# Key Sustainability Goals for the Logistics Sector: A Cross-Sectional Survey Analysis of the European Logistics Landscape

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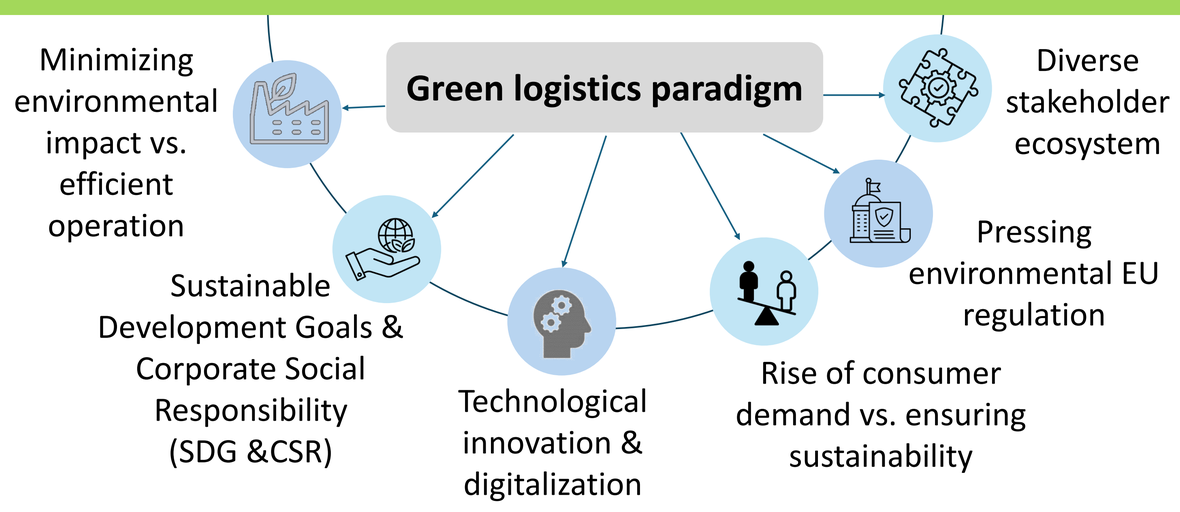
## INTRODUCTION




The aim of this study is to identify the **key goals and drivers** that influence the achievement of green logistics, and to analyse how these are perceived through the **different stakeholders** in the **European context**.

## METHODOLOGY FRAMEWORK

| Phase 1 | Phase 2 | Phase 3 |
|---|---|---|
| **Selection of goals and drivers** | **Survey design and data collection** | **Statistical methods** |
| • Based on literature review<br>• Workshop with logistics stakeholders | • Pairwise comparison of sustainability dimensions<br>• 5 and 7-point scale in the level of importance of goals and priorities in green logistics<br>• Online -> SurveyMonkey<br>• 115 valid responses<br>• Jul-Oct 2024 (EU) | (1) Sustainability goals: AHP + Welche's anova<br>(2) Main drivers: Wilcoxon rank-test |

## RESULTS

### (1) SUSTAINABLILITY GOALS

**AHP results of the pairwise comparison of sustainability dimensions (overall, by stakeholder role and EU region)**

| | Categorization | | Economic | Environ-mental | Social | Gover-nance | λmax |
|---|---|---|---|---|---|---|---|
| 1 | General | | 0.84 | 1.93 | 0.84 | 0.39 | 4.16 |
| 2 | By European territory | East (26.1%) | 1.22 | 1.55 | 0.72 | 0.52 | 4.16 |
| | | North (21.7%) | 0.83 | 2.10 | 0.63 | 0.44 | 4.12 |
| | | South (40.9%) | 0.84 | 1.93 | 0.84 | 0.39 | 4.16 |
| | | West (11.3%) | 0.49 | 1.89 | 1.13 | 0.49 | 4.16 |
| 3 | By stakeholder role | Academia (20.0%) | 0.65 | 1.94 | 0.90 | 0.52 | 4.16 |
| | | Ancillary services (19.1%) | 0.84 | 1.93 | 0.84 | 0.39 | 4.16 |
| | | Cargo owner (7.8%) | 1.20 | 1.20 | 1.20 | 0.40 | 4.00 |
| | | Government (18.3%) | 0.97 | 1.30 | 0.77 | 0.97 | 4.16 |
| | | Infrastructure manager (10.4%) | 0.64 | 2.16 | 0.57 | 0.64 | 4.03 |
| | | Logistics operator (17.4%) | 1.16 | 1.33 | 1.16 | 0.35 | 4.03 |
| | | Other (7.0%) | 0.77 | 1.30 | 0.97 | 0.97 | 4.16 |

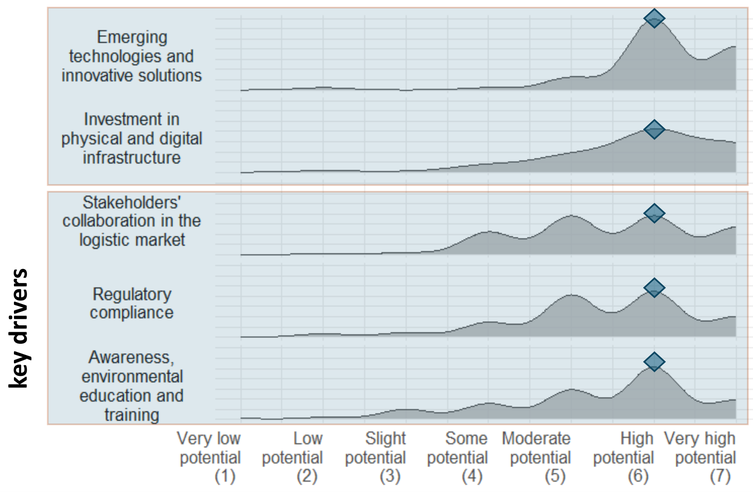
**Level of importance of the sustainable goals weighted by the AHP results according to stakeholder category, and calculations of the mean difference between them**


- **Environmental dimension is 2.3 times** higher than economic and social dimension.
- By European Regions, **Northern countries prioritize Environmental** dimension the most. For the **Western countries environmental and social** aspects are the most important ones. **Eastern countries environmental and economic**.

- **Logistics operators** and **cargo owners** emphasize economic and social goals.
- **Infrastructure managers** prioritise environmental goals.
- **Academia** and **ancillary** services share a high valuation of environmental concerns.
- **Governments** and **associations** value governance dimensions.

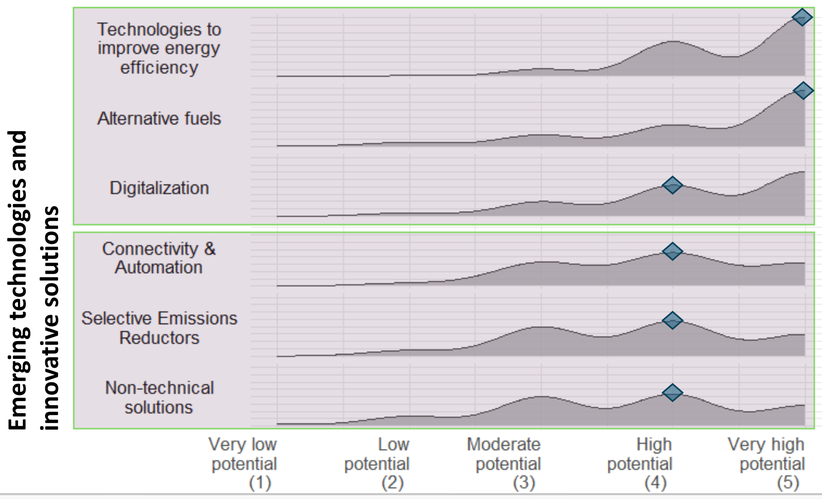
### (2) MAIN DRIVERS

Potential of key drivers identified in the literature



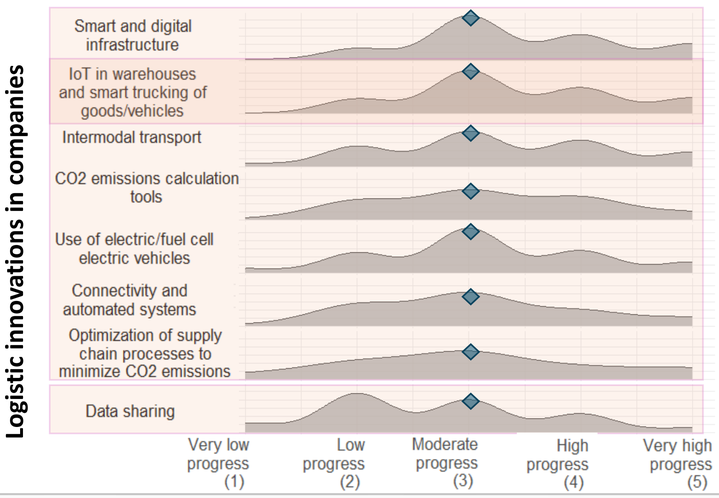

**Most impactful drivers**: Technologies and innovative solutions & infrastructure investments.
Non-technological factors remain important.

Potential impact of emerging technologies and innovative solutions




Innovative solutions with **very high potential: Energy efficiency technologies, alternative fuels and digitalization.**

Progress of logistics companies in implementing innovations




Most logistics innovations are progressing moderately; but **data sharing seems to be progressing more slowly**.

## CONCLUSIONS, LIMITATIONS AND FURTHER RESEARCH

- A stakeholder survey **reveals varying priorities in green logistics across stakeholders' categories and EU regions**.
- While **environmental goals are broadly supported**, cargo owners and logistics operators tend to favour economic and social objectives.
- **Top goals include improving energy efficiency and cutting GHG emissions** and air pollution.
- **Innovation and infrastructure**—both physical and digital—are key drivers of sustainable logistics.
- **Companies' adoption - Data sharing lags behind** other innovations like electric vehicles, intermodal transport, and warehouse IoT adoption.

- Future studies could validate findings through expert **focus groups, to refine the prioritization of goals and drivers** in light of ongoing developments.
- **Use results to support impact assessment** of innovative logistics solutions via multi-criteria evaluation methods.

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