

# Green supply chains

Implications and challenges for  
Rhine-Scheldt Delta seaports



Project partners



**ECONOMIC ANALYSIS OF THE  
RHINE-SCHELD T DELTA PORT REGION**

Report prepared for  
**ING**

Report prepared by  
**ITMMA**  
Universiteit  
Antwerpen

**Economic Analysis of the  
Warehousing &  
Distribution Market  
in Northwest Europe**

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**STRATEGIC EVALUATION  
OF THE BELGIAN PORT SECTOR  
AND ACCOMPANYING SERVICES**

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**Green Supply Chains**  
Implications and challenges  
for Rhine-Scheldt Delta Seaports

Report prepared for  
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**ECONOMIC ANALYSIS OF  
BREAK BULK  
FLOWS AND ACTIVITIES IN BELGIAN PORTS**

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**ECONOMIC ANALYSIS OF VOLATILITY  
AND UNCERTAINTY IN SEAPORTS**  
TOOLS AND STRATEGIES TOWARDS GREATER FLEXIBILITY, RESILIENCE  
AND AGILITY OF PORT AUTHORITIES AND PORT COMPANIES

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**THE FUTURE OF  
PORT LOGISTICS**  
MEETING THE CHALLENGES OF  
SUPPLY CHAIN INTEGRATION

Report prepared for  
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**ITMMA**  
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Antwerpen

**VIL**  
EMPOWERING  
LOGISTICS

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**UPT**  
*Erasmus*  
ERASMUS CENTRE FOR URBAN  
PORT AND TRANSPORT ECONOMICS

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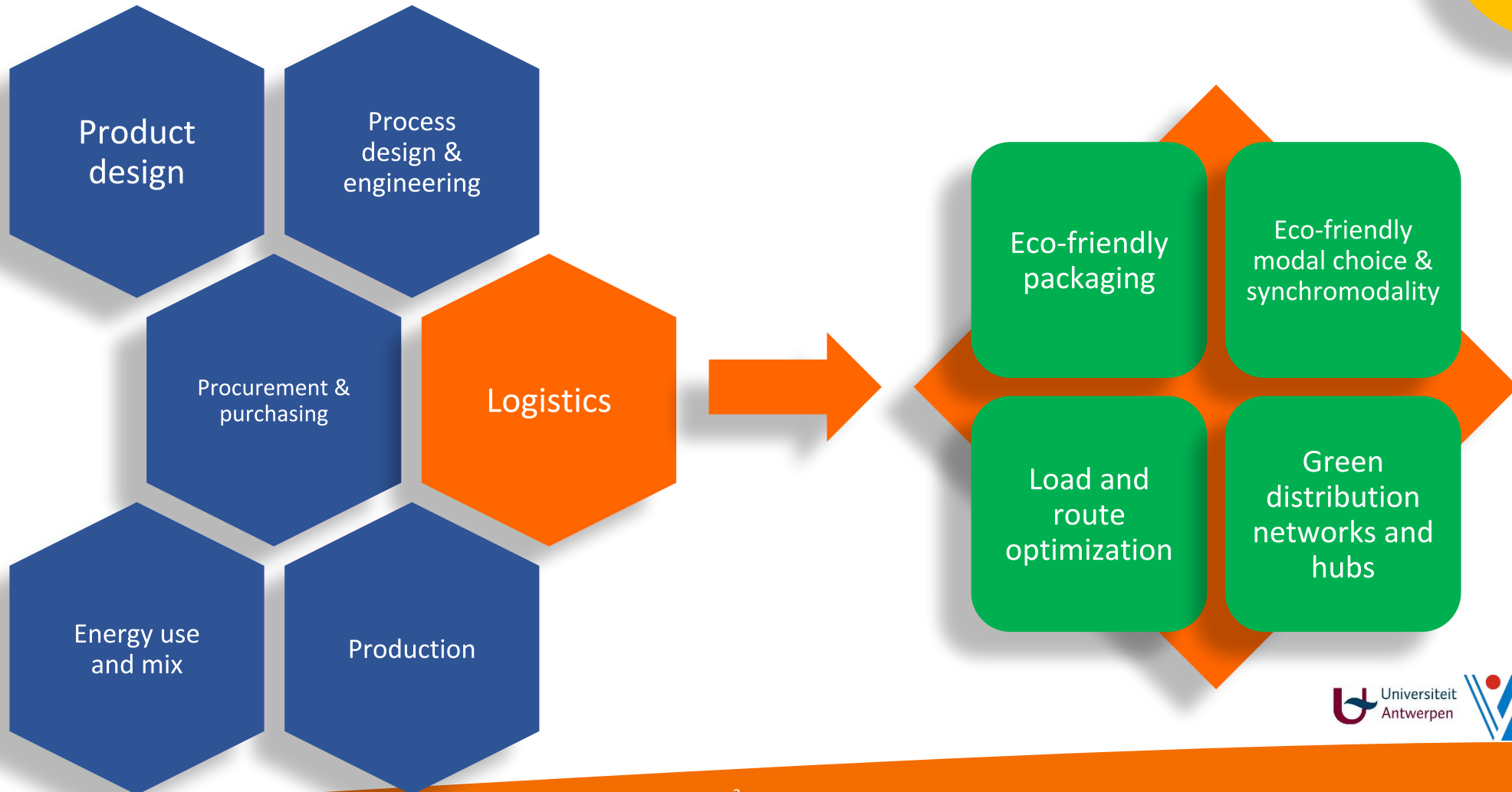
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# Key features of GSCM

Reduction in environmental impacts by focusing on a series of R's: Reduce, Re-use, Recycle, Remanufacture, Reverse logistics, etc.

Sense of urgency



Pushing for green supply chains against background of volume and investment growth

Amsterdam  
 Rotterdam  
 Antwerp  
 The Hague  
 North Sea Port  
 Port of Zebrugghe  
 Port of Ostende



# Wide range of fields of action for GSCM in ports

With involvement of multitude of actors

## Green shipping

e.g. Green port dues (ESI)  
Shore Power Supply  
Support LNG as a ship fuel

## Green port development & operations

e.g. CCUS (Carbon capture utilization and storage)  
“ecologies of scale”  
Windmills and solar parks/roofs in ports  
Energy transition  
Green concession policy

## Knowledge exchange & development

e.g. Co-operation through associations (WPSP, Ecoports) and coalitions of the willing  
Sustainability reporting  
Incubators, universities, research institutions

## Green inland logistics

e.g. Synchromodality  
Inland terminals and port-hinterland concepts  
Spread traffic in time and space  
Pipeline network

## Circular economy

e.g. Industrial ecology  
Seaports as hubs for recycle flows  
Use of renewable energy sources

# GSCM initiatives

## Some of the main issues and concerns



Corporate financial health + business case  
Paradigm shift?



Choice of green technology  
or energy source



Distribution of cost/benefits  
in case of collaboration



How to reach targets?



'Greenwashing'



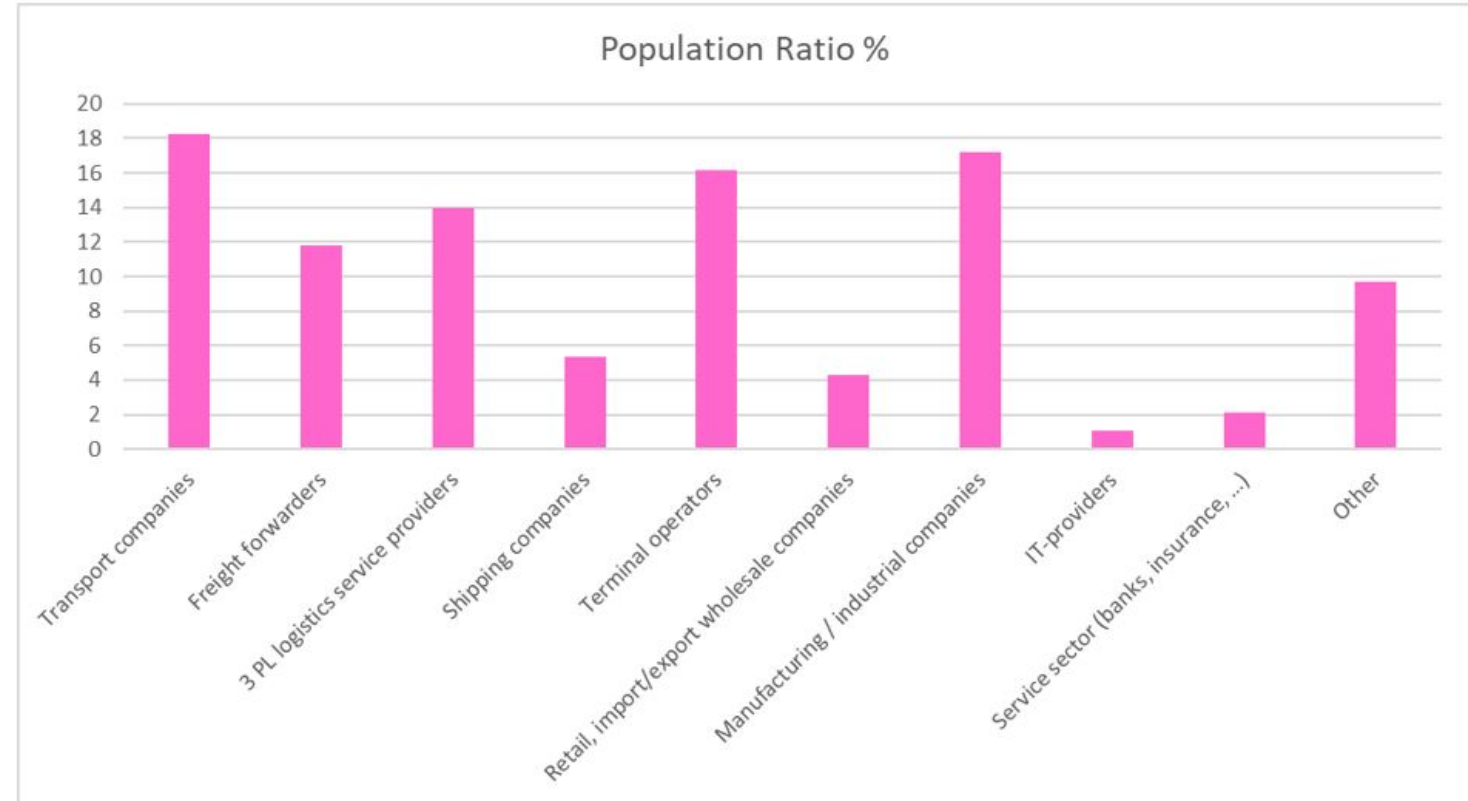
Lack of coherence and continuity of public policies (e.g. subsidies)

# Survey

## Survey population

- Assessment of the realisations, initiatives and expectations of the stakeholders in the field of greening of port logistics
- 22 questions
- About 1000 companies were invited to participate
- C-level or senior mngt

### Response rate



# Survey

## How much of a topic is greening for your company?

	Prior to 2010	Prior to 2015	Since 2016-2017	Since last year (2018)	We're starting (2019)	We will start next year(2020)	We are planning to start (2021-2022)	Not yet
Since when has greening been a topic ?	32 (34,4 %)	33 (35,5 %)	13 (14,0 %)	5 (5,4 %)	3 (3,2 %)	0	2 (2,2 %)	5 (5,4 %)
Since when has greening been included in your mission statement ?	21 (22,6 %)	24 (25,8 %)	18 (19,4 %)	7 (7,5 %)	5 (5,4 %)	1 (1,1 %)	0	17 (18,3 %)
Since when have you effectively expanded into actions ?	24 (25,8 %)	27 (29,0 %)	11 (11,8 %)	13 (14,0 %)	4 (4,3 %)	3 (3,2 %)	2 (2,2 %)	9 (9,7 %)

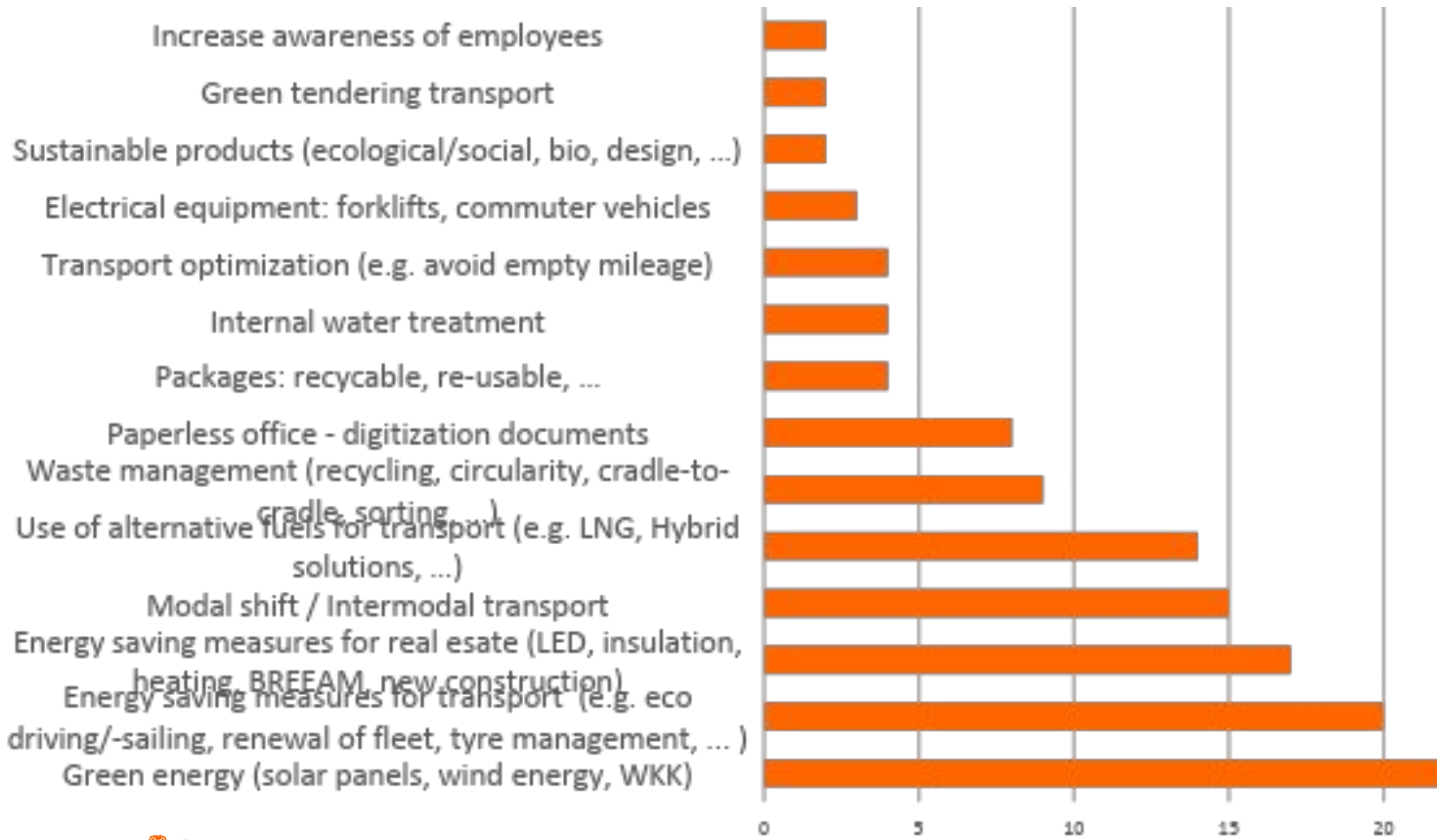
## Findings

- 70%: **topic** prior to 2015
- *LSPs*: significantly more aware (78% by 2015) and active (80% by 2017)
- *Shippers*: a stunning 85% included it in their company mission by 2017, but only 50% have moved to actions by then
- Almost 20% still needs to get into action



# Survey

## Most obvious example of a green measure?



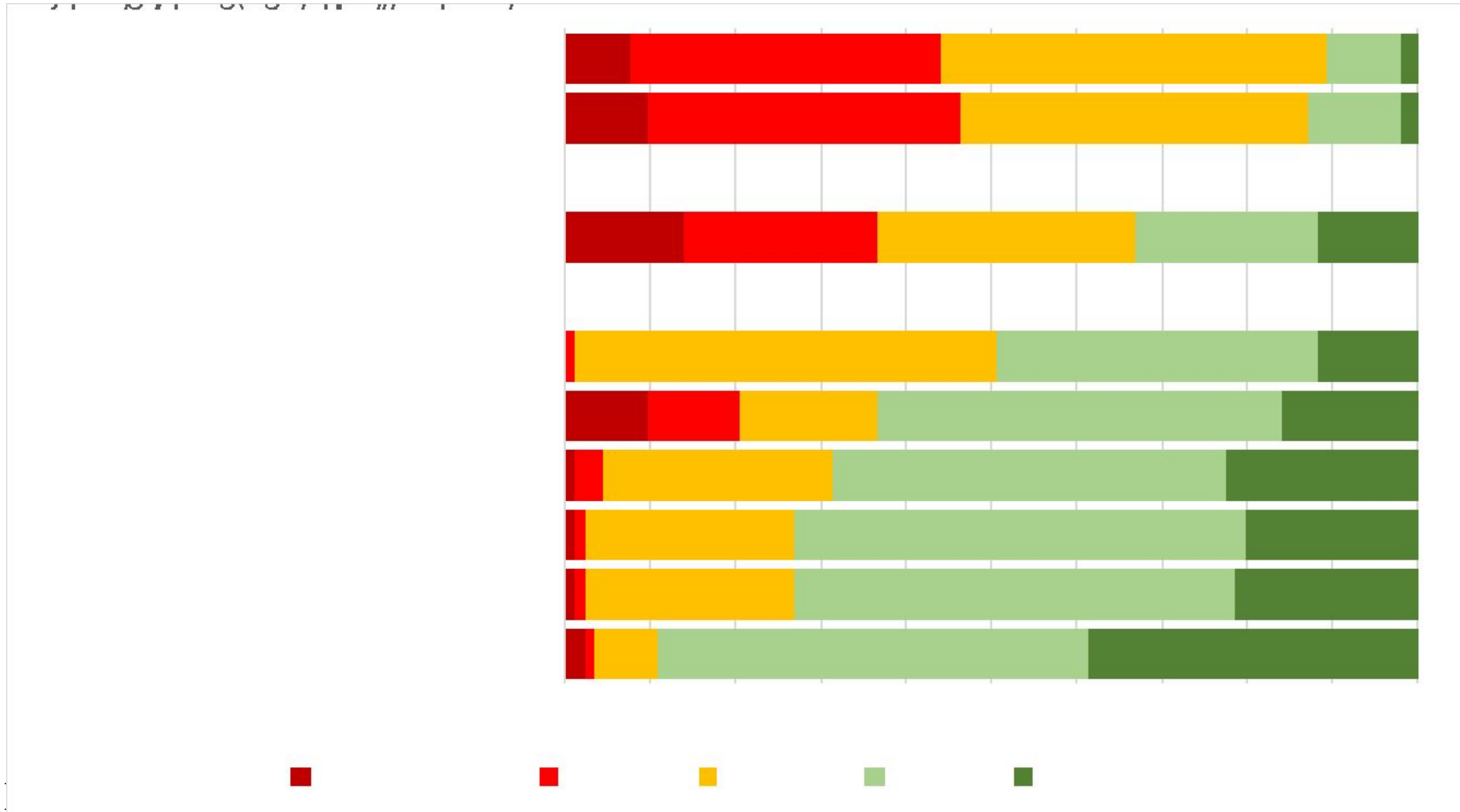
### Top 5:

- Green energy (22)
- Energy saving measures for transport (20)
- Energy saving measures for infrastructure (17)
- Modal shift (15)
- Alternative fuels (14)

*Best scoring measures relate directly to existing legislation and indirectly to cost savings*

# Survey

## Major drivers & barriers to greening of supply chains



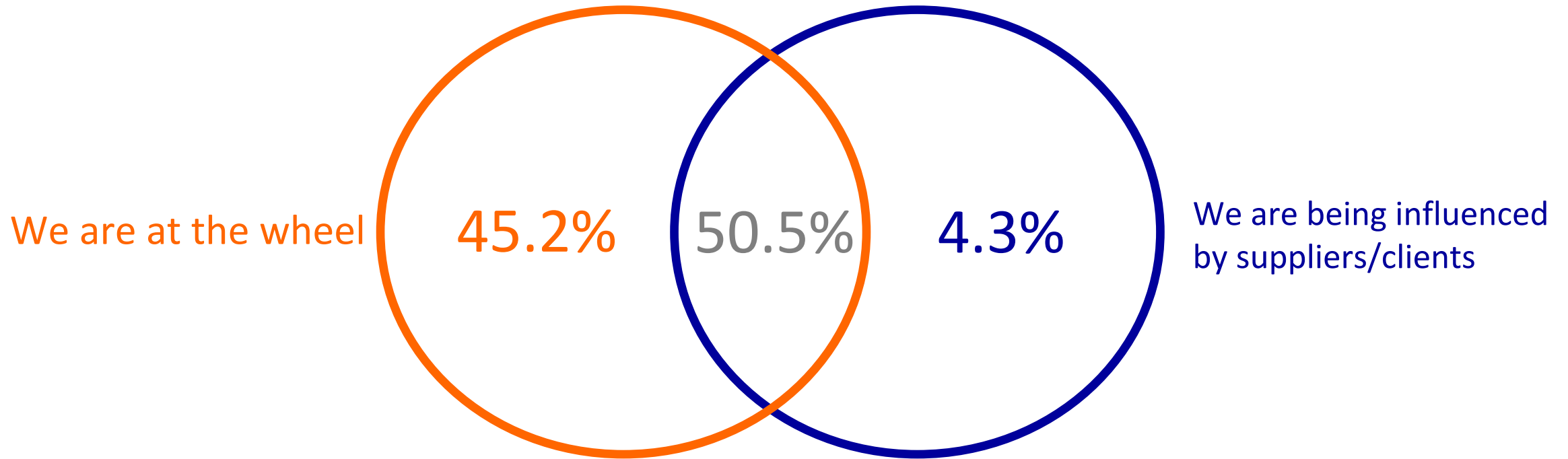
Main barriers

Undecided

Main drivers

# Survey

## Who is the driving force behind greening?

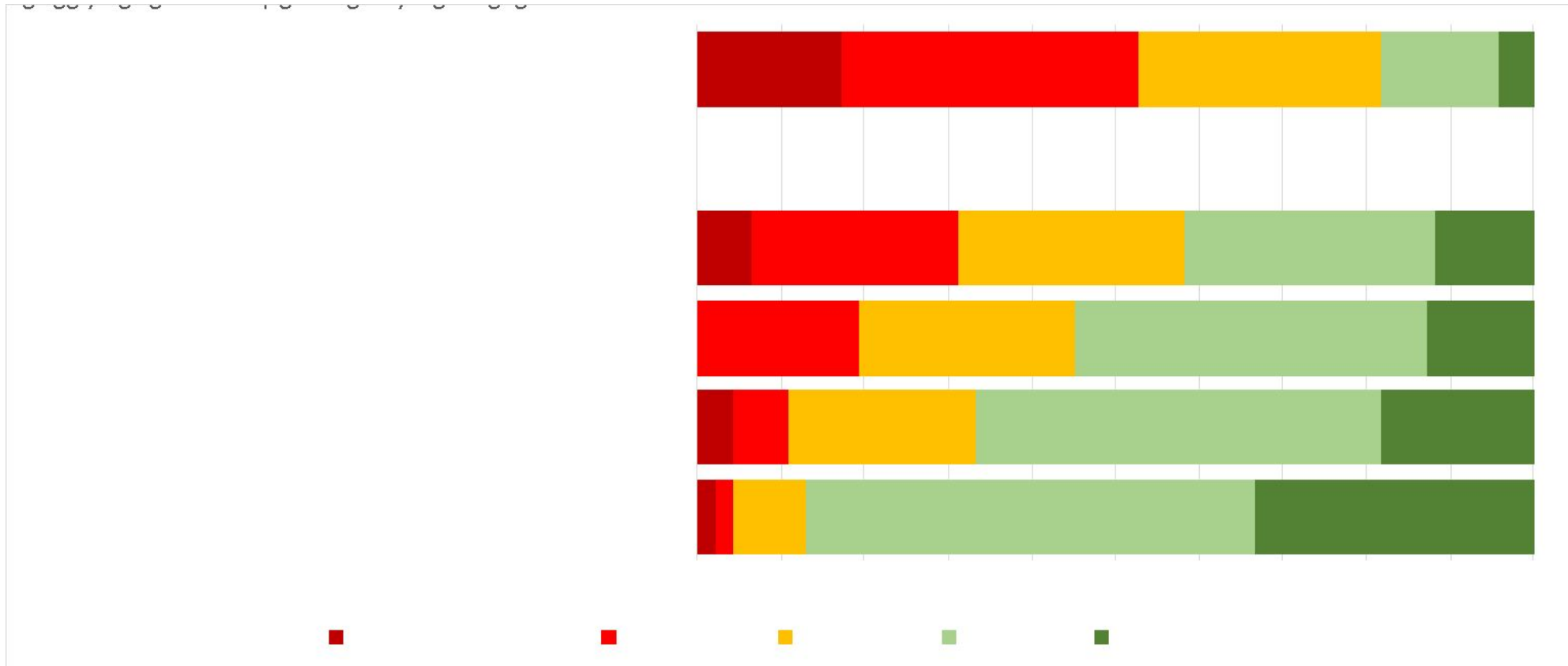


## How is greening imposed?

Design specifications, environmental audits, sustainability ratings/certification, etc..

# Survey

## The role of government

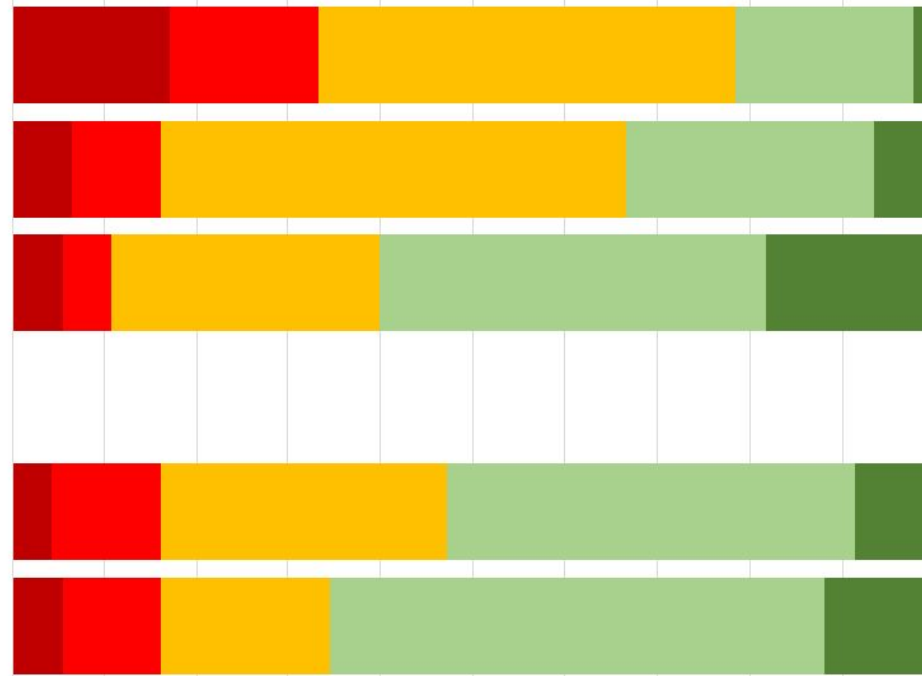


## Findings

- 53%: some **involvement** is desirable (*Shippers*: 80%)
- Impose minimum **standards**
  - all *shipping companies* (100%)!
- **Subsidies**: Especially by *LSPs* (83,2%)

# Survey

Is competition between ports and companies influenced by greening actions?



## Findings

- Mainly influence: companies own **competitiveness** (66%) and choice of **transport mode** (60%)
- 52.7% sees greening as an opportunity for **collaboration**

# Key conclusions

Urgency - but still a large group that has to get into real action

Major activities are in energy saving actions: business case is leading

Drivers are not all economic: reputation, being attractive for young employees  
& just striving for a better planet

KPI's are missing, needed for enabling the measurement of progress and impact

(Not) Greening seemingly may have direct implications for market shares

Almost everyone agrees that greening is a joint responsibility

# Recommendations

1. Exploit underlying feeling

2. Capitalize on mentality shift & joint commitment



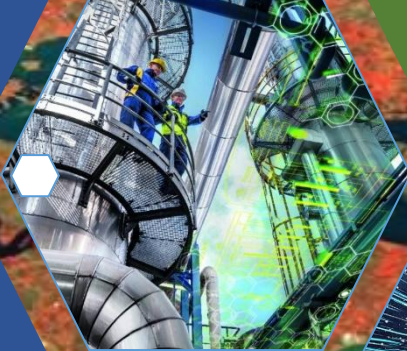
3. Co-operation & guidance on dealing with uncertainty



4. Maximize ecologies of scale

5. Cross-border implementation of CCUS solutions

7. Big bang approach



6. Facilitate role of ports as recycling centres

8. Chain approach toward the environment



9. Case-specific role of port authorities



10. Port authorities are not tax collectors



The report was prepared for ING Belgium, visit [www.ing.be](http://www.ing.be).

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