



Rijkswaterstaat
*Ministry of Infrastructure
and Water Management*

Embedding Circularity in Public Procurement Criteria

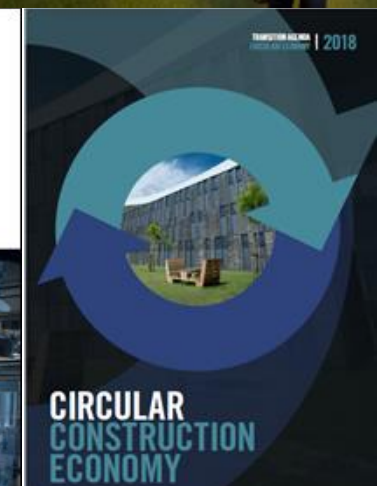
PUBLIC PROCUREMENT INTEGRITY IN PRACTICE

Budapest, 22 June 2022

Dr Mervyn Jones,
Senior Adviser, Circular Economy
Rijkswaterstaat, Netherlands

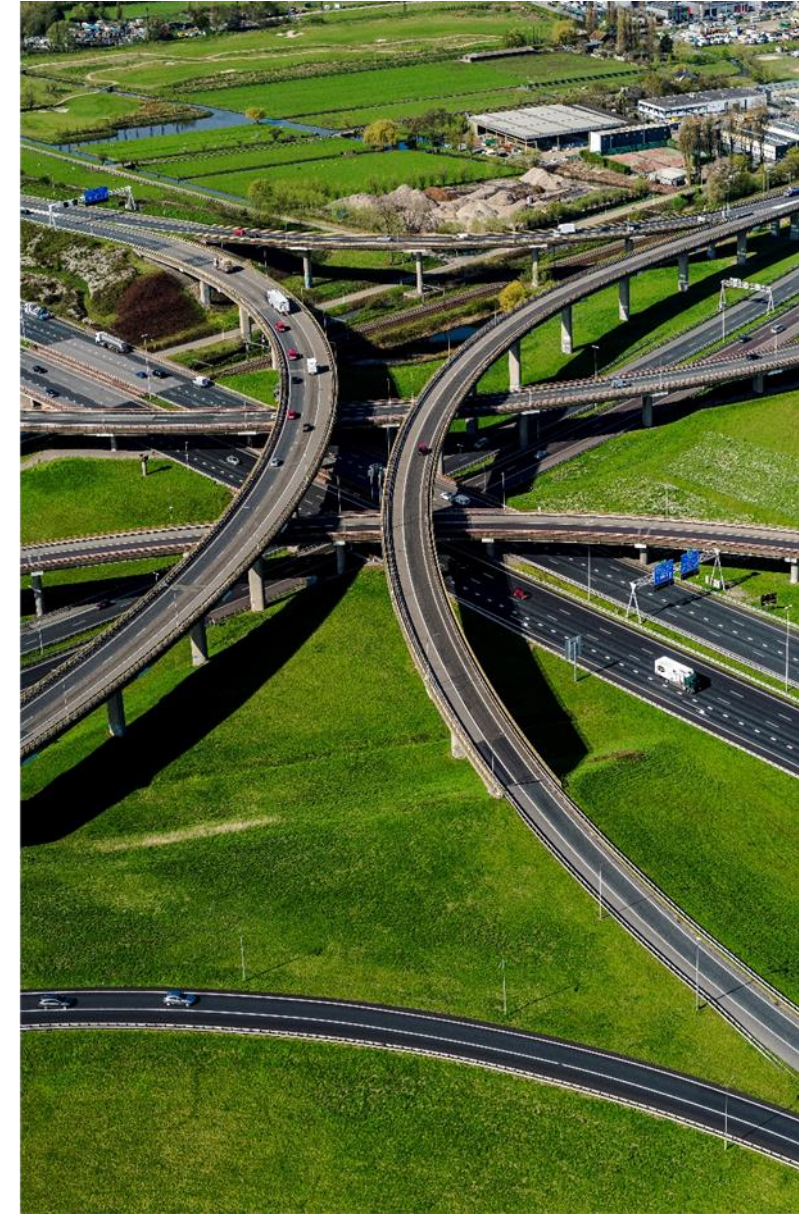
Circular Economy in the Netherlands

- By 2050: 100% circular economy
- By 2030: 50% reduction in use of primary raw materials
- International cooperation is essential for the transition
- Raw materials agreement: 400 organisations endorsed these goals
- Transition agendas for 5 priority chains:
 - Biomass and Food
 - Plastics
 - Manufacturing industry
 - **Construction (buildings and infrastructure)**
 - Consumer goods



Rijkswaterstaat CE & CO₂ ambitions (2016)

- 2030: Rijkswaterstaat will be climate neutral and 'working circular'
 - Strategy (2020); organised in four 'transition paths':
 - Roads
 - Constructions,
 - Groundworks/building sites and
 - Flood protection/river maintainance
- In 2016 we lacked the knowledge of what the circularity ambition would imply
 - Therefore we started the "Impulse Programme Circular Economy for the infra sector"

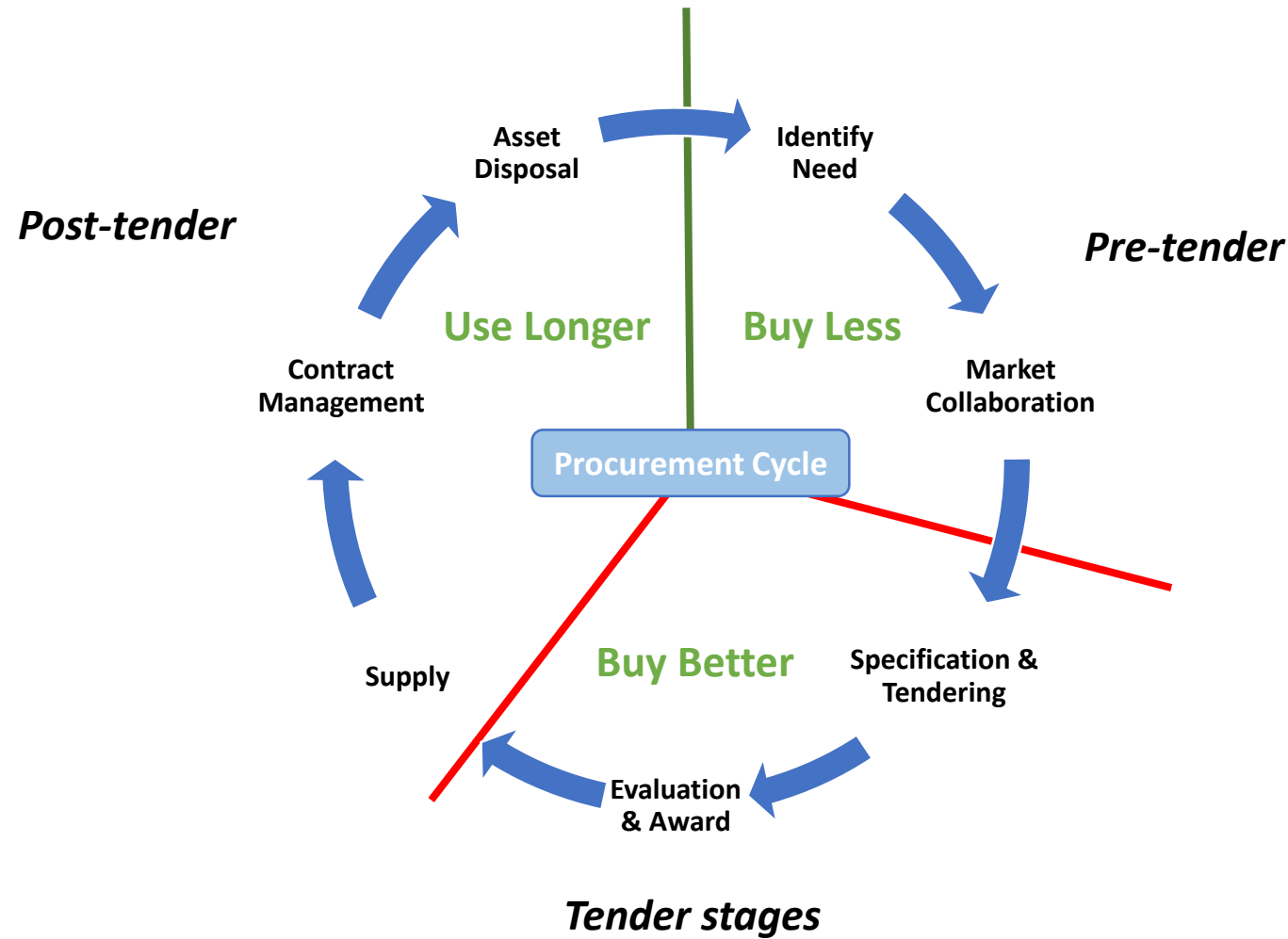


Focal points for action

- Planning
 - When to act and in what categories
- Prioritisation & proportionality
 - When to act
 - What requirements
 - where in tenders
- Projecting –
 - your requirements (and aims) to the market
 - Asking the right question

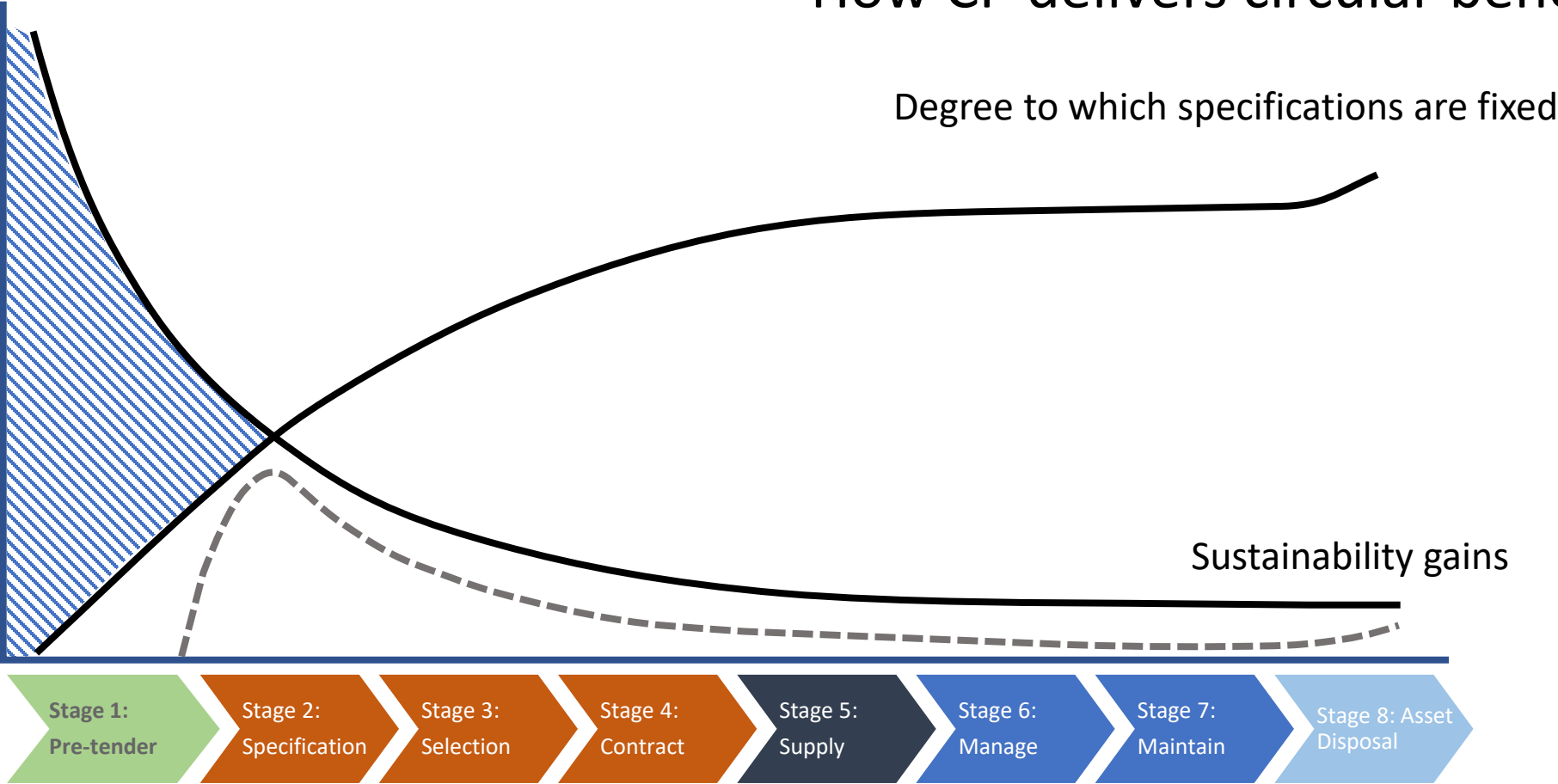


Planning - across the procurement cycle



Prioritising - when to act

How CP delivers circular benefits



Projecting - to the market

A life cycle approach to criteria

Sourcing



Reduce total amount of materials



Reduce amount of virgin inputs

Use phase



Extend the useful life



Maximise the reusability of a product or component

End-of-life



Maximise the reusability or recyclability of materials

INTERNAL

Do we really need it?
Where does it come from?
Who made it?
How is it designed?
What is it made of?

Lifetime optimisation - how will it be used?
Can we reuse internally or externally?
Can we repair or refurbish?

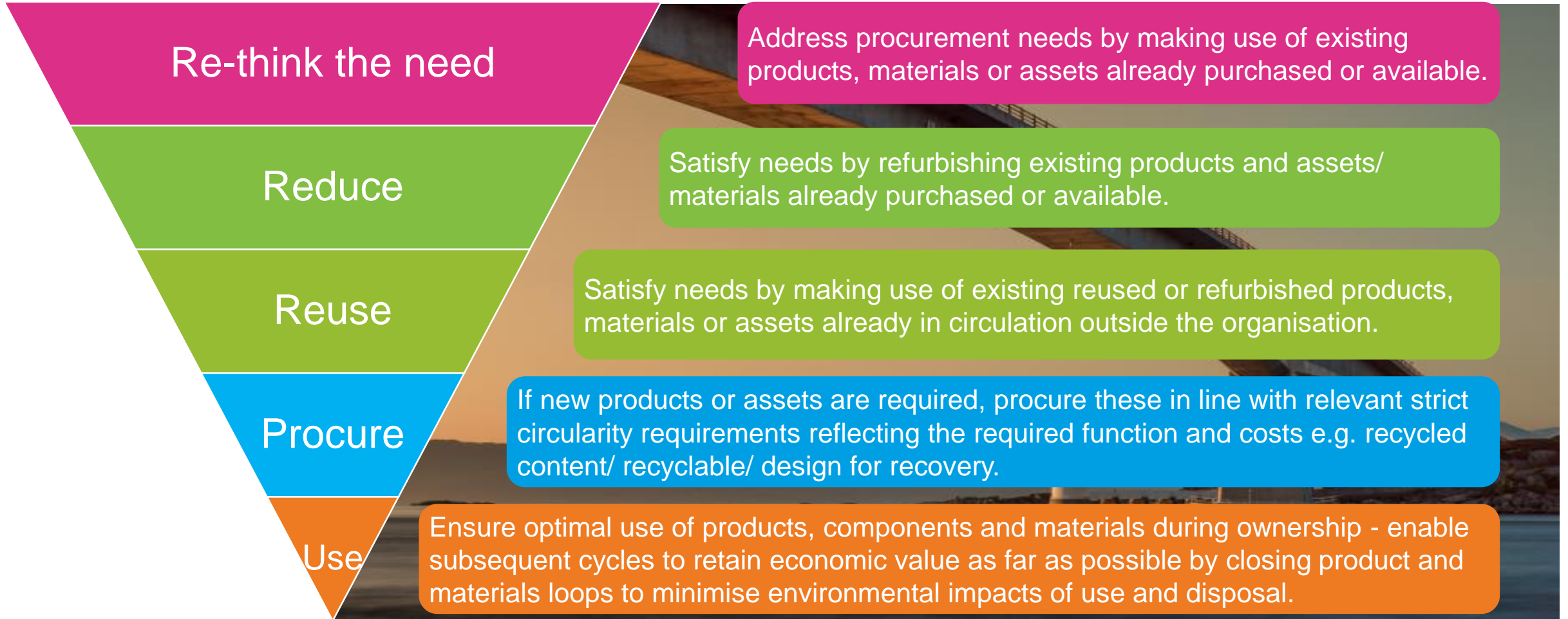
What will happen to it afterwards?
Is it designed for deconstruction / disassembly?

EXTERNAL

Functional and/or Technical?
CIRCULARITY STARTS BY ASKING THE RIGHT QUESTION

A circular approach to needs

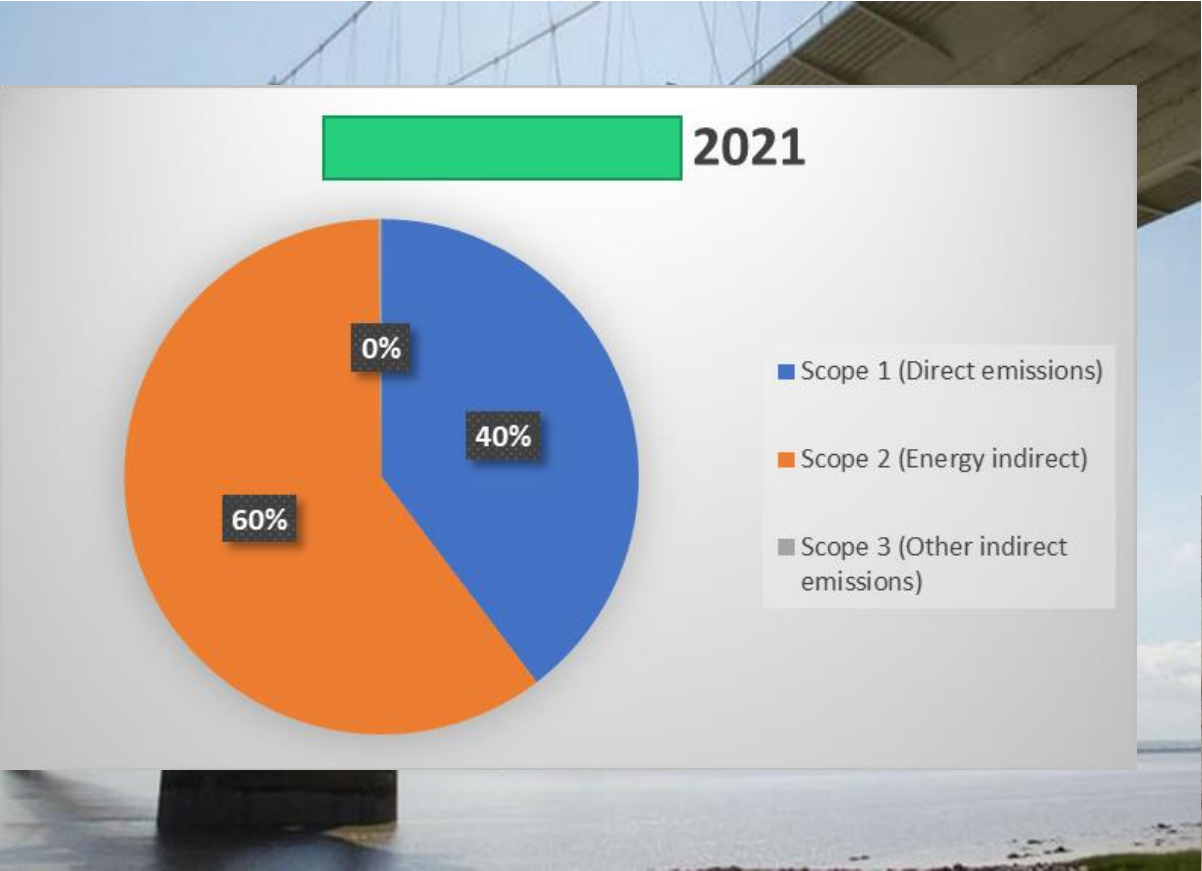
The hierarchy for meeting the procurement requirement



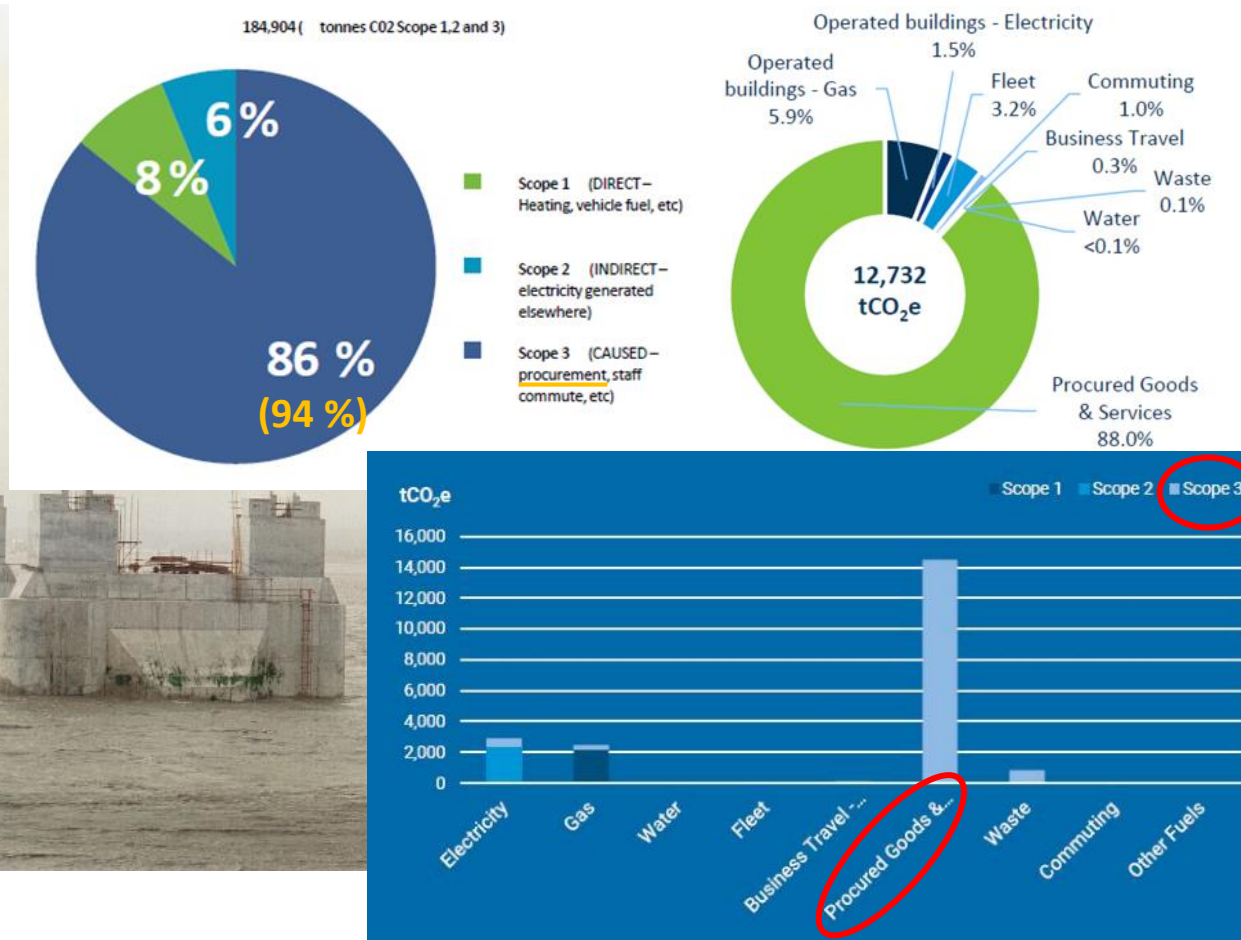
Change it one step at a time

The full carbon picture

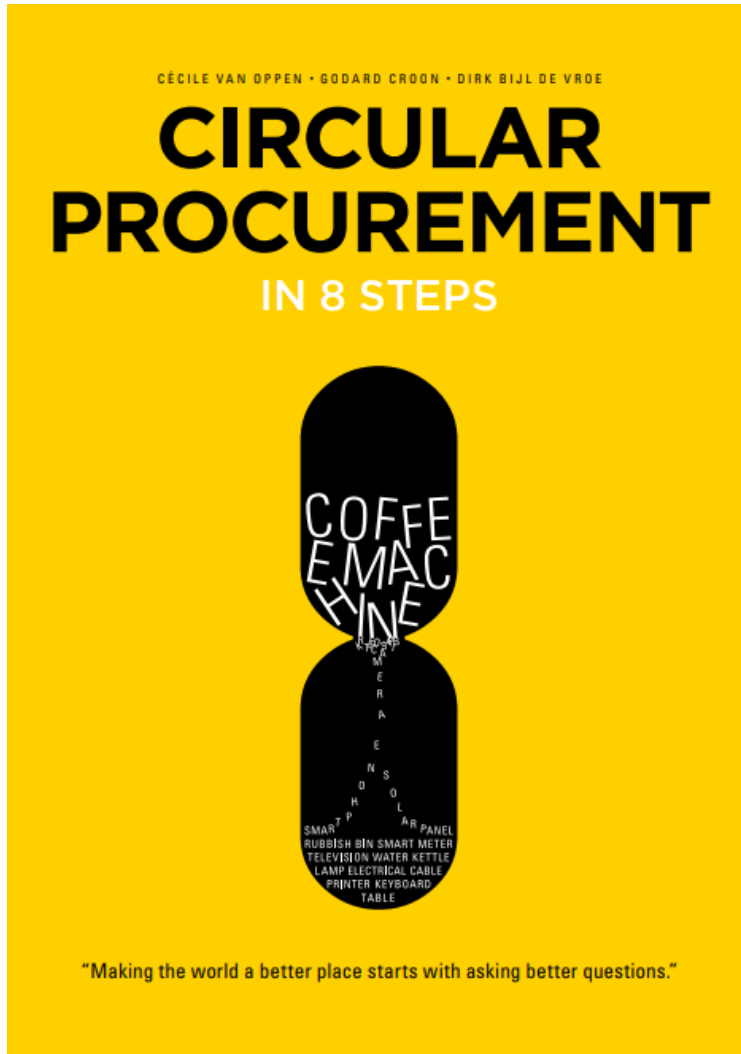
You think you are looking at this...



But the reality is different



Circular Procurement in 8 steps



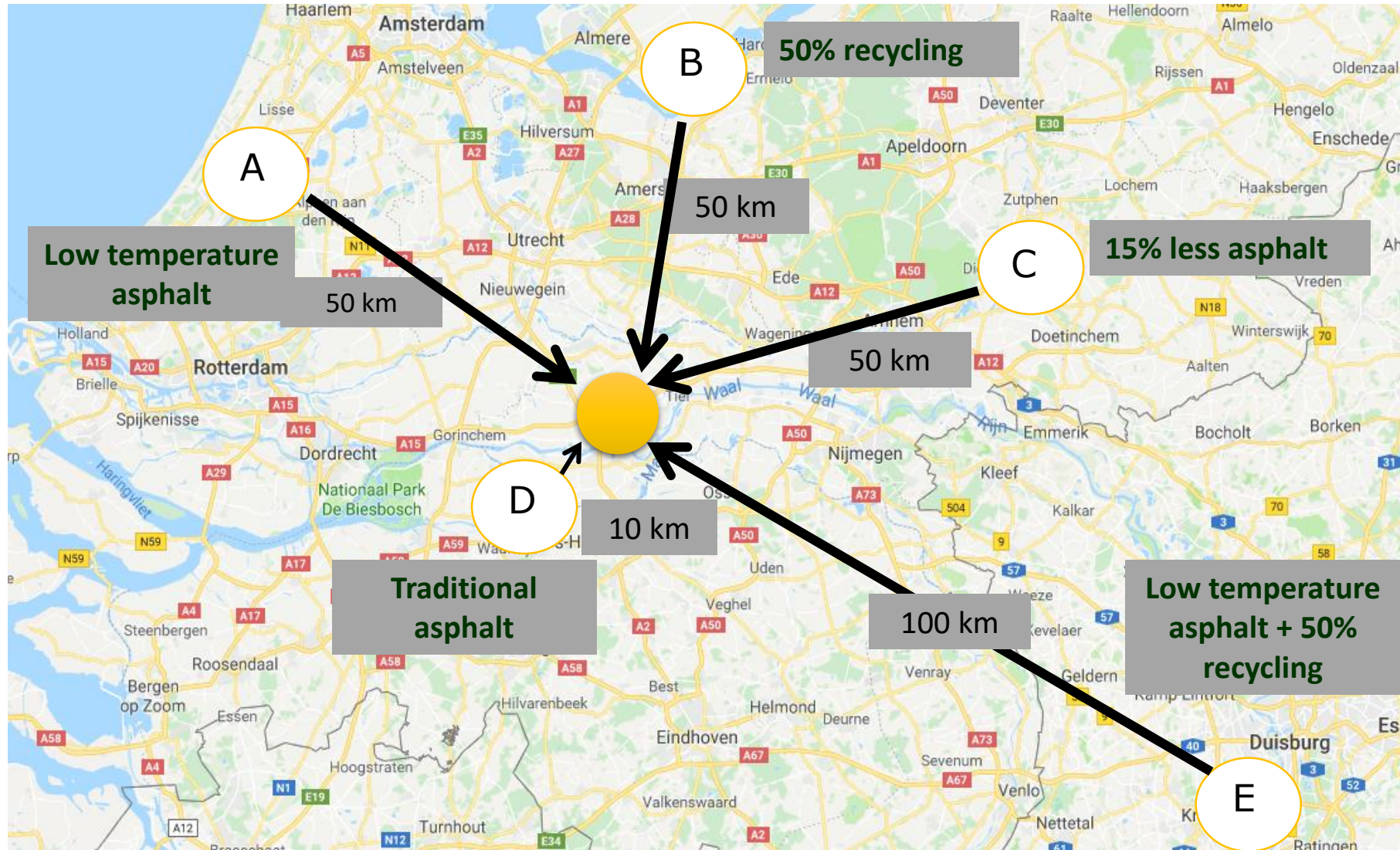
1. From definition to ambition
2. Internal organisation
3. Defining your need
4. Business models
5. Market collaboration
6. Tender procedure
7. Measuring and awarding
8. Contract management



Sourcing



Which asphalt is more sustainable?



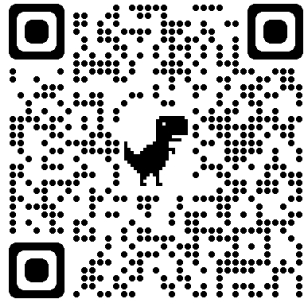
Criteria, standards & labels

Understand the criteria behind them...how do they address circular approaches?

EU Green Public Procurement (GPP) criteria

- Regularly updated but based on market availability across Europe

Link between selection, technical, award and contract management criteria.



Procurers should choose 'Type I' ecolabels i.e. verified by a third party and awarded on the basis of life cycle costs.



Price vs Quality – is it a competition?

- Life-cycle costing and the best price-quality ratio (BPQR)
- Initial cost or whole life cost? **TOTAL COST OF OWNERSHIP** because you pay even if you don't account for it
- Life cycle approach to cost will drive a life cycle approach to products and their impacts



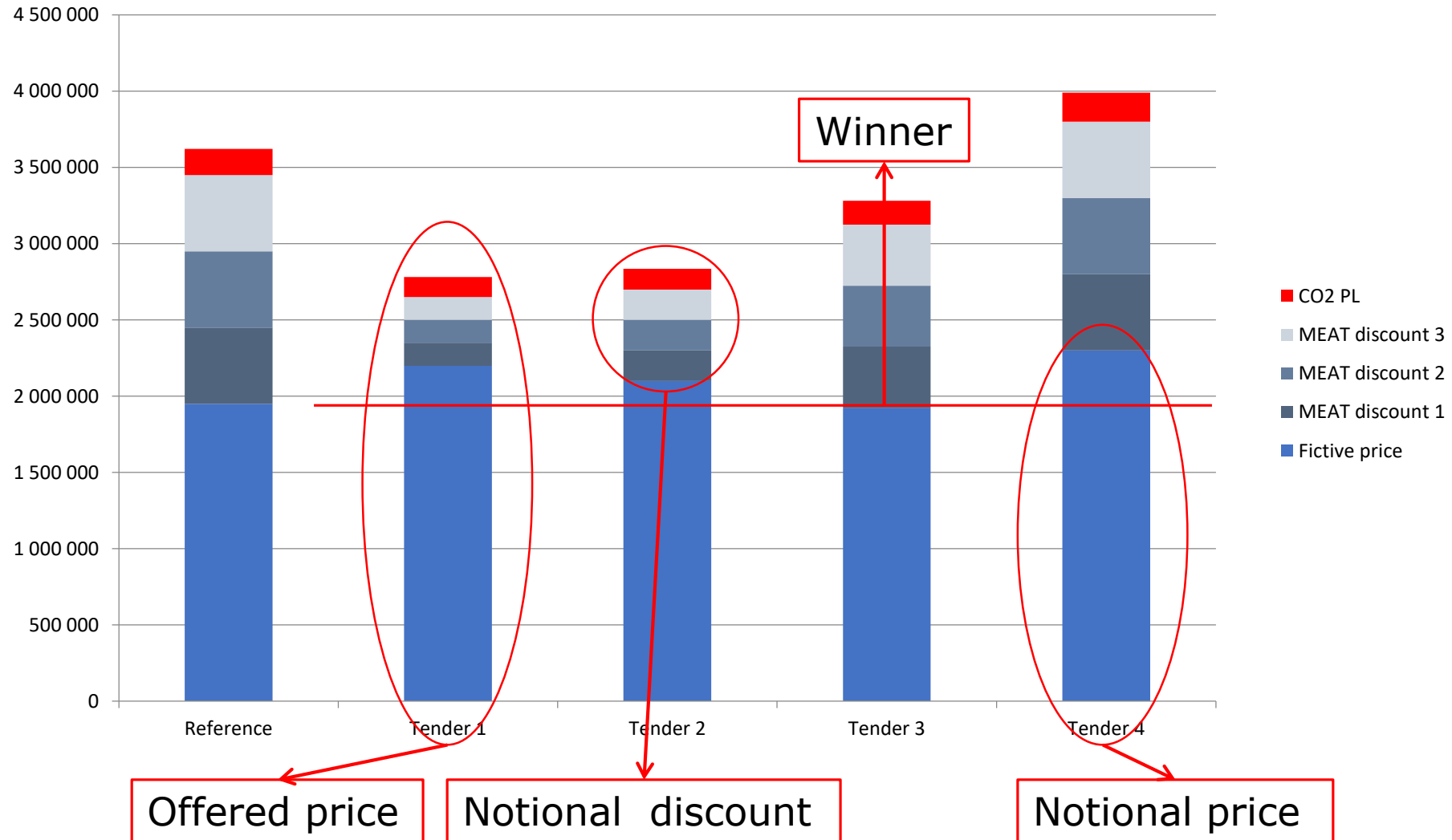
Best Price Quality Ratio (BPQR)/ Most Economically Advantageous Tender (MEAT)

- Selection of tenders based on a combination of price and quality
- Quality includes for instance:
 - Public oriented approach ('less hindrance')
 - Risk management
 - Sustainability
- The criteria must:
 - Create competition between tenderers
 - Be easy to understand for tenderers
 - Show differences in quality
- Two instruments
- CO₂ performance ladder and DuboCalc

About DuboCalc

- DuboCalc calculates the environmental impacts of the different infrastructure designs, based on material and energy use during the whole lifecycle, this is called the Environmental Cost Indicator (ECI)
- DuboCalc uses the method of the environmental Life Cycle Analysis (LCA)
- Objective comparison of tender-bids
- RWS uses this LCA-instrument to evaluate the environmental impact of the bids (award criterion) (BPQR/ MEAT)

BPQR calculation



Circular viaduct: Vianen archbridge, Netherlands

Reduce materials used, Reduce waste,
Minimise disruption

- Modular approach – multi-span
- Designed for disassembly
- Faster onsite build – less disruption
- Fewer materials used in total construction
- Materials passport

LESSONS LEARNED

- Early consideration of alternatives to traditional build result in life cycle benefits.

Volker InfraDesign



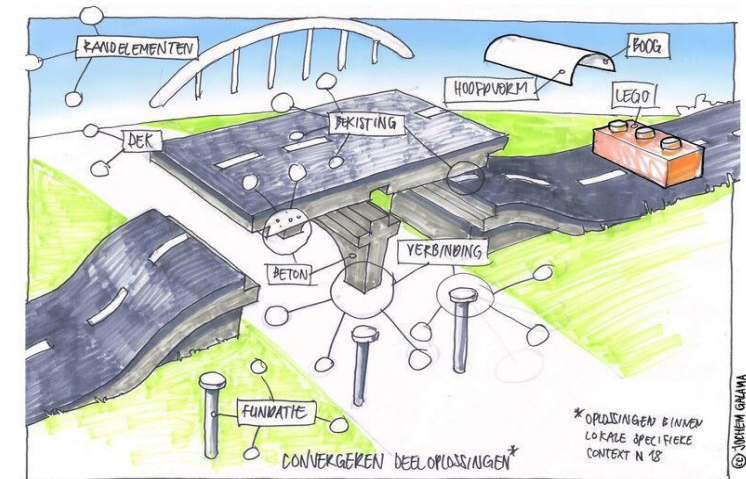
Rijkswaterstaat
Ministerie van Infrastructuur en Milieu

CONSOLIS
SPANBETON

SGS

SBR
CUR
net

Example



The Royal Netherlands Ministry of Defence (MoD)

Textiles procurement - workwear & towels and overalls

INTENDED OUTCOMES

1. Prevent incineration of discarded items:
 - contract awarded to sort 750,000 end of life items for reuse or recycling into fibres for use in new textile products.
2. Procuring towels and overalls containing at least 10% recycled post consumer textiles fibres:
 - contracts awarded for 100,000 towels and 10,000 cloths containing 36% recycled content and 53,000 overalls, containing 14% recycled content.

LESSONS LEARNED

The MoD found that the original requirements included too many technical specifications. Circular invitations to tender must be described in more functional terms to give the market room for solutions.

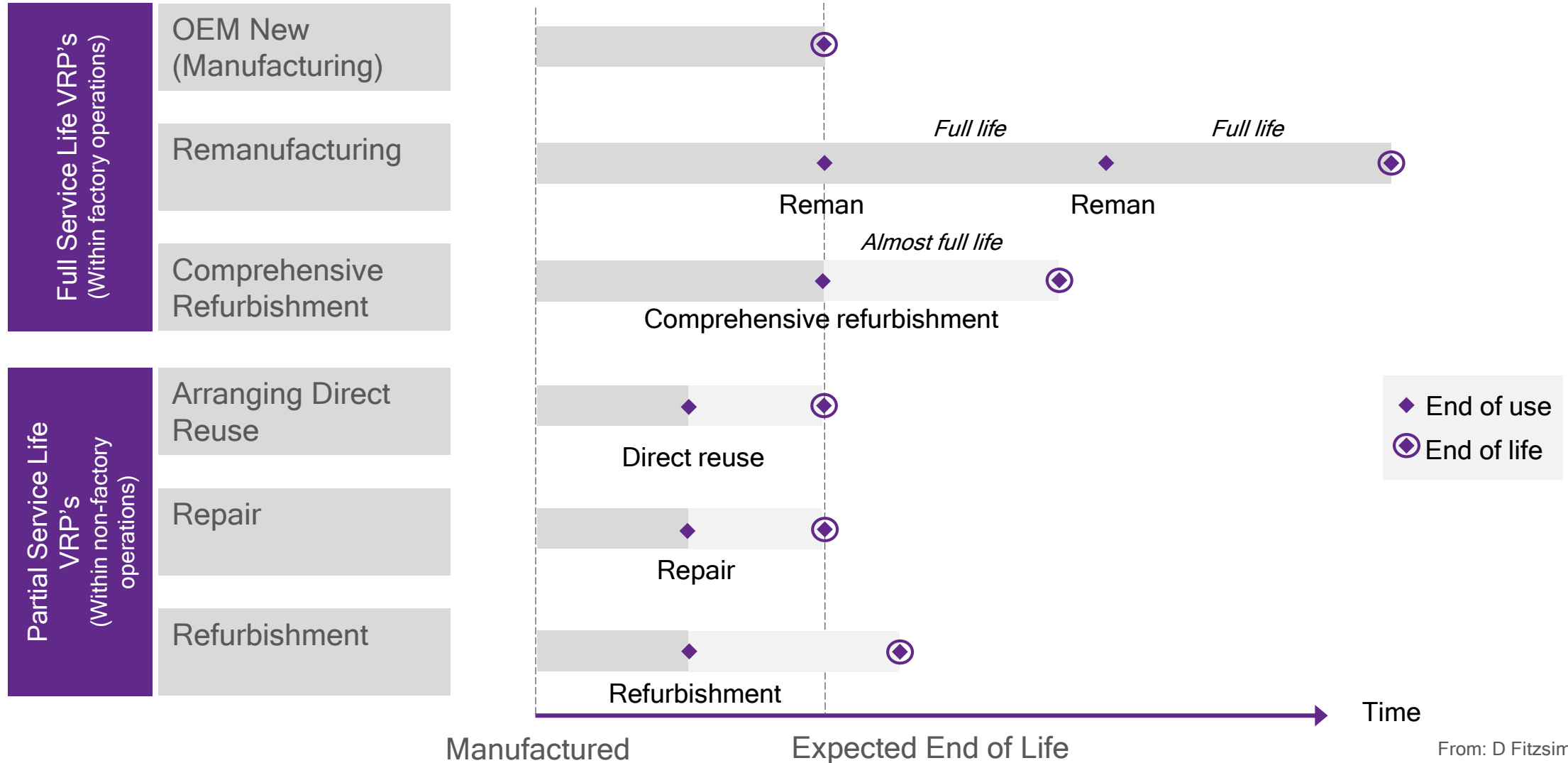
"Our historical specifications were defined down to the last detail. We don't want to do that anymore." Stephanie Grieving, Workwear Chain Specialist, Ministry of Defence.



Utilisation



Lifetime optimisation and lifetime extension



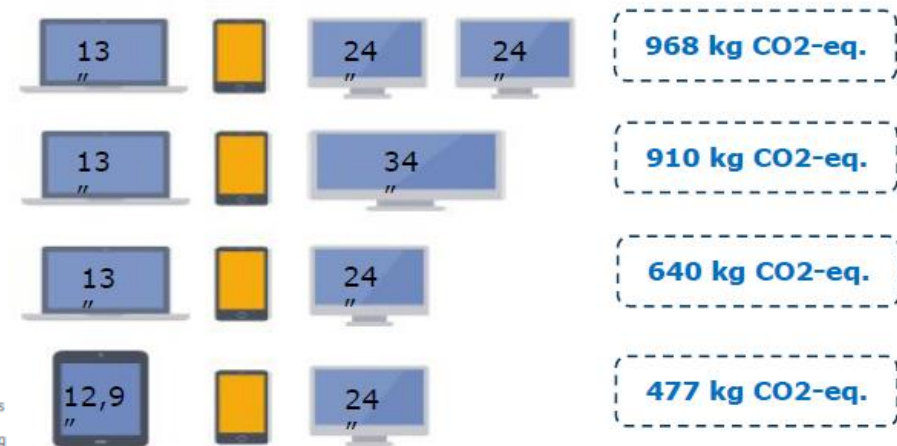
Lifetime and CO₂ reduction potential

- Consider mobile first / mobile only strategies - significantly lower CO2 footprint;
- Evaluate the hardware available and buy best in class products with the lowest CO2 footprints;
- Consider Bring You Own Device (BYOD) and/or Company Owned, Personally Enabled (COPE). This deduplication of hardware leads to >40% reduction of CO2 / raw materials;
- Reuse redundant display's elsewhere, within the government or for home use; and,
- Optimise lifecycles for maximum CO2 reduction, reduction of raw materials, mitigate abuses in the supply chain (for social accountability) and, cost reduction:
 - Smartphones and tablets 5-6 years;
 - Laptops 5-7 years; and,
 - Displays 10 years.

CO2 reduction based on the LIFECYCLE (gray=PAIA standard)



Example of CO2 effect PRODUCT PORTFOLIO



Based on Greenhouse Gas Protocol 'Product Life Cycle Accounting and Reporting Standard' (or equal) incl. raw materials, production, (downstream) transport, 4 + 5 year use phase and end-of-life in combination with IWR2021 Footprint data analysis and extrapolation. Products mentioned are based on a standard Windows-OS laptop (i5 or equal processor, 8GB RAM and 256GB SSD), 6,1" smartphone with 128GB storage, tablet with 256GB storage and standard office display(s) based on 0,7 WPF. For use of keyboard add 16kg CO2-eq and mouse add 6kg CO2-eq based on 0,7 WPF.

Light as a service Schiphol airport



Disposal

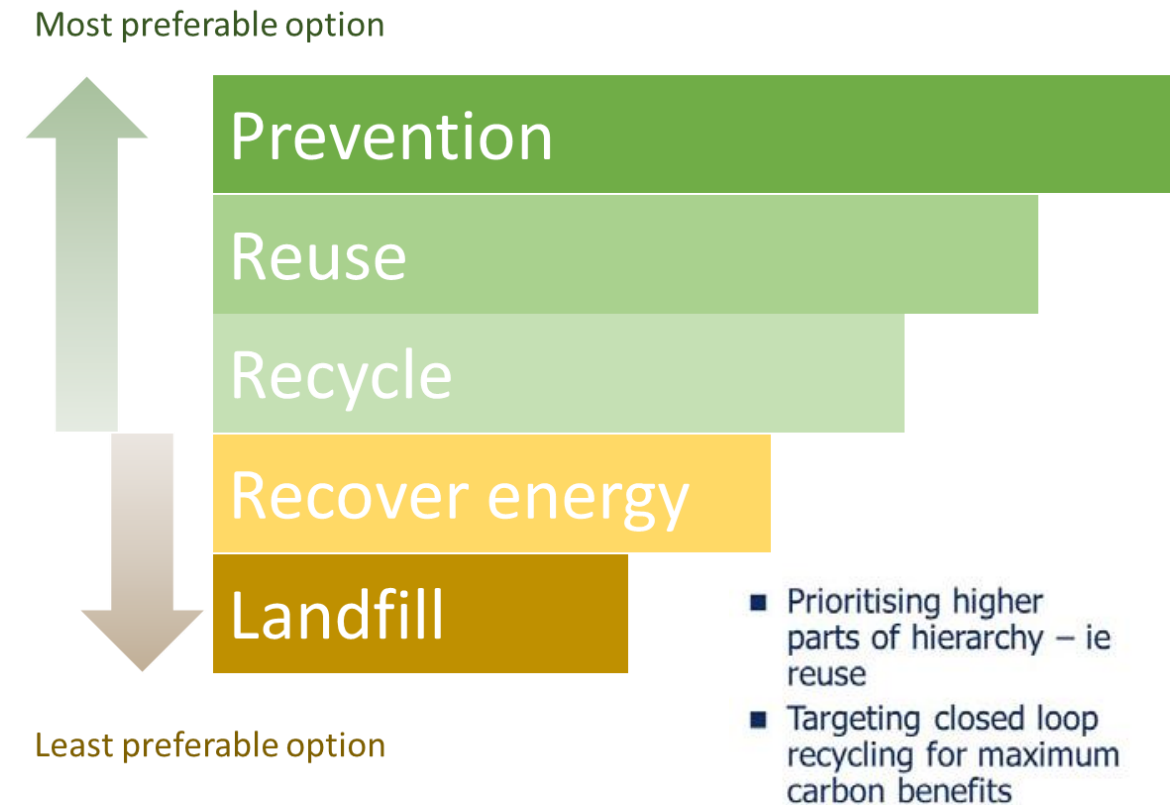


Throwaway Living

DISPOSABLE ITEMS CUT DOWN HOUSEHOLD CHORES

Disposal

- Disposal options should be considered in the initial procurement as they impact circular choices
 - **But often another person, role and another budget**
- Contracting for disposal can be included in the primary contract
 - **But rarely is** – this is **not necessarily a barrier** as long as there's a robust sustainable procurement policy in place.



Summary

- Plan - Use procurement as a strategic instrument to maximise benefits
- Prioritise - Circular procurement involves many stakeholders so collaboration internally and externally is important
- Project - procurement integrity is not just about sourcing but also use and disposal so consider all aspects at the start and ask the right question(s)





The time to act is now!



Thank you



Mervyn Jones | Rijkswaterstaat

mervyn.jones@rws.nl



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