

# Scandinavian experience

FUTURE OF THE DANUBE REGION:

GREEN TRANSITION AND CIRCULAR BIOECONOMY

**Dr. Torfi Johannesson / Nordic Insights**

# PA-Bioeconomy – who are we?

— PA-Bioeconomy covers the following priority areas:

- Bioeconomy and forestry (Nordic Council of Ministers)
- Agriculture (The Ministry of Agriculture and Forestry, Finland)
- Rural Development (The Ministry of Agriculture of the Republic of Lithuania)
- Fisheries and aquaculture (The Swedish Board of Agriculture)

# Modes of Action

Mapping  
Networking  
Influencing



# PA-Bioeconomy 2021-2027

Bioeconomy; Fisheries; Agriculture; Forestry; Rural development



## Main areas of action:

- Sustainable bioeconomy (public outreach; workshops; road-trips; publications; videos/podcasts)
- Nutrient leakage from agriculture (guidelines; standards; workshops; digital platform)
- Blue bioeconomy (ecosystem restoration; new business models; MA-network)
- Youth (BLP; direct involvement in activities; network/panel)
- Rural development (Cross cutting; MA-network)

## Flagships – from projects to processes – translating the new Action Plan into practice:

- Flagship projects have and will continue to be important for the PA
- Adding processes will strengthen the institutional capacity and the links to the MS's
- Two to three thematic working groups are planned with participation from all MS's.

# Bioeconomy in the Nordic and Baltic Region

## Nordic Bioeconomy Strategy

- Establishment of a Nordic Bioeconomy Panel
- Case study - 25 cases
- A Nordic Bioeconomy Programme
- Nordic/Baltic Trend Analysis



[www.norden.org/25cases](http://www.norden.org/25cases)

7

COUNTRIES



5

CRITERIA



4

STRONGHOLDS



25

CASES



NORDIC  
BIOECONOMY

25

CASES FOR  
SUSTAINABLE  
CHANGE



# Nordic Bioeconomy – for Sustainable Change

## REPLACE

– in search  
of responsible  
resources

## UPGRADE

– unlocking  
the full potential  
of sidestreams  
and waste

## CIRCULATE

– creating  
self-sustainable,  
local and circular  
bio-solutions

## COLLABORATE

– because  
we are smarter  
together

# 5



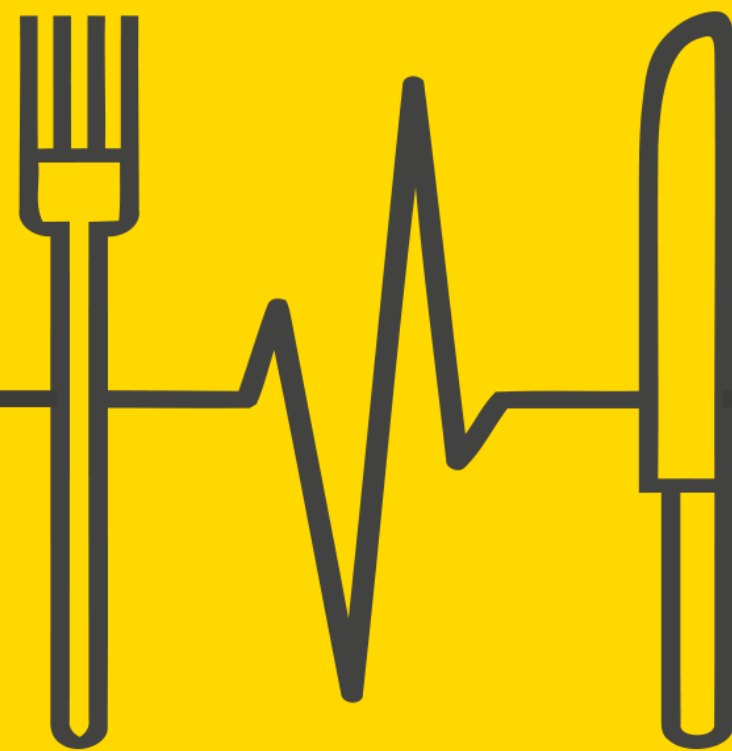
Principles for a Sustainable Nordic Bioeconomy



Inclusive Growth



Resilient Ecosystems



Food & Health



Resource Management



Sustainable Consumption





# NORDIC BIOECONOMY PROGRAMME

# 15

## ACTION POINTS FOR SUSTAINABLE CHANGE



## 15 ACTION POINTS

### INNOVATE

Supporting research, innovation  
and human capital

1. Increased R&D funding
2. More coherent policies
3. Investment support
4. New educational opportunities
5. Provide intelligence

### ACCELERATE

Policies and market  
development

6. Targeted public procurement
7. Regulatory frameworks
8. Labelling and certificates
9. Regional innovation strategies
10. Promote cross-border freedom  
of movement

### NETWORK

Forging new and  
stronger connections

11. Support bioeconomy clusters
12. Open access to test and  
demonstration centres
13. Macro-regional co-operation
14. Bolstering networking activities
15. Nordic impact and branding

# 10

# TRENDS

## FOR SUSTAINABLE BIOECONOMY

in the Nordic Arctic and  
Baltic Sea Region

- Closing material loops
- Biofuels
- Local branding
- Seaweed and algae
- Alternative proteins
- ...



**EUSBSR**  
EU STRATEGY  
FOR THE BALTIC  
SEA REGION

## 1. Trends update

# Updated trends list

### Macro trends influencing the bioeconomy

1. The world is going digital
2. Green new deals
3. Investors are going green
4. Urbanization and changing demographics
5. Electrification of the energy system

### Bioeconomy trends

1. Closing the industrial loops
2. New protein sources
3. Algae on the rise
4. Storytelling adds value
5. Biofuels replacing fossils

#### ENABLING

Digitalization adding value to the bioeconomy

Shift in consumer behaviour

The rise of cheap clean power

#### VALUE STREAM

Industrial side streams as a resource

More circular and cascading business models

Growing appreciation of ecosystem services

Businesses driving social impact

#### RESOURCE STREAM

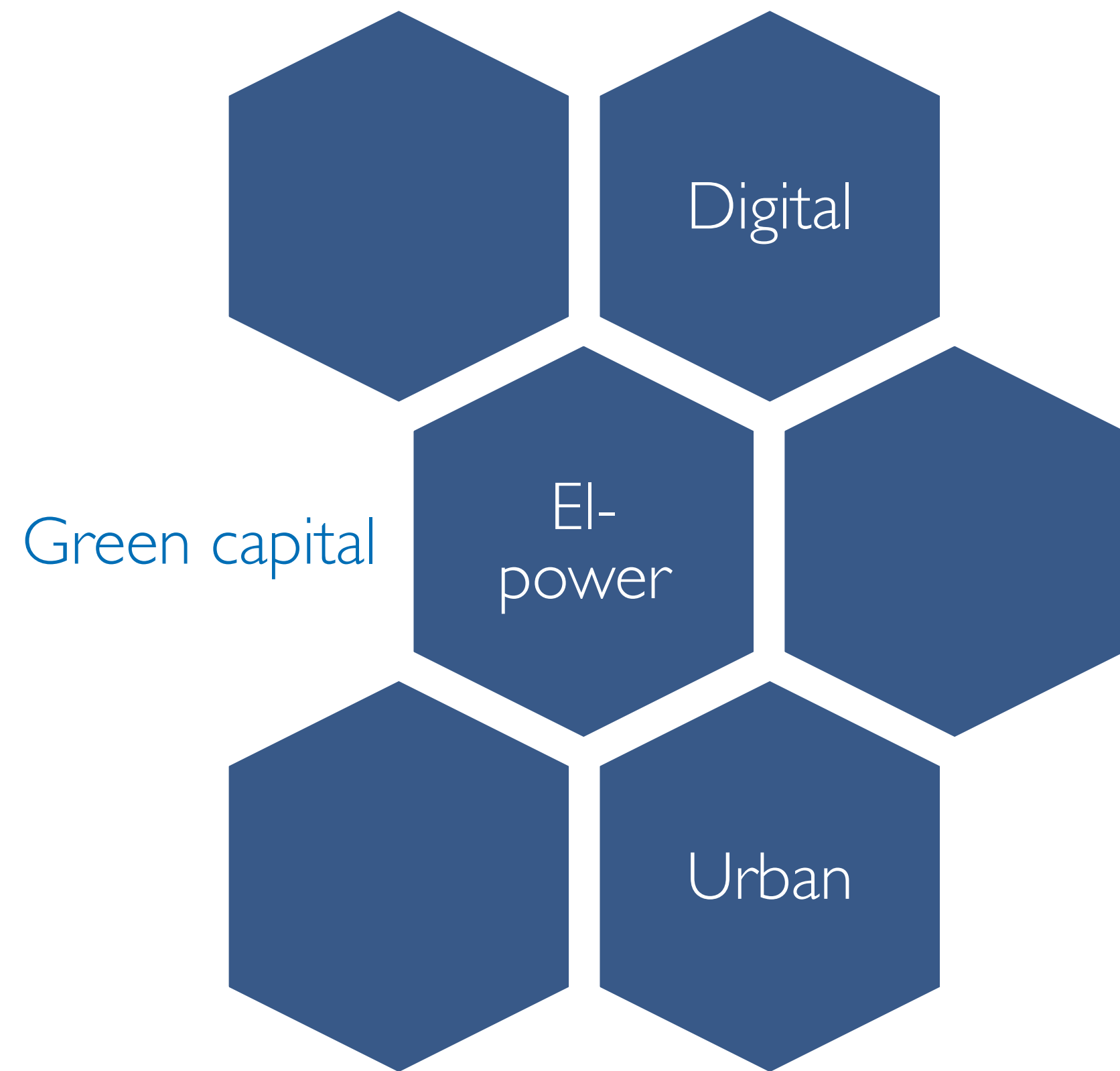
Development of alternative proteins

Diversification of value creation in forests

New opportunities for plant-based marine resources

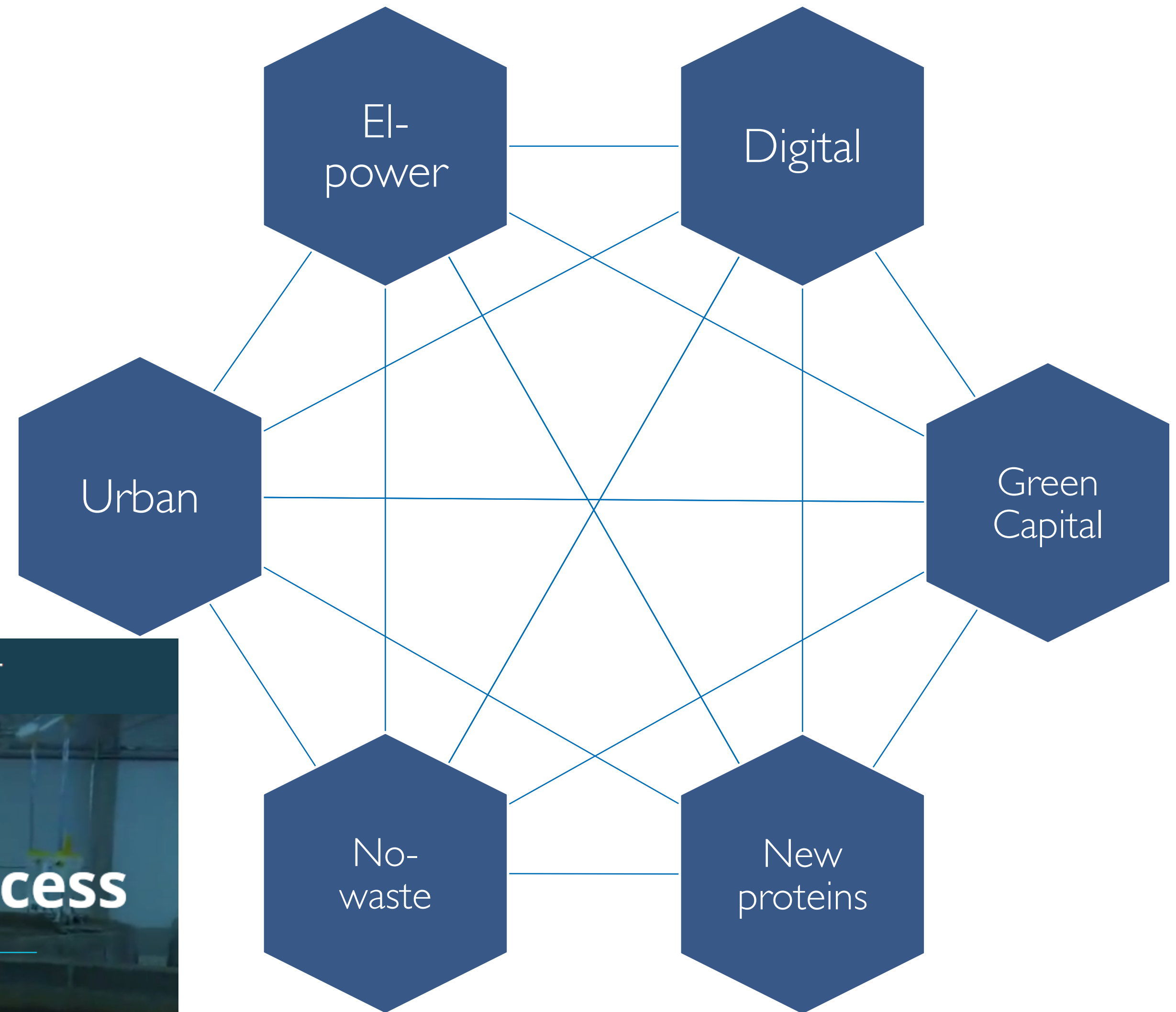
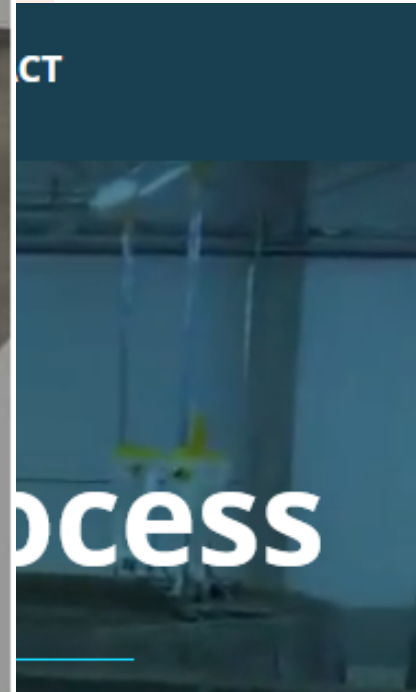
Uptake in bio-based construction materials

# Macro trends



# Bioeconomy trends





- Our production method is developed towards minimum ecological impact



**No bio risks**



**Zero waste, zero exchange**



**Green energy**



**Full recycling**

- Our shrimps are 100% natural



**Grown in recreated seawater conditions**



**Natural feed**



**No Antibiotics, no Chemicals, no Growth hormones**



**No treatment for packaging**

<https://localocean.eu/>



# Biorefineries





# Biofuels replacing fossils

Biofuels – transport fuels based on biomass like straw or woodchips – have seen considerable investment and political support. This is in part based on the ambition to reduce the European Union’s dependency on imported fuels. Recently the rise in other renewable energy sources, especially wind, and electric cars has led many to argue that biofuels will be a temporary energy source in the transition from fossils to solar/wind based transport system.



# Bioenergy – trade-offs

1. Bioenergy and food production
2. Bioenergy and biodiversity
3. Bioenergy and biorefineries



# BioEquality – gender equality in the Nordic bioeconomy

## Redefining digital bioeconomy

Reviewing how the digital transformation affects gender inequalities in the Nordic bioeconomy

# Take-aways

- Digitalization and AI will pick their winners
  - Cows are out – "micro" is in
  - We don't sell products – we sell stories
  - Bioenergy is important NOW, but...
- 
- To change the world, you need:
    - supply
    - demand
    - regulatory framework
    - financial incentives

# Financial instruments

- Primarily “local funding”
  - Nordic Council of Ministers
  - Interreg Baltic
  - Swedish Institute
- Own funding from participants
  - Governments
  - NGO's
  - Universities
- Linking to existing projects and programmes

Mapping  
Networking  
Influencing

# Links to resources

- **Trend analyse:** <https://www.norden.org/en/publication/ten-trends-sustainable-bioeconomy-nordic-arctic-and-baltic-sea-region>
- **25 cases:** <http://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A1065456&dswid=-3324>
- **Nordic Bioeconomy Strategy:** <http://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A1222743&dswid=6171>
- **Gender Equality:** <https://nordicforestresearch.org/bioequality-gender-equality-in-the-nordic-bioeconomy/>

# Nordic Insights

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