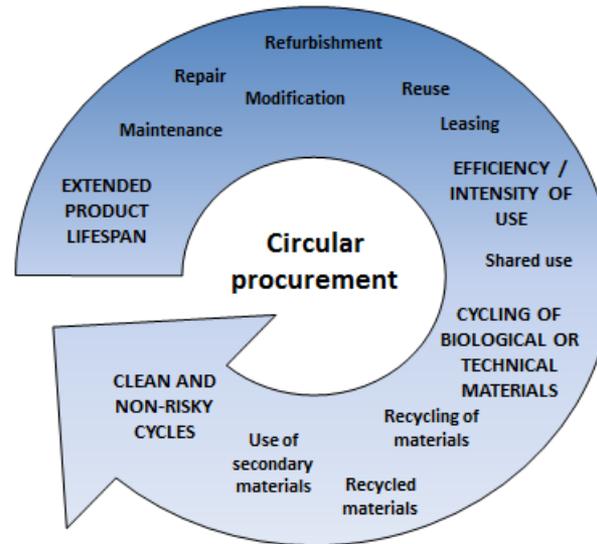


Circular Public Procurement in Nordic Countries

CIPRON

**NGG workshop 10.11.2016
Copenhagen**



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Agenda

- About CIPRON
- What is circular public procurement?
- Approaches to circular public procurement
- Circular public procurement in Nordic countries
- Future potential and the way forward



Circular public procurement in Nordic countries CIPRON

Main objectives:

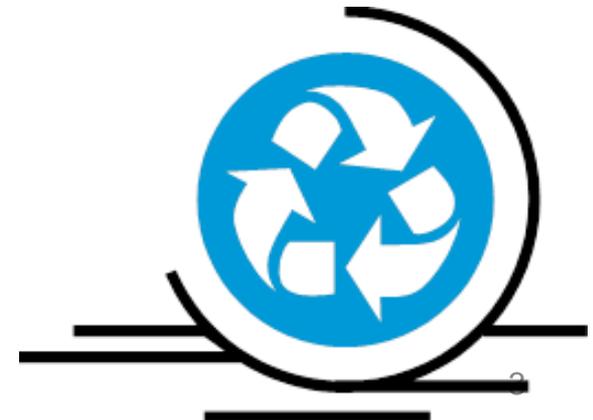
1. Increase knowledge on circular economy and how it could be adapted to public procurement
2. Search for examples and best practices of procurement cases and procurement criteria that have promoted circular economy
3. Identify product groups applicable to public procurement and for which public demand could create markets

Participants:

- Finnish Environment Institute (SYKE) – coordinator
- Copenhagen Resource Institute / CRI
- IVL Swedish Environmental Institute
- Nordic Council of Ministers - financier

Duration:

1.2. – 31.12.2016



What is circular procurement?

No standard definition

Procurement
that supports
circular
economy



- Procurement in which:**
- No negative external impacts or waste is created
 - Product and its parts are 100 % recyclable / reusable
 - No harmful substances exist
 - Energy comes from renewable sources

General definition

Ideal but not realistic!

CIRCULAR PROCUREMENT BY DEFINITION	Focus	Reference
Circular Procurement = Circular Economy + Public Procurement	Cycling focused; Reuse Recycle Repair Refurbish Remanufacturing Retrieve	Van Geet, 2014
Stimulate and create demand for goods that contribute to the circular economy.	Business focused	Green Deal, Circular Procurement, 2013
Procurer ensures that the products are produced in accordance with the principles of circular economy and will be further processed after use, i.e., are repairable and can be broken down into components and/or materials at the end of life cycle, which can then be re-used.	Production and recycling focused	MVO Nederland, 2015
Purchasing of products or services that follow the principles of circular economy ; There are no negative side effects of production, waste does not exist, a product or its elements are completely compostable or re-used, and toxic materials are eliminated. Energy for production is from renewable sources.	Resource efficiency and closed loops focused	NewForesight, 2014
Circular procurement is about making choices early on in the product creation process , so that materials and components are suitable, at end-of-life, for repair or refurbishment or re-use.	Eco-design focused; Selection of components and co-operation in supply chain.	Philips, 2016

Procurement that promotes circular economy by:

Minimizing harmful substances



Maximizing the cycling of products and raw materials

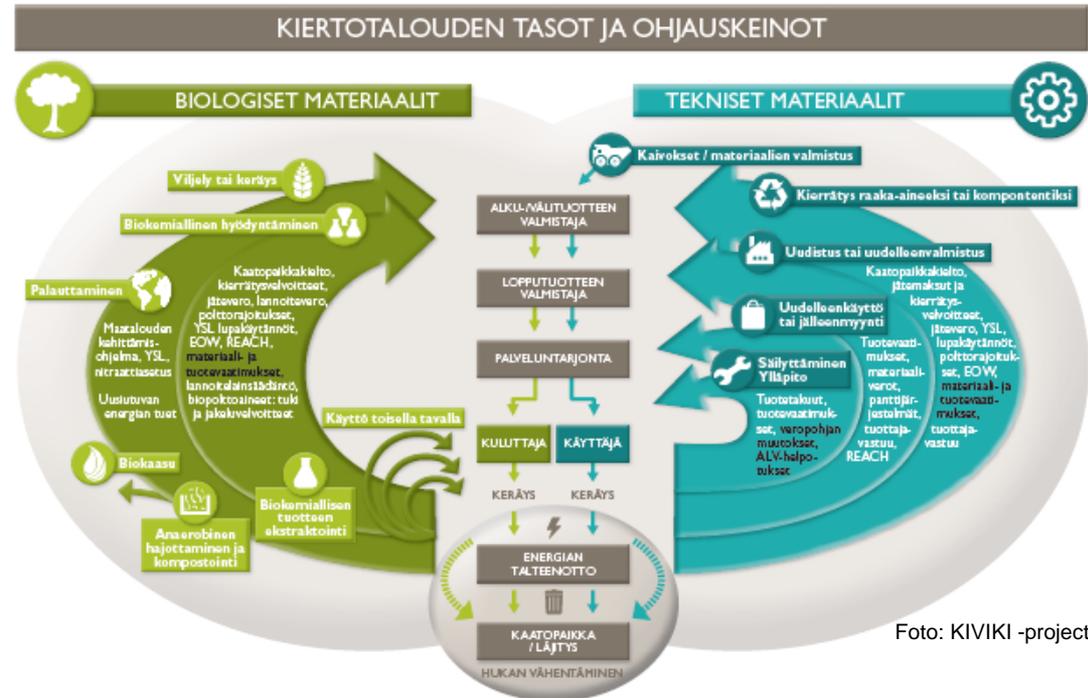
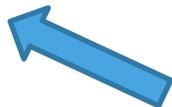
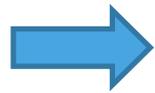
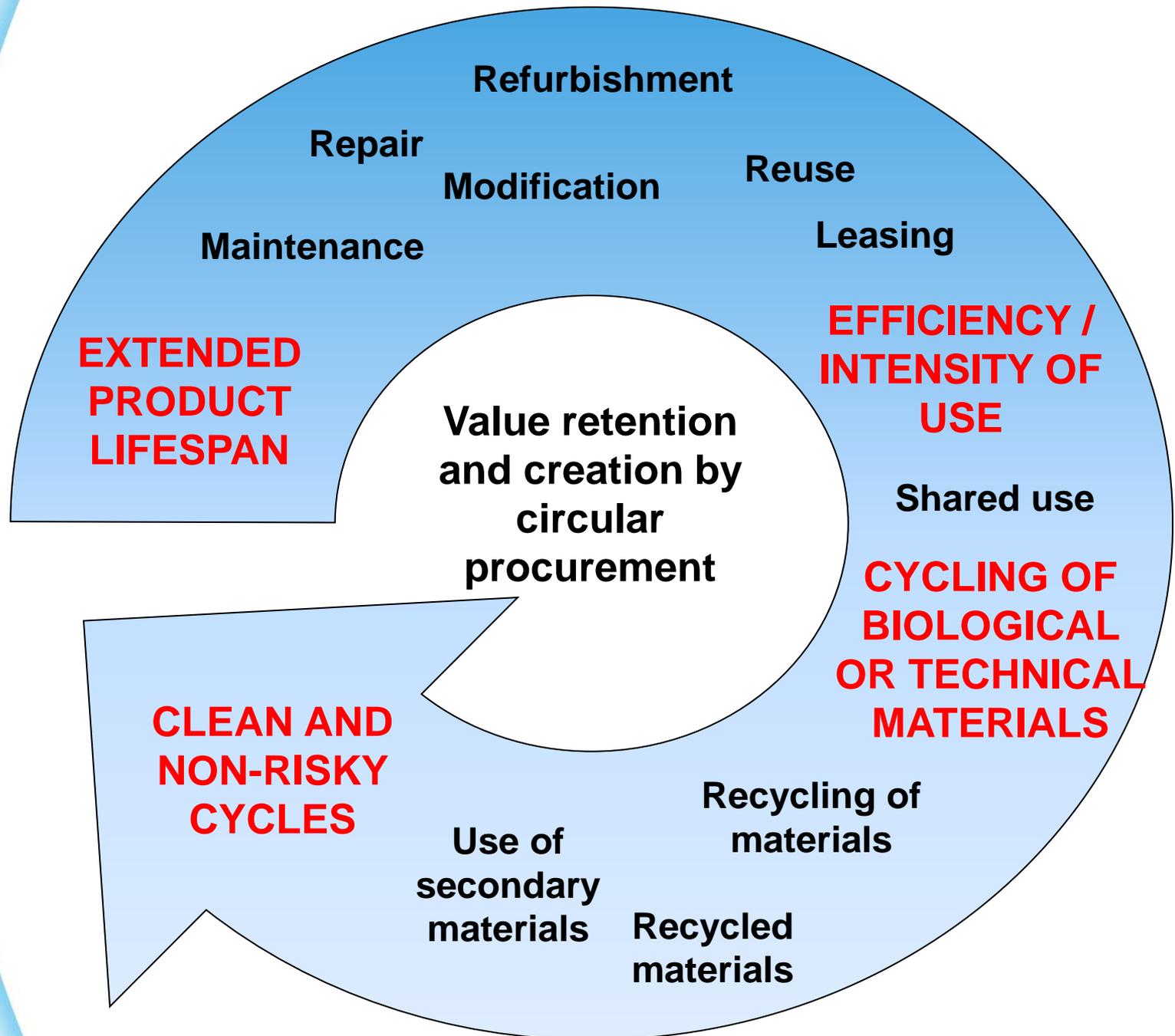


Foto: KIVIKI -project

Minimizing the value destruction



Promoting new business models related to circular economy



Suggestion for the definition:

Procurement of competitively priced products, services or systems that satisfy the customer needs and lead to extended lifespan, value retention and/or remarkably improved and non-risky cycling of biological or technical materials, compared to other solutions for a similar purpose in the market.

Circular procurement is a part of green and/or sustainable procurement aiming at environmental improvements, value creation, and social well-being.



FOUR APPROACHES TO CIRCULAR PROCUREMENT

1

2

3

4

Procurement using GPP based "circular criteria"

Improved products and services that include circular aspects are procured by adding more GPP/circular criteria to the tender competition:

- Recyclability
- Share of recycled materials
- Reuse
- Packaging material
- Etc.

Examples:

- Paper products

Procurement promoting new products and materials

New products are procured (and developed) in the market:

- Products that are remarkably better in terms of recyclability, share of recycled materials, disassembly, long lifespan, etc.
- May require an innovative public procurement process

Examples:

- Outdoor building materials
- Textiles of recycled material

Procurement promoting new business concepts

New and innovative approaches to respond the procuring unit's need, promoting efficient material cycles:

- Product – service systems
- Leasing concept
- Buy per use
- Shared use
- Buying and selling back

Examples:

- Buying light instead of lamps
- Leasing furniture instead of buying them

Procurement promoting circular ecosystems

Investments that stimulate 'circular' ecosystems are made

- Develop or support closed loops
- Create new networks and alliances
- "Somebody's waste is somebody else's material"

Examples:

- Buses running by locally produced biogas
- Construction of infrastructure with closed material- and energy loops

Better quality products ➡ New products ➡ New business concepts ➡ Circular ecosystems

Analysing the current state of circular procurement

- *Screening the tender documents* - What can be found from calls for tenders?
- *Interviews / discussions with procurers (forerunner cities)* - How do procurers take circular procurement into account?
- *Search for criteria* - What can be found from the criteria in eco-labels etc. and to what extent these are used?
- *Search for cases*

Analysing the current state of circular procurement

- *Screening the tender documents in Finnish HILMA tender database*
 - What can be found from the tender documents?
 - Screened 30 calls for tenders (16.8.2016)
 - Textiles 3 of 22 included e.g., timeless design, durability, easy to clean, availability or repair services
 - Office furniture 2 of 5 included criteria, long guarantee, easily separable and recyclable packaging materials, durability of materials, easy to maintain and repair
 - Food and catering; 1 of 3 included: adjustable sizes of deliveries
 - > larger sample would be needed in order to make generalizations
 - > none of the calls for tenders included novel form of procurement criteria that would actually promote new product development or innovative solutions

Analysing the current state of circular procurement

- *Interviews / discussions with procurers (forerunner cities)* - How do procurers take circular procurement into account?

- **Finland:** there is a national focus on public procurement of clean technology, resource efficiency, circular economy and bioeconomy: Government Decision-In-Principle on the Promotion of Sustainable Environmental and Energy solutions (cleantech solutions) in Public Procurement

- Circular economy is a part of municipalities' strategies and many "circular" pilots exist especially in the field of construction (infra & building)

- **Sweden:** Almost all parties in the public sectors commit themselves to follow the criteria recommendations given by the Swedish Public Authority (SPA)

- There exist many consultancy firms offering their services on sustainable procurement. However, it is most likely that only a few of them currently have the right competence to be able to extend their services to circular economy.

- Focus is on promoting life cycle costing (LCC)

- **Denmark:** Ministry of Environment and Food (MEF) some years ago took the initiative to promote GPP, is now also talking about Circular Procurement

- MEF has developed guidelines and tools for Total Cost of Ownership (LCC): Guidelines for incorporating TCO in public procurement

- The CradlePeople represent a network, which brings procurers and suppliers together, and which also focus on innovation.

Analysing the current state of circular procurement

- *Search for criteria* - What can be found from the criteria in eco-labels etc. and to what extent these are used?
 - Nordic Swan
 - EU GPP criteria
 - National criteria (Swedish SPA, and Finnish Motiva and Hansel framework contracts)

Generally:

Recyclability, guarantee, repairability, packaging material, recycling system or reuse system, chemical content, etc.

Some other examples:

Refurbished spare parts are allowed

End of waste cannot be located outside the EU

How has the supplier organized recovery of harmful chemicals?

Mapping the potential cases

1. Circular aspects in general are focused in the procurement process; i.e., in description or objectives of the procurement
2. Extended product lifespan is focused in the procurement
3. Cycling of biological or technical materials are focused in the procurement process
4. Clean and non-risky cycles are paid attention to in the procurement process
5. Certain tools are used in the procurement process to address circular elements

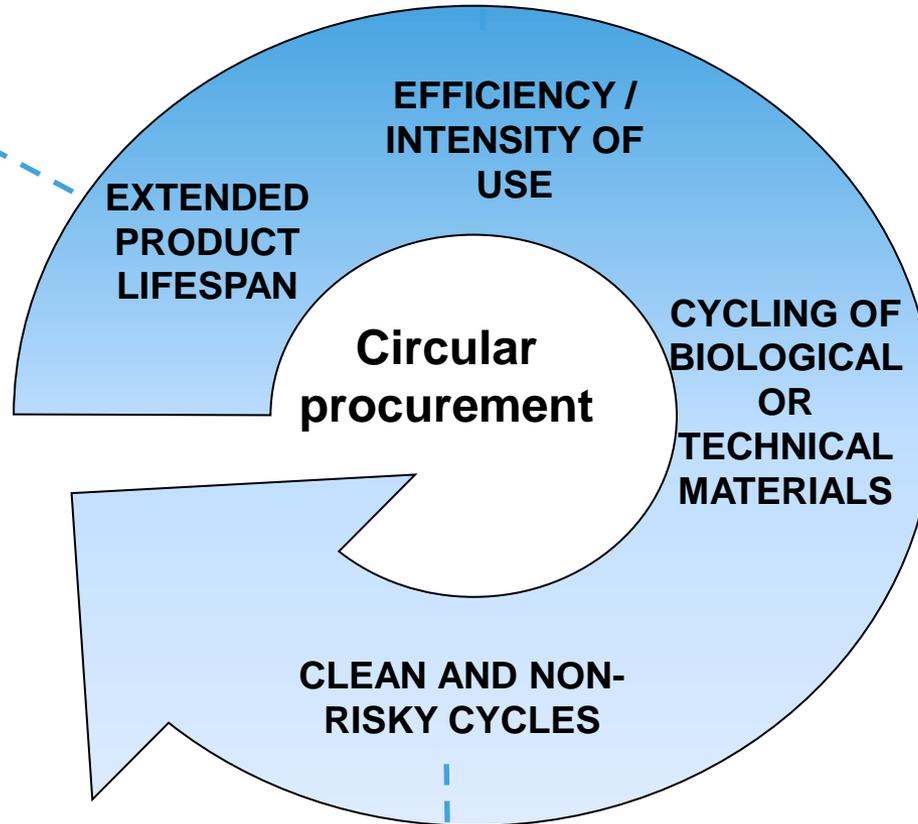
How is efficiency or intensity of use improved through procurement? For example, concept of shared use, etc.

How is life extension taken into account?

What kinds of requirements

e.g., for:

- Maintenance
- Guarantee
- Refurbishment
- Repair
- Modification
- Reuse/leasing



- How is cycling of materials taken into account in the procurement process? For example: recycling of materials is required, use of recycled materials is required, use of secondary materials is allowed, etc.
- What kinds of criteria are used?
- What kinds of contract terms are used?

How are non-risk of cycles and materials taken into account?

Reuse of bricks for two schools

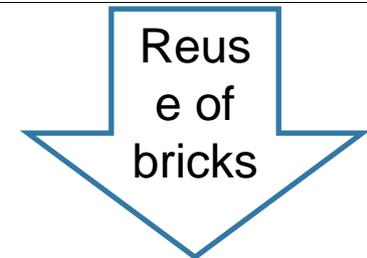
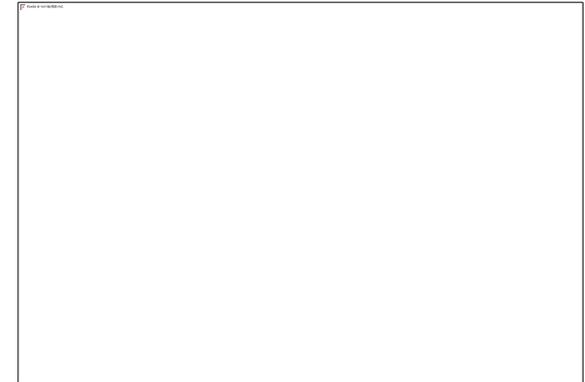
Procurement authority: Copenhagen Municipality

Subject for procurement: Buildings for extension of 2 schools

Procurement procedure: Open public procurement procedure with specification of the type of bricks to used in the new buildings

Type of criteria used: The tender documents specified that the bricks used for the outer wall should be reused bricks or some with similar appearance (hand made appearance)

Impact on circular procurement: The strict requirements for the appearance of bricks will ensure reuse of bricks from demolition activities and thereby reduce the emission of GHG with 0.5 kg CO₂ eq per brick.



Environmental criteria for building and construction

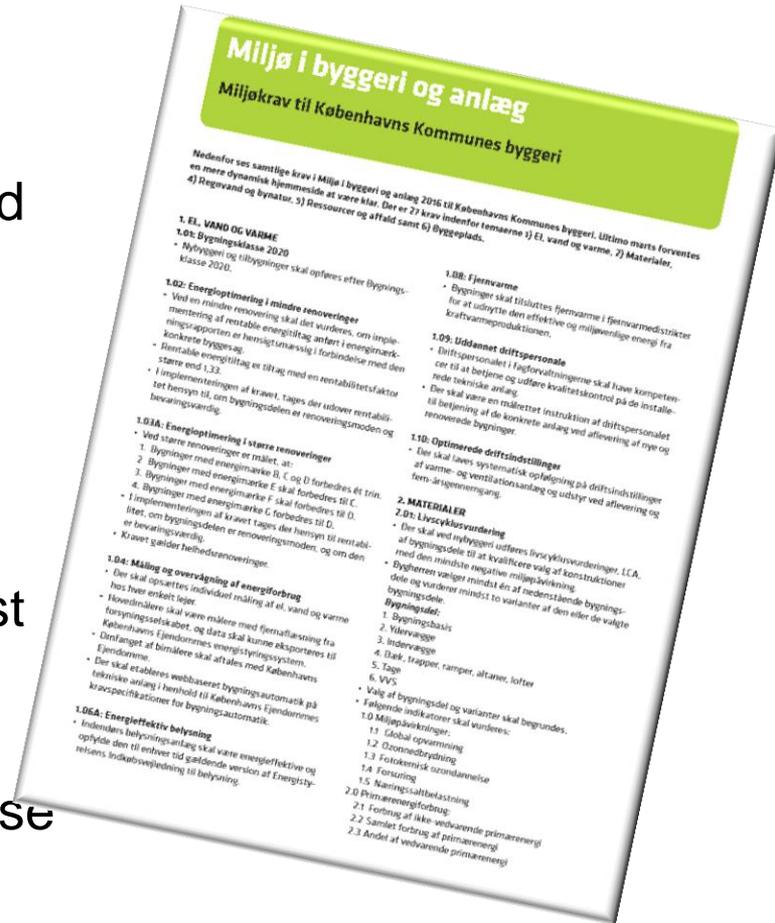
Procurement authority: Copenhagen Municipality

Subject for procurement: Building and construction works and services.

Procurement procedure: All public procurement

Type of criteria used: LCA shall be used to select the building parts that result in the construction with the lowest environmental impact

Impact on circular procurement: It is assumed that the LCA will promote reuse and recycling of building parts and materials



Increased life of working clothes

Procurement authority: Herning Municipality

Subject for procurement: Working clothes for technical operations department.

Procurement procedure: Open public procurement/leasing

Type of criteria used: Technical criteria for maintenance, repair and recycling of clothes

Impact on circular procurement:
The technical criteria are assumed to extend the life of the clothes.
Estimated savings; 6700 Euros and 1011 tonnes of CO2 emission in 4 years for the department alone.





PUBLIC TRANSPORTATION

Procurement authority: Kalmar länstrafik, Sweden

Subject for procurement: All types of public transportation including city and regional transport modes, and specific service transportation

Procurement procedure: Negotiated procedure

Type of criteria used: Certified environmental and work environment management systems, a gradual reduction of emissions of NOx and particles during the contract period, noise limitations, requirements on energy efficiency, use of biofuels and electricity, follow-up procedures and annual environmental reporting.

Impact on circular procurement: Strict requirements and follow-up procedures for exchanging fossil fuels with different types of biofuels (biogas, sustainable synthetic diesel, "green electricity, RME and ethanol) including electricity simulating the generation these fuels from local activities and manufacturing.

WASTE COLLECTION AND TRANSPORT



Procurement authority: VA SYD, Malmö, Sweden

Subject for procurement: Collection and transportation of household waste in an efficient and environmentally sound manner to a central waste storage site

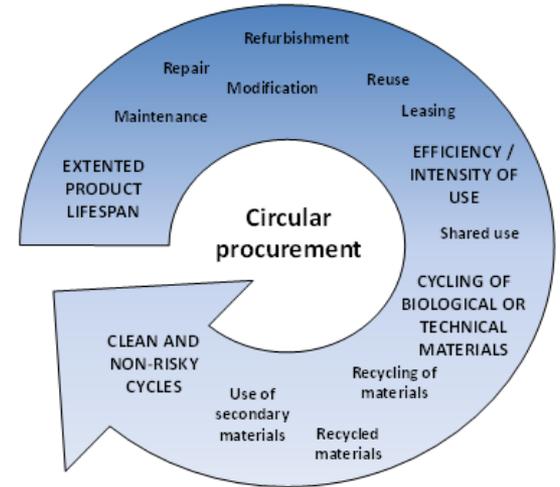
Procurement procedure: An open procurement procedure not allowing negotiations

Type of criteria used: Certified environmental and work environment management systems, stimulate ECO-driving, parking in warm garages to avoid "cold-starting" of vehicles and other equipment

Impact on circular procurement: Strict requirements for collecting different types of waste in separate containers for further activities of VA SYD which will secure the further handling of the waste for material and energy recovery in a proper context according to the intent of a circular economy

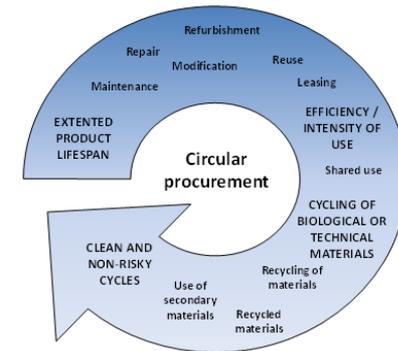
Waste water sludge treatment (HSY, Finland)

Helsinki Region Environmental Services Authority HSY is undertaken a procurement of 4 – 5 pilots of new technologies, which will be tested on their site. The objective is to test and evaluate new methods of treating and utilizing digested sewage sludge and other biomasses at the Ämmässuo waste treatment center in Espoo, Finland. The solutions suggested for testing must comply with the European waste hierarchy, and thus favor nutrient and material recycling over energy recovery. The procurer is interest especially in methods that produce fertilizers or biochar



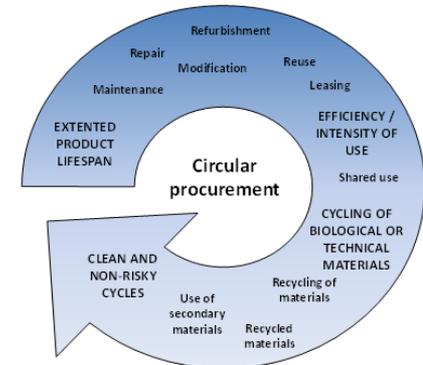
Development processes for food and catering services (Sodankylä, Finland)

- Developing the central kitchen and catering through careful planning and new technology:
 - Increasing the amount of locally produced food
 - Deliveries of food raw materials instead of semifinished products – possibilities to freeze
- Packaging and logistics is focused
- Recipes and seasonal food is paid attention to



Potential sectors for circular procurement

- Construction
 - Buildings
 - Roads / infra
- Furniture
 - Components made of recycled materials
 - Planning services
 - Life cycle furniture services (leasing)
- Food and catering
 - More efficient food chains, reducing disposal of raw materials in the value chain
 - Concepts on how to reduce the disposal of food
 - New protein sources
- Local energy production and biobased energy
- Waste water treatment
 - Efficient and clean cycling of nutrients



Nordic way forward?

- Potential of innovation partnership?
- Potential of Life cycle costing?
 - ...in taking secondary materials, reuse and recyclability of materials into account in public procurement while making also the economic benefits of circular procurement visible
- At the moment public procurement do **support** and **promote** the principles of circular economy but examples of innovative 'circular' cases are still scarce
 - Markets are starting to develop, products not yet available
- > estimate 2020 onwards
- Development of service concepts and servicizing, e.g. repair services
- How can we provide conditions in which circular procurement can evolve? For example, the waste legislation?
- There are many good examples, a combination of which makes an ideal circular procurement case!