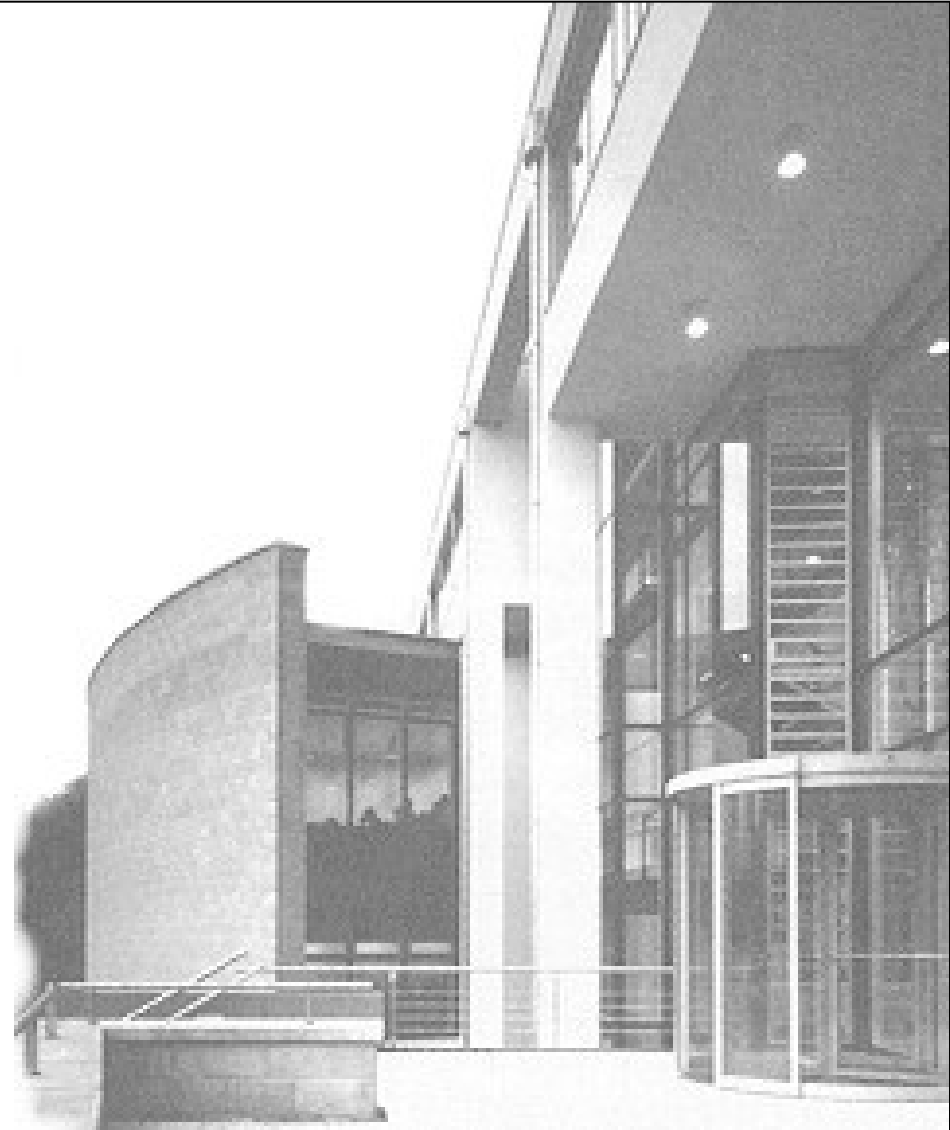


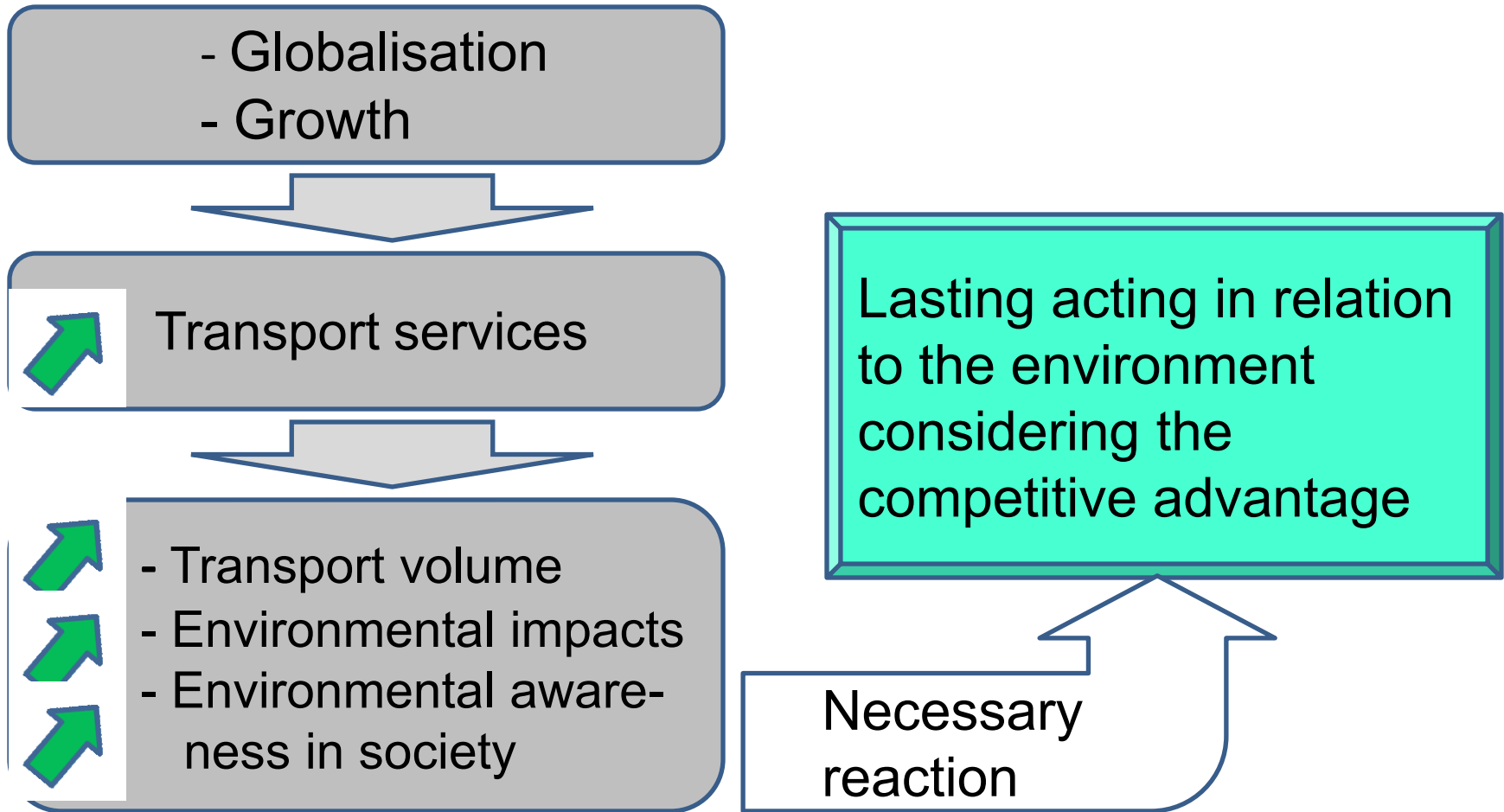
Change to Green in Intralogistics

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24th European Simulation and
Modelling Conference (ESM)
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1. Introduction
2. Potential in Intralogistics
3. Expert Survey
4. Conclusions



Sustainable business and processes

Requires

Change of existing corporate strategy

Subcategories

Ecology

Careful handling of environment or contributions to climate protection

Economy

Pursuit of economic goals

Social

Reconciliation of social forces



Balanced relationship





Balanced relationship



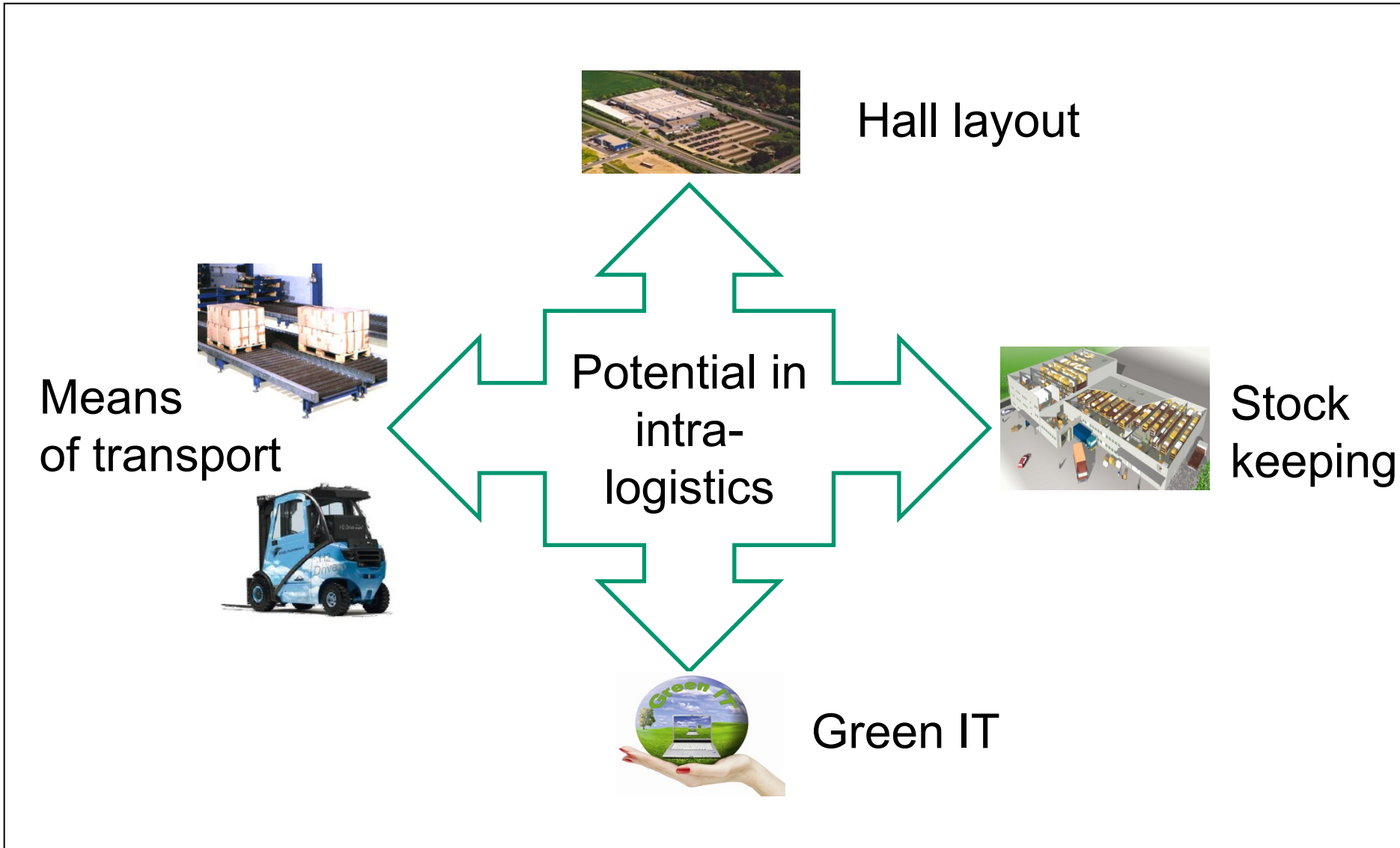
Reasons for disregard

Prejudices like e.g.:

Ecology = investment = long amortization time

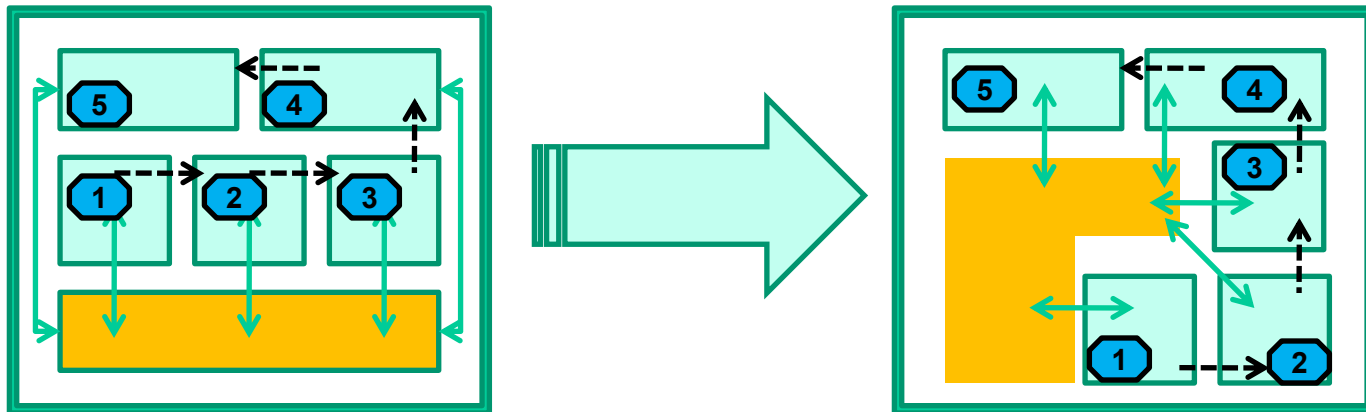
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2. Potential in Intralogistics



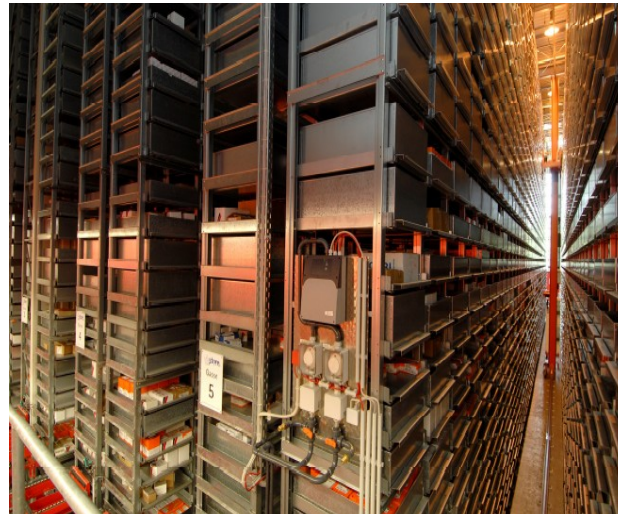
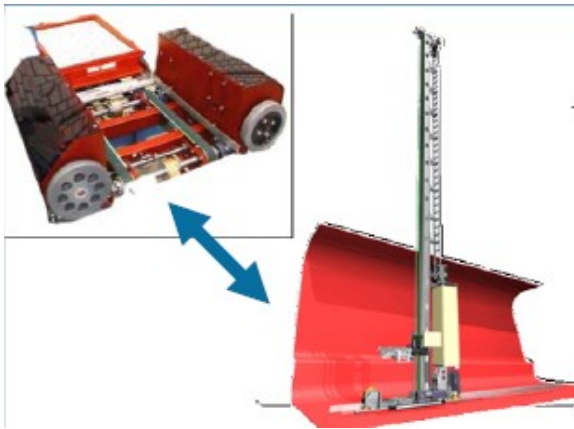
Potential in hall layout

- Definition of locations: Production halls, production lines in the halls and stocks
 - Under attention of the production sequences and short distances for transportation
- Optimal distance between the production lines
 - Employment of unpowered haulage systems e.g. chute
 - Production method: Transport of parts by workers



Potential in Stock keeping

- Energy recovery
- Use of motion detectors
- Automation of cooling area



Potential in Means of transport

Conventional feed systems

- Prevention of driveways through improved supervision and concepts
- Use of new propulsion concepts for forklifts (electro/hybrid drive)
- Optimisation of energy storage
- Use of automatic stacking systems



Potential in Means of transport

Fixed feed systems

- Reduction of transmission losses
- Avoidance of oversized drive systems
- Reduction of excessive compressed-air use
- Use of automatic stand-by function of material handling systems



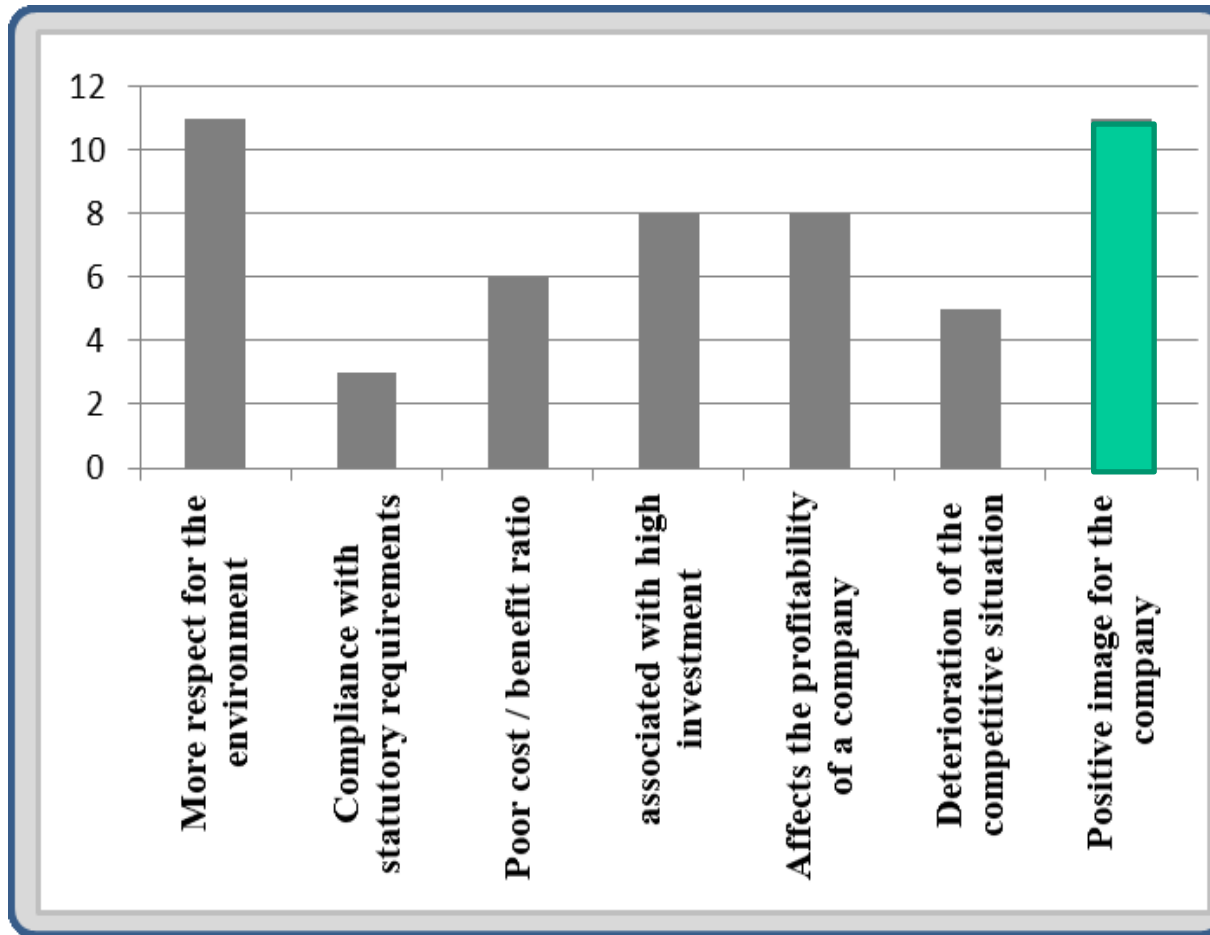
Potential in Green IT

- Use of Server-Virtualization
- Use of Warehouse-Management-Systems

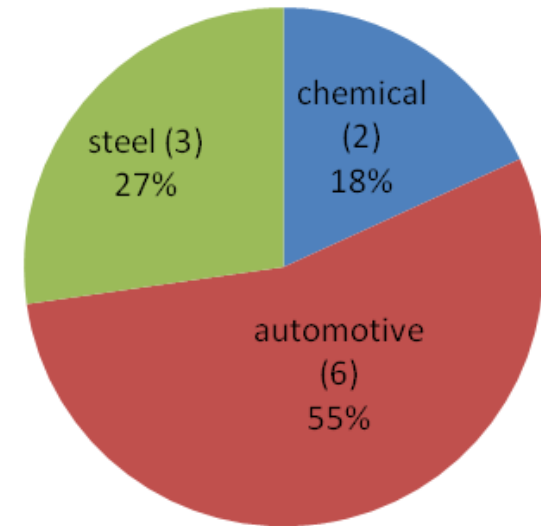


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Which statement do you associate with Green Logistics?

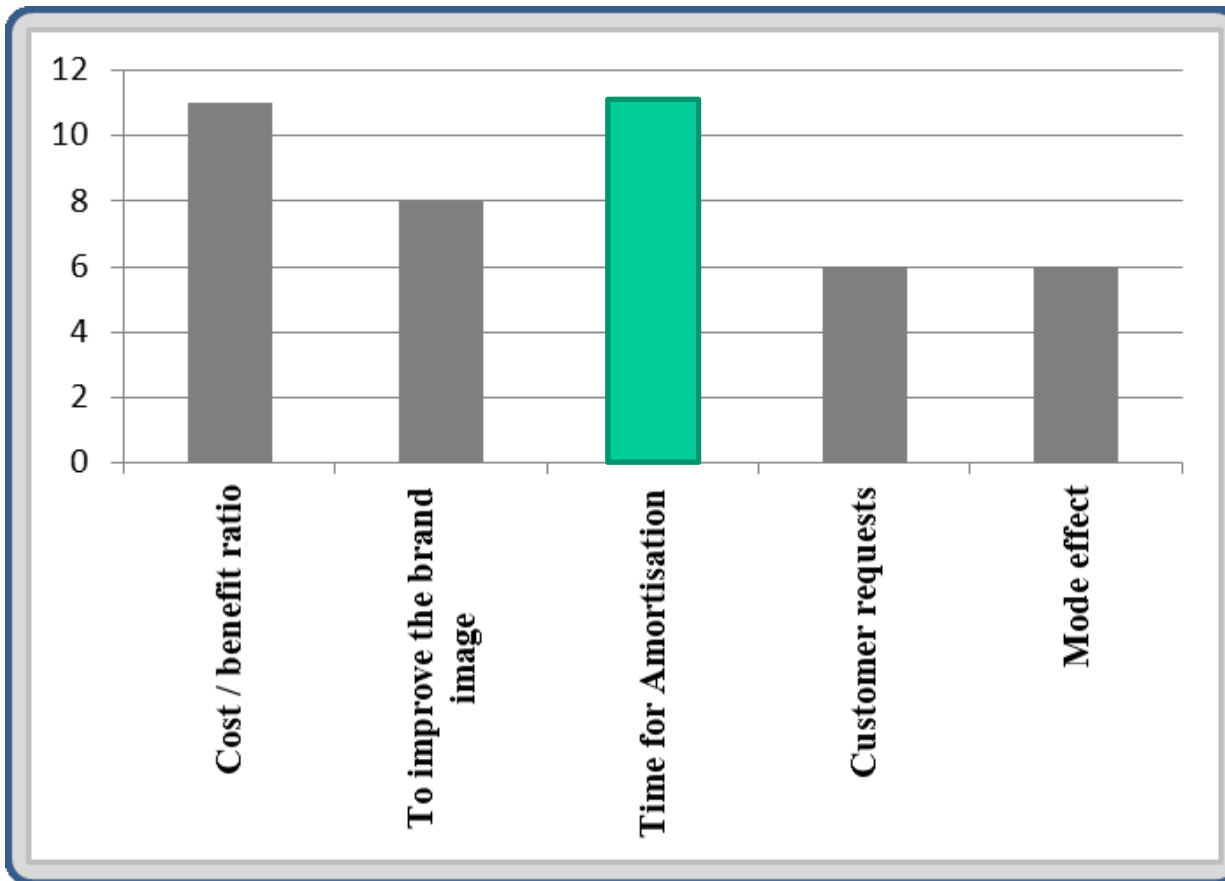


Respondent companies

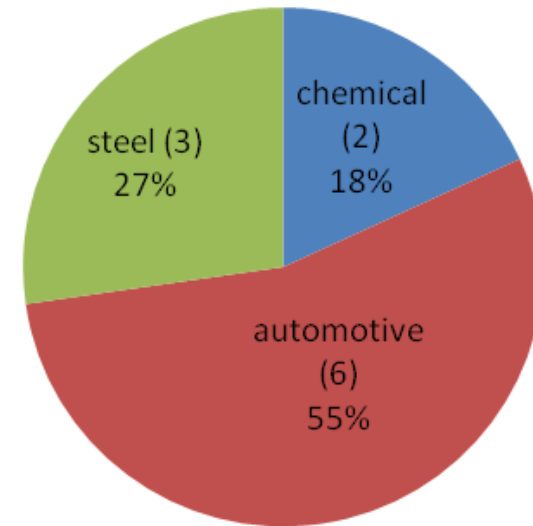


n=11
Multiple choices possible

What are the main triggers for change to green measures?

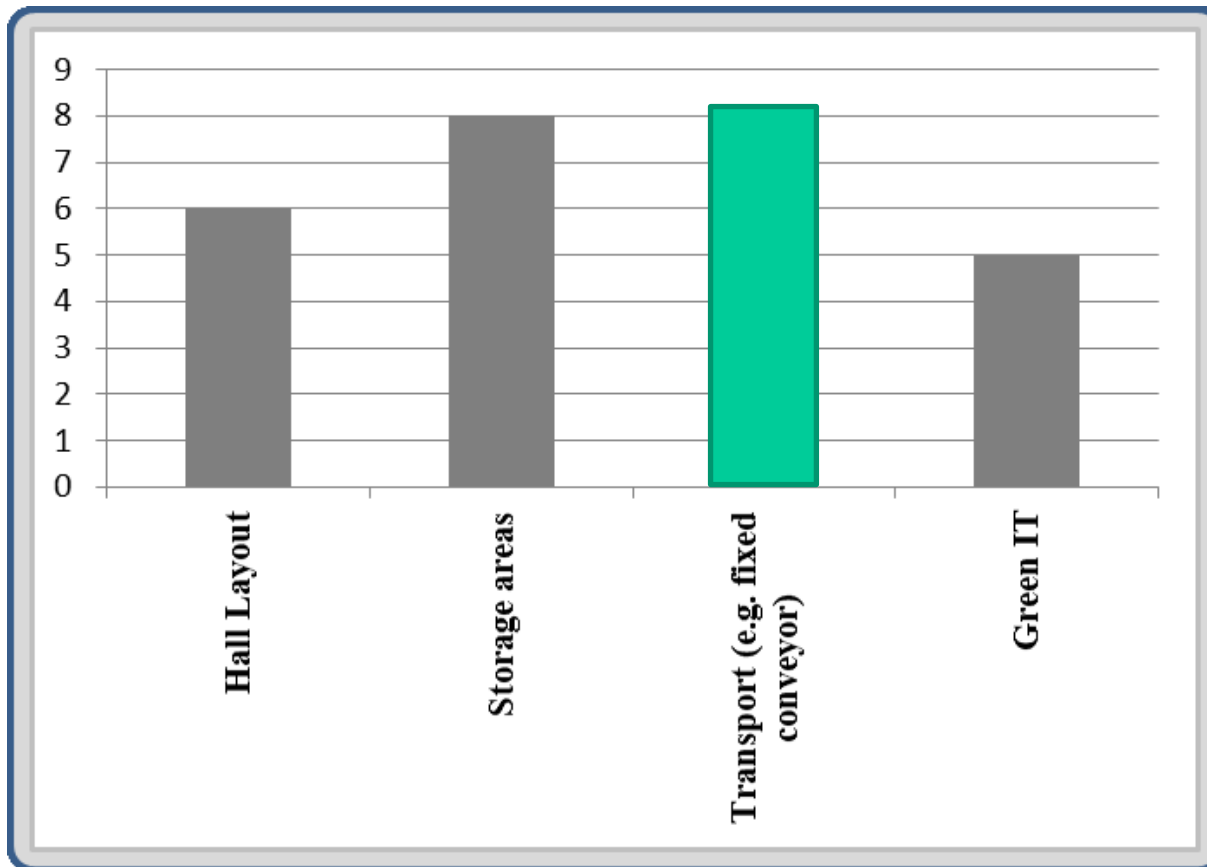


Respondent companies

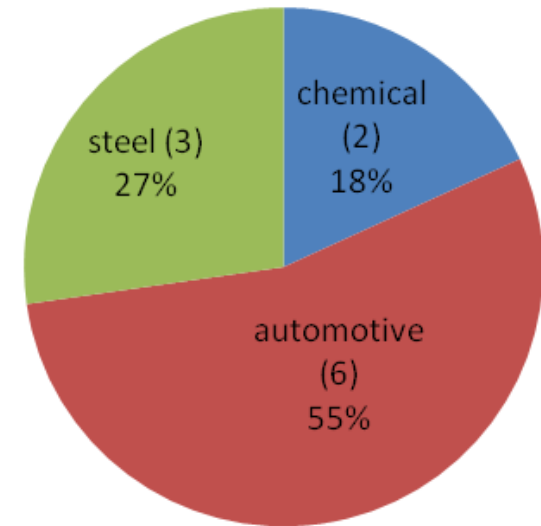


n=11
Multiple choices possible

In which of the following areas green-logistics is used or planned to achieve economic objectives of a company, in the field of intralogistics?



Respondent companies



n=11
Multiple choices possible

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- 4. Conclusions**

- Globalisation and growth require change of existing strategies with the subcategories ecology, economy and social
- Potential in intralogistics are to be found in the areas of Hall layout, Stock keeping, Green IT and Means of transport
- A lot of potential does not require high investments
- The amortisation period is in comparison to other optimization measures not higher
- Green logistics is mainly conducted to improve image or to fulfil environmental standards
- For most companies green logistics measures are not seen as cost saving potentials
- Companies which to convert green logistic measures will have sustained competitive advantages in the future

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Thank you for your
kind attention.

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