkswaterstaat

Belgium

- Circular Flanders
- Kamp C

Denmark

- NSBD
- CLEAN
- Kolding Municipality

Norway

- DFO

Sweden

- Malmo

ACR+

- Facilitating role outwith NSR area



Goals

25% reduction in raw materials, waste, and CO₂ emissions

Area

EU North Sea Region (NSR)

Who

11 partners in 6 countries
30 pilots demonstrating procurement opportunities

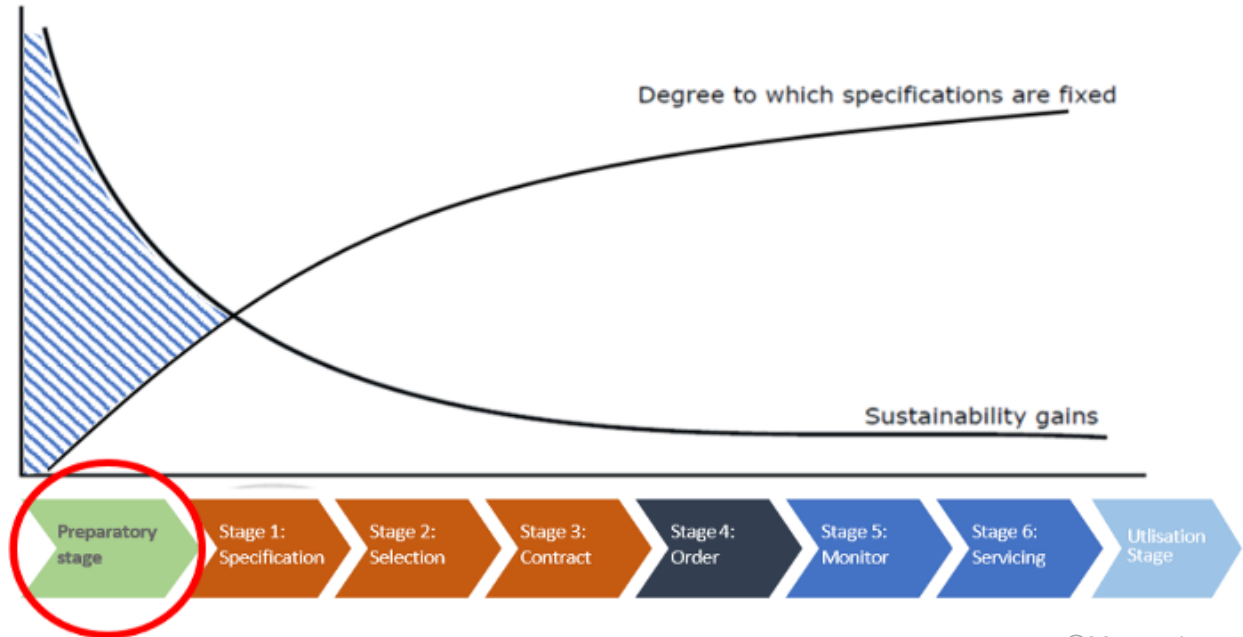
Why

To promote the development and adoption of a common circular procurement framework

The image features a central circular opening, possibly a tunnel or a large pipe, with a textured, metallic interior. The lighting is dramatic, with a strong green glow on the left side and a blue glow on the right. The text "Circular ambition chart" is overlaid in the center in a bold, white, sans-serif font. The background consists of a dark, textured surface that frames the circular opening.

Circular ambition chart

Importance of planning phase



A

Reduce total amount
of materials

B

Reduce amount of
virgin inputs

C

Extend
the useful life

D

Maximise the
reusability of a
product or component

E

Maximise the
reusability or recyclability
of materials

A
1

Internal sharing

B
1Understanding the share of
recycled, biobased and virgin
materials present**C**
1

Extending guarantees

D
1

Design for Disassembly

E
1

Design for recycling

A
2Renting or
peer to peer sharing**B**
2Increasing the amount of
recycled content**C**
2Contractual arrangements
for maintenance and repair**D**
2

Modular design

E
2

Understanding materials

A
3Reuse, refurbishing or
upgrading**B**
3Increasing the amount of
biobased content**C**
3

Upgradable products

D
3

Standardised design

E
3Contractual arrangements
for take back and recycling**A**
4Minimal use of materials in
design**C**
4

Design for longevity

D
4Understanding the internal
composition and connections**E**
4Reducing or banning
toxicity**A**
5

Less waste

C
5Repairability and
maintainability**D**
5Contractual arrangements
for take back and reuse**E**
5Biologically degradable /
compostable**C**
6Modular/change oriented
design**D**
6Stimulate circular business
models**E**
6Stimulate circular business
models**C**
7Contractual incentives for
extension of useful life**C**
8Supplier guidance for
use optimization

GOALS AND STRATEGIES FOR CIRCULAR PURCHASERS

A



Reduce total amount
of materials

A
1 Internal sharing

A
2 Renting or
peer to peer sharing

A
3 Reuse, refurbishing or
upgrading



Het Facilitair Bedrijf van de Vlaamse overheid gaat voor circulaire kantoorinrichting

WOENSDAG 18 DECEMBER 2019

Hergebruik als logische keuze
voor de inrichting van de
overheidskantoren

[LEES MEER >](#)





C



Extend
the useful life

C
1

Extending guarantees

C
2

Contractual arrangements
for maintenance and repair

C
3

Upgradable products

C
4

Design for longevity

C
5

Repairability and
maintainability

C
6

Modular/change oriented
design

C
7

Contractual incentives for
extension of useful life

C
8

Supplier guidance for
use optimization



Bib stad Kortrijk verlicht met LAAS

WOENSDAG 18 DECEMBER 2019

Kortrijk kies als eerste openbaar
bestuur voor lighting-as-service
met Signify

[LEES MEER >](#)

B



Reduce amount of
virgin inputs

B
1

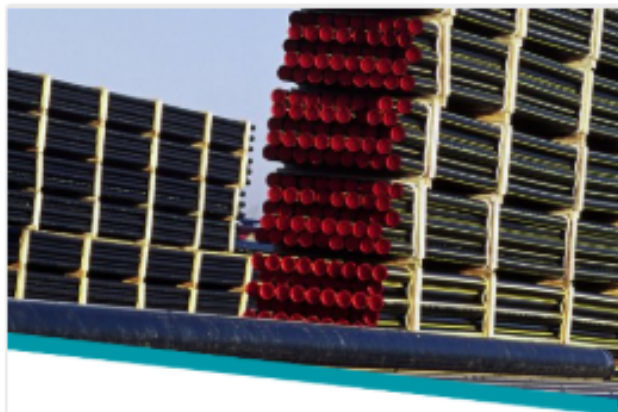
Understanding the share of
recycled, biobased and virgin
materials present

B
2

Increasing the amount of
recycled content

B
3

Increasing the amount of
biobased content



Potentieel hergebruik van PE maximaliseren

WOENSDAG 20 NOVEMBER 2019

Fluvius zet in op circulariteit
voor nutsleidingen

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D



Maximise the reusability of a product or component

D 1 Design for Disassembly

D 2 Modular design

D 3 Standardised design

D 4 Understanding the internal composition and connections

D 5 Contractual arrangements for take back and reuse

D 6 Stimulate circular business models



MET CE SUBSIDIE



PVT Circulair

WOENSDAG 16 JANUARI 2019

Een circulair verzorgingstehuis

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E



Maximise the reusability or recyclability of **materials**

E 1 Design for recycling

E 2 Understanding materials

E 3 Contractual arrangements for take back and recycling

E 4 Reducing or banning toxicity

E 5 Biologically degradable / compostable

E 6 Stimulate circular business models



Indicators



Input

Use

Output

A



Reduce total amount of materials

B



Reduce non-renewable virgin input

C



Extend usage time

D



Maximise potential reuse of product or component

E



Maximise potential reuse of material - recyclability

A₁

% amount of material used

B₁

% biobased content

C₁

functional lifetime

D₁

% product reuse

E₁

% material reuse

A₂

% reuse

B₂

% recycled content

D₂

% component reuse

A₃

% refurbishment/upgrade

A₄

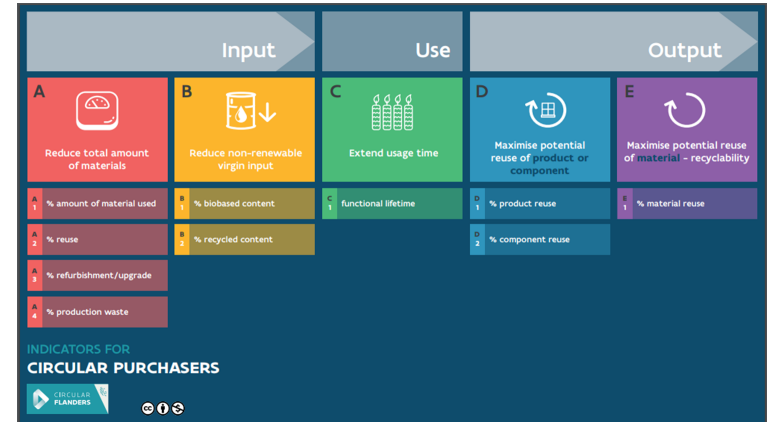
% production waste

INDICATORS FOR CIRCULAR PURCHASERS






Indicator chart

- Determine the magnitude of your ambitions
- Baseline, contract and execution measurements
 - What was the impact of the project?
 - Are your ambitions challenging the market?
 - Is the contract honored?





Baseline vs. outcome

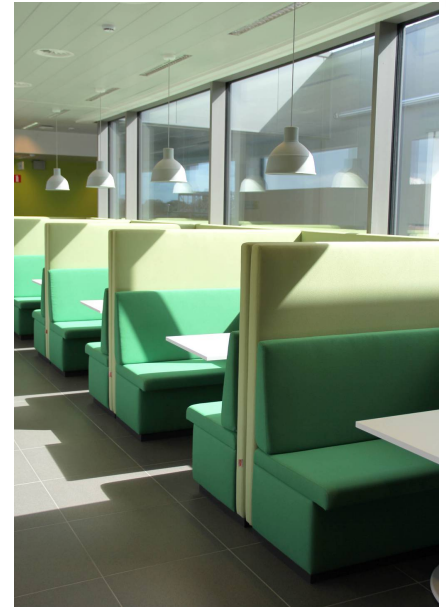
	Metric	Target result
	Carbon emissions (CO ₂)	20% reduction*
	Virgin materials	20% reduction*
	Waste	25% reduction*

*compared to the project baseline

Market maturity?












- ✓ Include monitoring in requirements
- ✓ Joint effort between procurer & supplier



Possible strategies & indicators



 CO₂		 Virgin Materials		 Waste	
<u>Strategy</u> 	<u>Indicator</u> 	<u>Strategy</u> 	<u>Indicator</u> 	<u>Strategy</u> 	<u>Indicator</u> 
Reduce carbon footprint	<u>KG materials</u> % biobased content % <u>recycled content</u>	Reduce quantity	<u>KG materials</u>	Reduce waste in process	KG production waste % production waste
More efficient energy use	<u>KwH</u>	Use recycled content	% <u>recycled content</u>	Optimize lifetime (economic vs. functional lifetime)	Years beyond 'usual' lifetime
Sustainable transportation and local sourcing	CO ₂ -emissions per KM Kilometers	Reuse of products	% reuse of refurbished	Reuse after lifetime	% reuse % recycling

A close-up photograph of a person's hands, wearing green work gloves, working on a large, circular metal flange. The flange has several holes around its perimeter and a central opening. The person is using a tool to work on the inner surface of the flange. The background is dark and industrial, with a large metal pipe visible on the left. The entire image has a teal color overlay.

Making the business case

Value for money?!



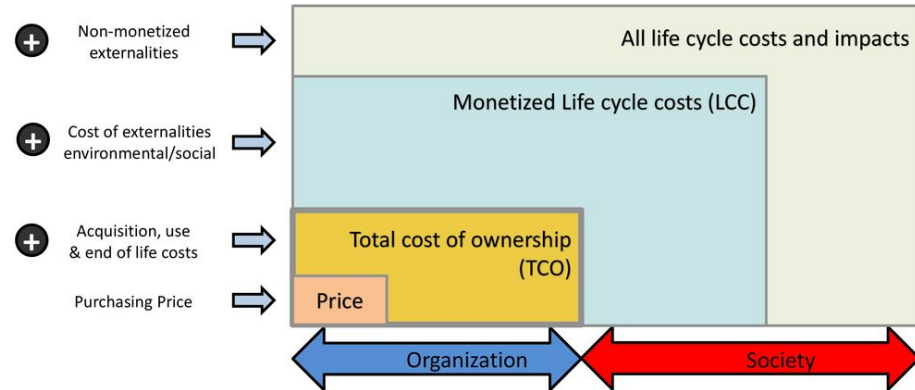
TCO voor tractoren

VRIJDAG 20 DECEMBER 2019

Total Cost of Ownership analyse voor tractoren levert verrassende resultaten op bij Krinkels NV

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Promoting Life Cycle Costing



Source: UN Environment/ISO 20400

All power to you!

www.circularprocurement.be

Melody@vlaanderen-circulair.be

Volg ons!



vlaanderen-circulair.be





CircularProcurement^{ca}



UPCOMING



**W O R L D
C I R C U L A R
E C O N O M Y
F O R U M**





PUTTING CIRCULAR
ECONOMY CONCEPTS
INTO ACTION



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