



CIRCULAR BUSINESS MODELS IN THE NORDICS

Webinar in Active Textile Society

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ABOUT NORION

Kia Egebæk

Senior consultant and partner

Working with strategy
development and project
management for
municipalities, public agencies
and companies.

Project manager of the NCM
Vision project 'PSS in the
Nordics'

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- Consultancy firm **established** in 1990
- Today, **35 people** working passionately within the spectrum of sustainability
- **Consultant to the** Nordic Council of Ministers, the EU Commission, the UN, the EEA, varying countries, municipalities and companies.
- Partner in the **European Topic Centre** for Circular Economy

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AGENDA

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1 Circular Business Models (in fashion)

2 Product Service Systems (PSS)

3 Potentials of PSS

4 Join the project

CIRCULAR BUSINESS STRATEGIES IN THE FASHION INDUSTRY

CIRCULAR BUSINESS MODELS (IN FASHION)

MORE USE
PER USER



MORE USERS
PER
PRODUCT



BEYOND
PHYSICAL
PRODUCTS



KEY CIRCULAR BUSINESS MODELS

1

Resale

Resale of items via different platforms

- Peer-to-peer resale,
 - Third-party marketplaces
- Re-commerce
- Take-back schemes

2

Rental

peer-to-peer rentals by private owners,

large-scale rental and subscription models

PSS model

3

Repair

Repair of faulty or broken products or components

4

Remake

Creating new products from existing products or components.

All of these aspects can be vital part of a product service system (PSS) model



Product Service Systems PSS

A system of products, services, networks, actors and infrastructure.

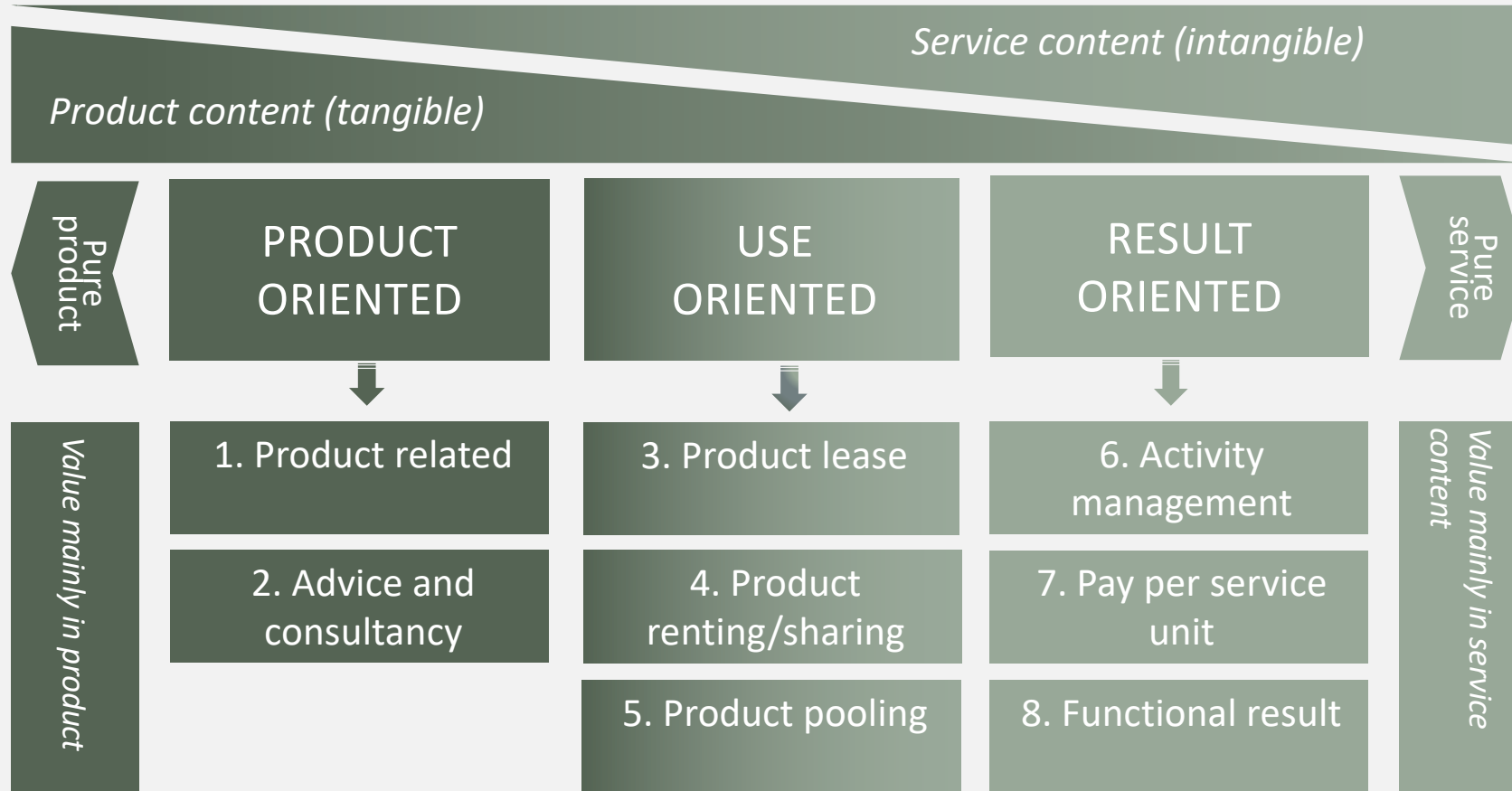
To satisfy customers' needs, in a competitive way, as well as to reduce environmental impact compared to traditional business models.

PRODUCT SERVICE SYSTEMS (PSS)

- In PSS models, goods are – in varying degrees – sold as services, e.g. through renting, leasing and sharing
- The key is that the producer retains ownership of the product
- PSS is often considered as a solution for decoupling economic growth from resource consumption
- But PSS is no guarantee for a circular economy or improved sustainability

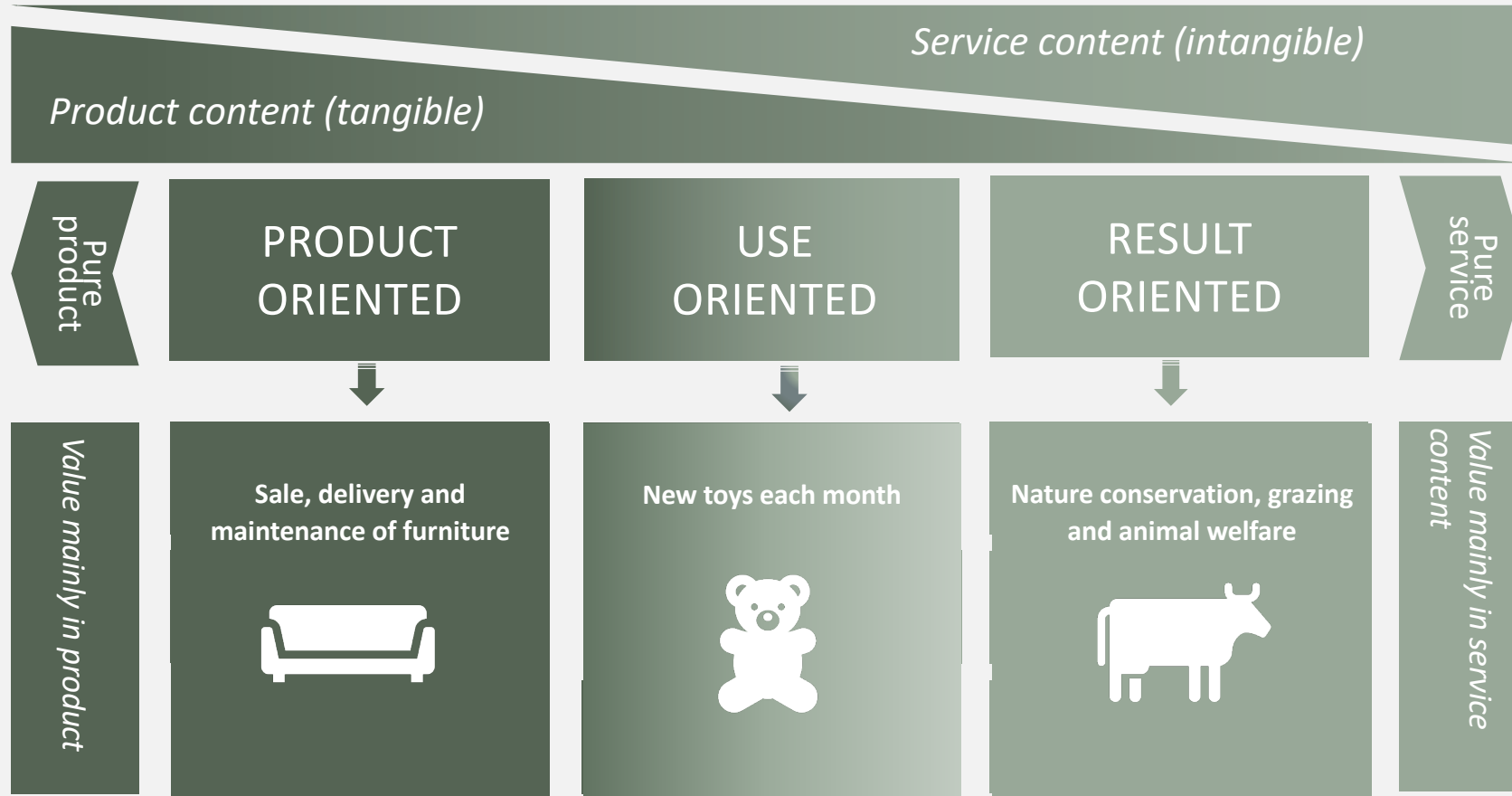
PRODUCT SERVICE SYSTEMS (PSS)

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CLUSTERING PRODUCT GROUPS

TRANSPOR-TATION	PACKAGING	MACHINERY & TOOLS	APPLIANCES, FURNITURE & HOUSEHOLD PRODUCTS	PRODUCTS FOR CHILDREN	CLOTHING & ACCESSORIES	SEASONAL & SPECIAL OCCASIONS	ELECTRONIC EQUIPMENT & SOLUTIONS	OTHER
Bicycles	Plastic & single use	Cranes	White goods & large appliances	Children clothes	Casual clothing	Party & event equipment	Computers & smartphones	Agriculture
Cars	E-commerce	Heavy machinery	Kitchen appliances & tableware	Toys	Clothes for special occasions	Sports, camping & hiking gear	Printers	Infrastructure
Scooters	Freight	Tools	Heating & electricity	Furniture & equipment	Workwear		Batteries	Animals
Boats		Processing equipment	Furniture		Accessories & jewellery		Cloud-based options	Plants
Mobility as a Service		Chemicals	Home textiles				Streaming service & E-books	Dinner subscriptions & catering

POTENTIAL OF PSS IN FASHION

71 % of consumers interested



High market potential for (online) rental services



Potential to increase use rate from 25 to 40 uses by 2030



ENVIRONMENTAL GAINS POTENTIAL

1

Avoidance of new production

Achieving total reduction of raw material consumption by reducing the need for (new) products

e.g. sharing of products
– multiple users or longer use

2

Product life extension

Improved performance through structured maintenance and upgrades

Designing the product to maintain its function and quality for longer

3

Improved use-phase

Minimised resource consumption in the use phase of the product (e.g. energy use), through product design, and conscious and appropriate handling of the product

4

Reduced waste generation

Minimised waste by, e.g. appropriate take-back schemes, reuse, upcycling (and recycling)



LACK OF EVIDENCE

- Most companies haven't documented their environmental impacts.
- Environmental impacts of PSS compared to other business models are often difficult to assess,
 - and positive impacts are only assumed and not demonstrated

CALCULATING THE EFFECTS



A PSS is compared against a similar system of **conventional product ownership**



Either type of system involves an initial «investment»
- the total emission 'costs' associated with that system



In return for that investment, the system yields product utility



More sustainable systems deliver utility at a lower unit 'emission cost'

AN EXAMPLE WOMEN'S APPAREL

- Occasional wear, made of polyester, weighing 800 grams
- Conventional ownership:
 - Normal lifespan 4 years
 - Worn 2x per year
 - Cleaned once every other use (4 times total)
- PSS model:
 - Monthly rental for 6 years,
 - Rented out 1/3 of the time,
 - Used once per rental
 - Cleaned upon every use



CALCULATING THE EFFECTS

Cost

Raw materials and manufacturing:
3.78 kg CO2 eqv

Cleaning:
0.25 kg CO2 eqv

Disposal (assumed textile incineration):
0.01 kg CO2 eqv

Transport associated with delivery:
0.01 kg CO2 eqv

Con



Total utility:
 $4 \times 2 = \underline{8 \text{ uses}}$

Total costs:
 $3.78 + 0.01 + (4 \times 0.25) + 0.01$
 $= \underline{4.80 \text{ kg CO2 eqv}}$

Cost per unit of utility:
 $4.8/8 = \underline{0.60 \text{ kg CO2 eqv}}$

PSS



Total utility:
 $6 \times 12 \times (1/3) = \underline{24 \text{ uses}}$

Total costs:
 $3.78 + (24 \times 0.01) + (24 \times 0.25) + 0.01$
 $= \underline{10.03 \text{ kg CO2 eqv}}$

Cost per unit of utility:
 $10.03/24 = \underline{0.42 \text{ kg CO2 eqv}}$

Total utility: 6 uses
Total costs: 5,35
Cost per unit of utility:
 $\underline{0,89 \text{ kg CO2 eqv}}$

PSS MODELS FOR TEXTILES IN THE NORDICS

Nordic textile companies illustrating PSS business operations and environmental gains:

1. Improved product lifespan due to economic incitements
2. Less production due to the sharing of occasional products
3. Improved use phase of the products with energy efficient maintenance



JOIN THE PROJECT!

Apply for a PSS Pilot Programme and gain professional consultancy assistance for a value of up to 300,000 DKK

Who can apply?

Nordic companies that work within the field of PSS or Nordic companies wishing to investigate potential PSS solutions for their business model.

Deadline for applications: November 1st, 2023 - we can help you apply.



www.pssinthenordics.com

Find more information



Thank you!

Get in contact:

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Learn more about the project and apply
for funding:

www.pssinthenordics.com