Energy efficiency and sustainability in ports

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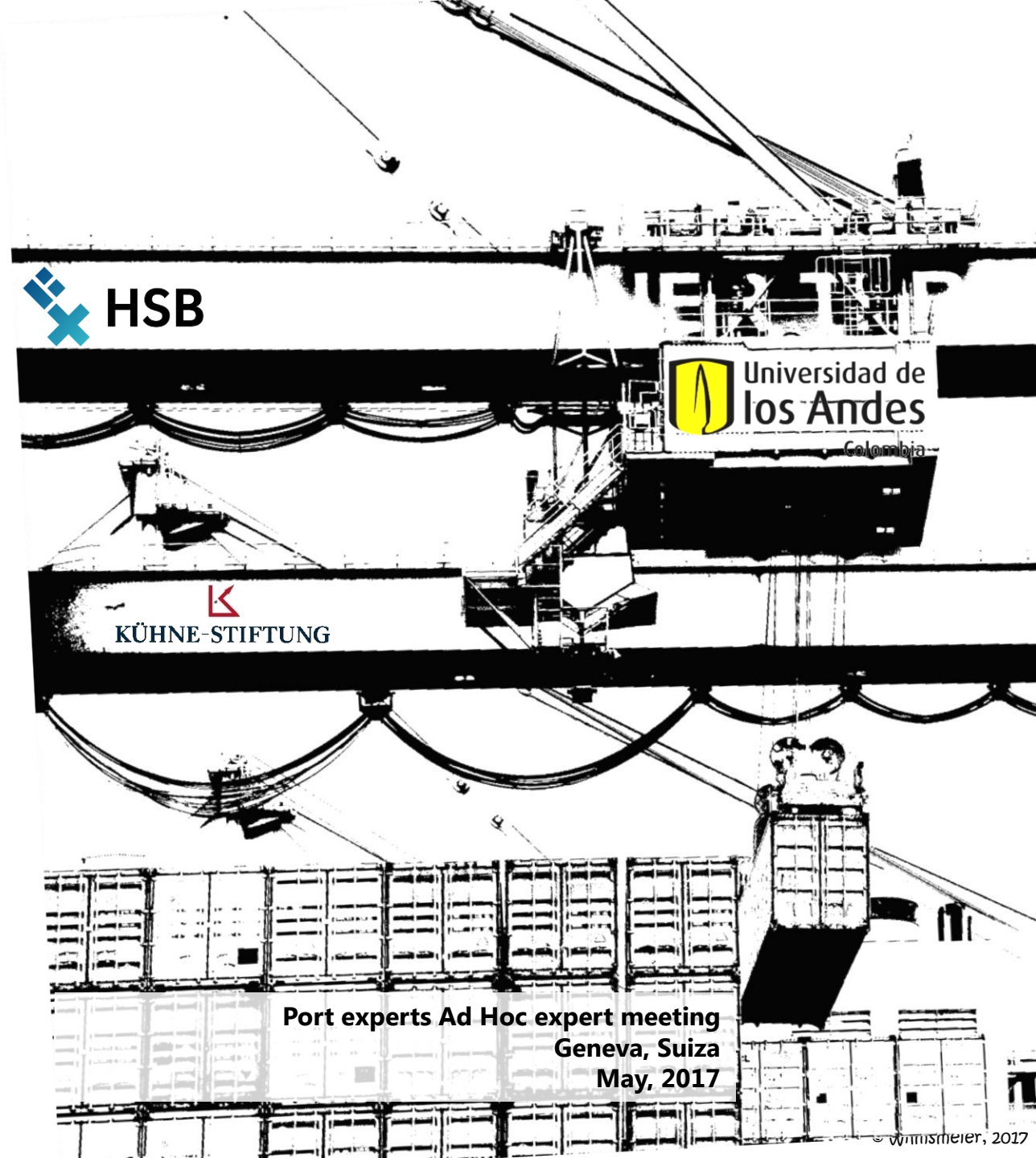
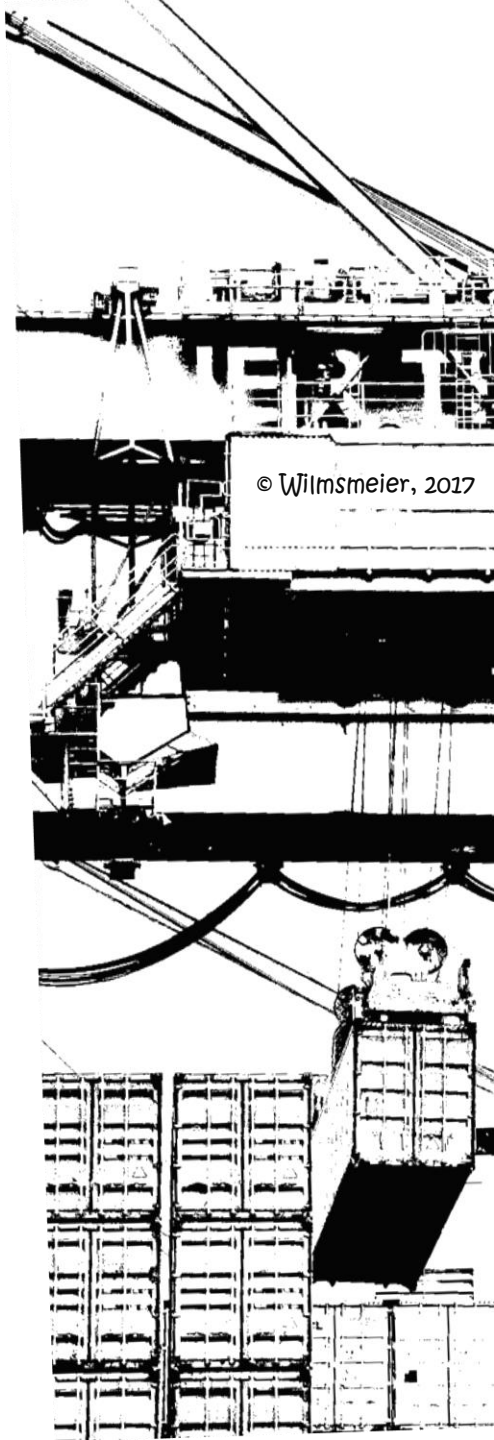


Port experts Ad Hoc expert meeting
Geneva, Suiza
May, 2017

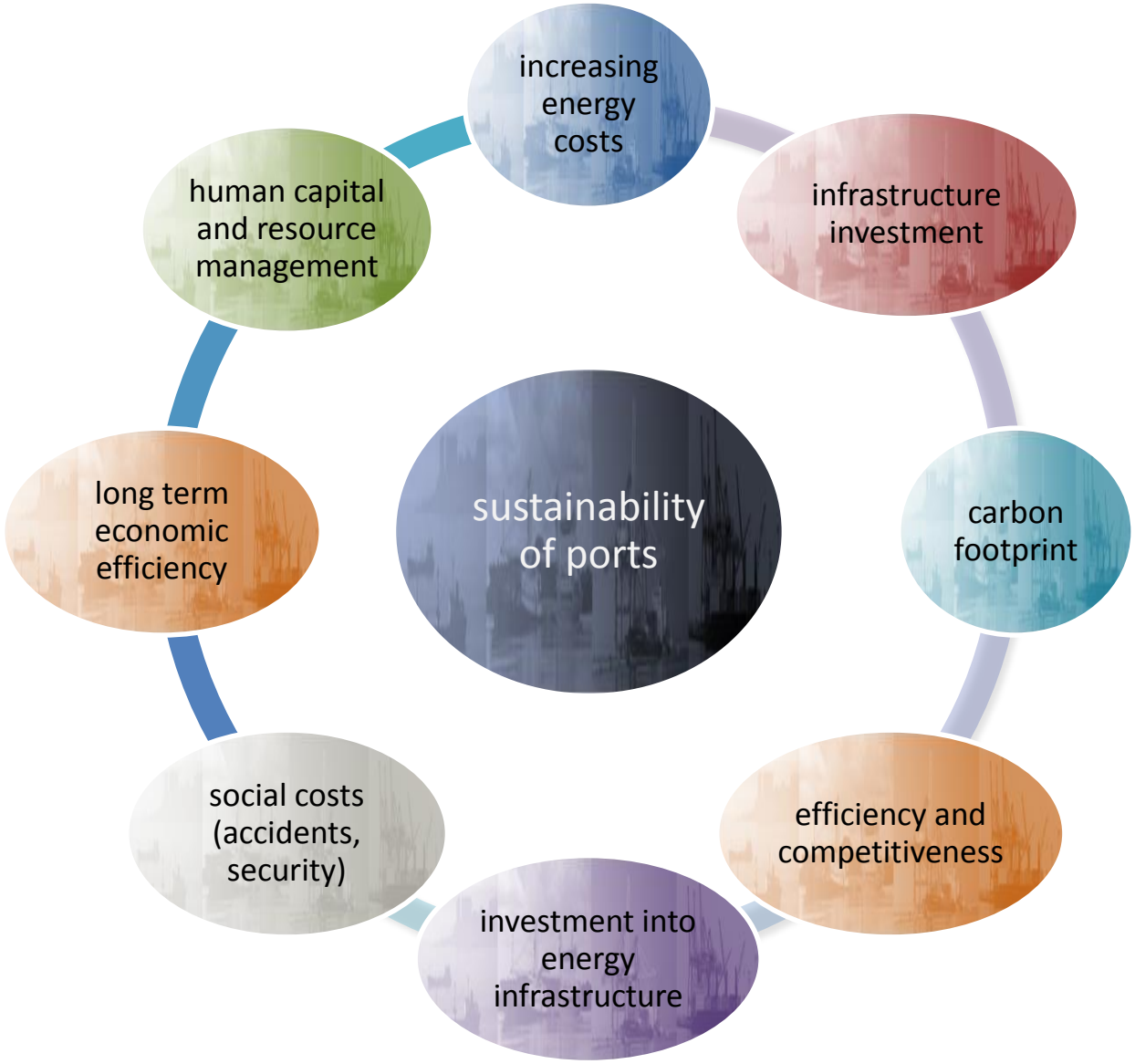
What is a sustainable port?

Common themes and principles of responsible businesses and international organizations

- Sustainability includes three dimensions: economic, social and environmental.
- Sustainability is not a phase or a fashion - it is a necessity.
- It is equivalent to being competitive in the long term.
- Sustainability must be measurable (benchmark).
- It requires proactive approaches.
- Sustainability can only be reached when public and private sector co-operate.
- Sustainability means that organizations need to reach beyond their organizational boundaries (co-ordination, we cannot do it alone).

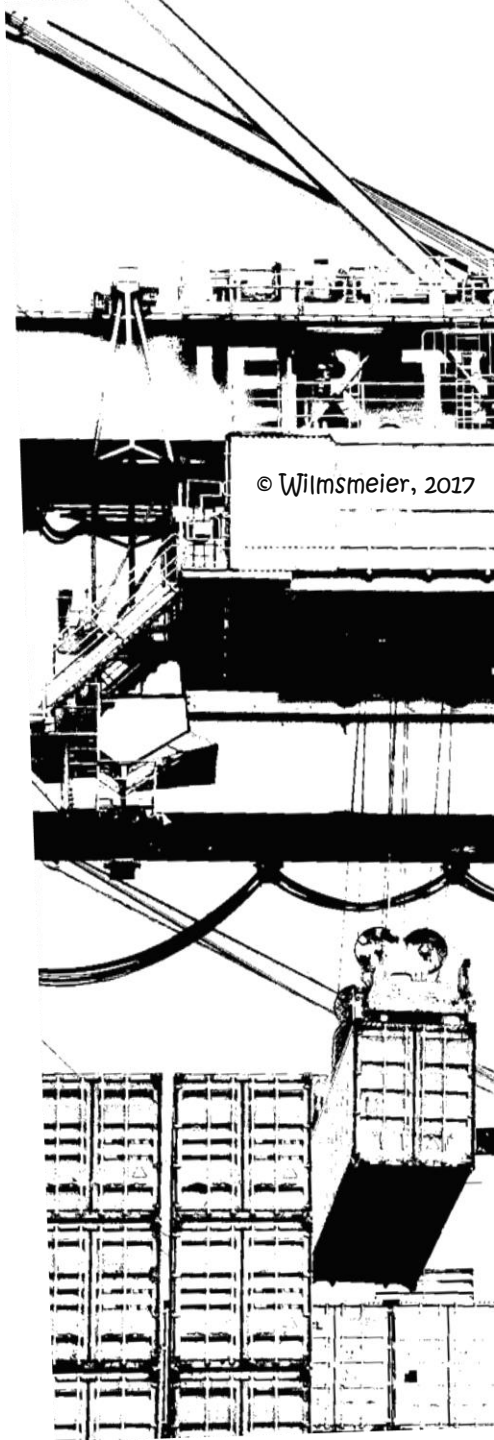


why should sustainability be discussed in the context of ports?



To reach efficient, sustainable and coordinated port performance the practitioner and governments need:

- Measurable outcomes;
- Commitment from the boardroom to the shop-floor;
- Effective and predictable public administration and policies;
- Collaboration;
- CSR (corporate social responsibility).



A wider set of measures of performance is necessary?

operational aspects

emissions

social

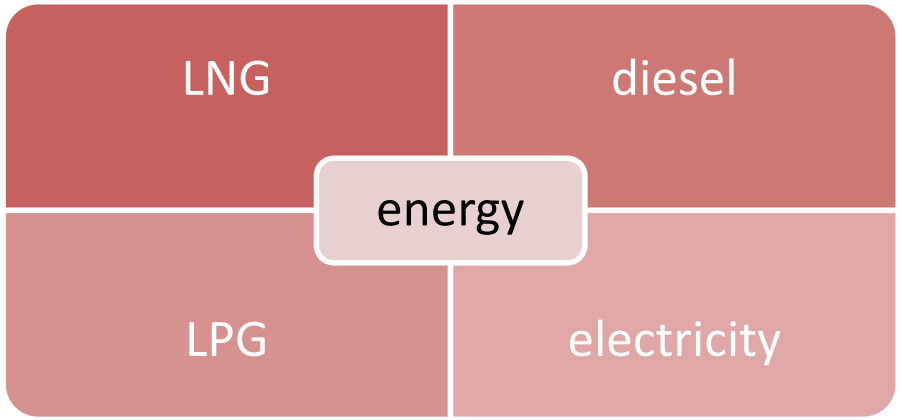
water

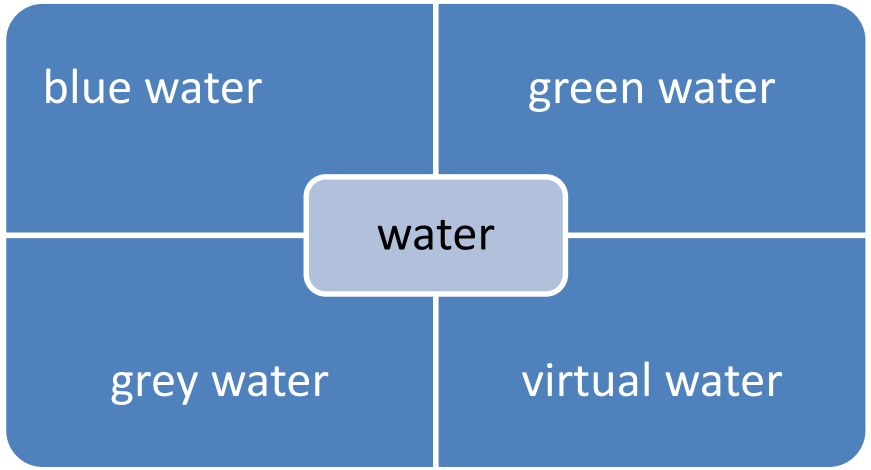
asset performance, measuring capacity utilization of infrastructure

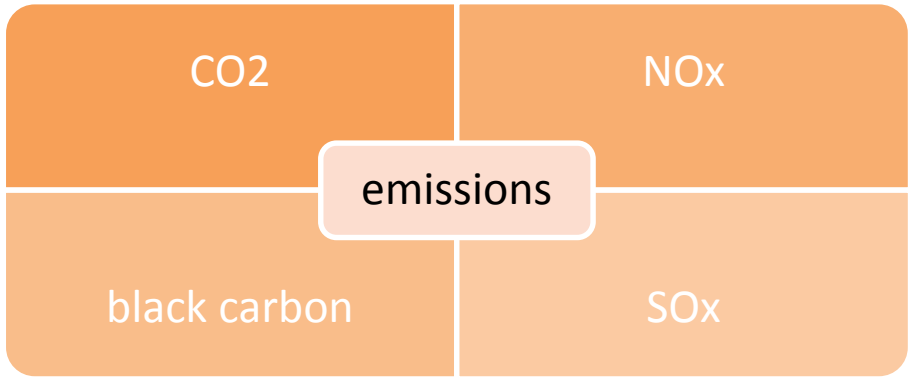
energy

financial aspects considering revenue from ships cargo, labour costs, capital equipment costs

New data and measures are not simple

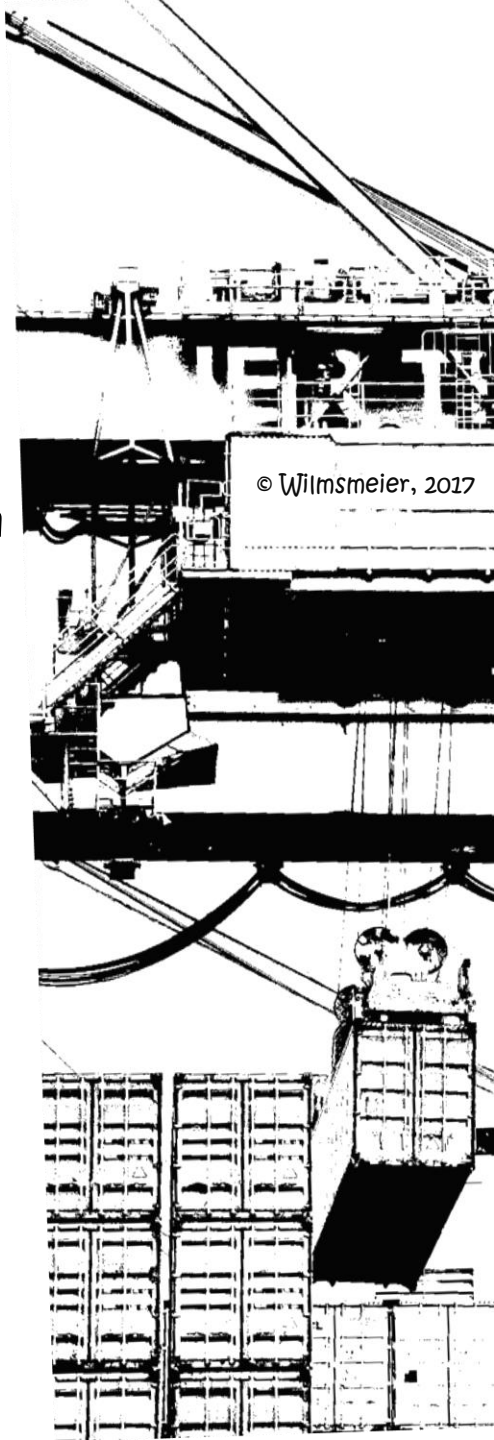




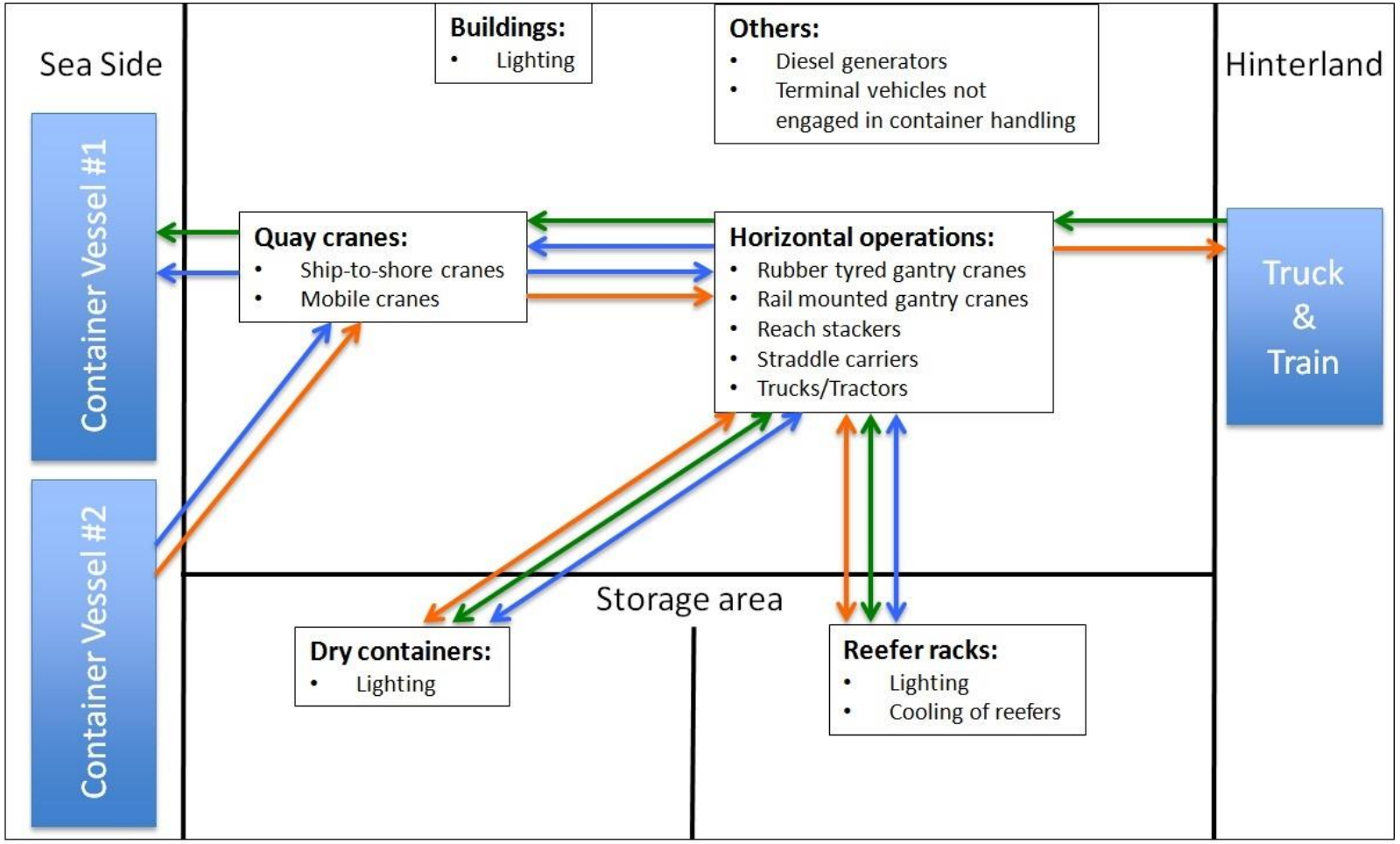


Relevant certifications

- ISO 14001: this is a group of management system standards which are applied to improve the environmental performance in organizations.
- Green Ports: a certification that shows balancing between environmental protection and economic demand.
- Ecoports: This is integration between two concepts: effective environmental and port management.
- ISO 50001 - Energy management standards target to use energy efficiently through the development of an energy management system (EnMS).
- CEN 16258
- GHG Protocol (adopted by ISO 14064-1)
- ISO 14046 –Wwater footprint

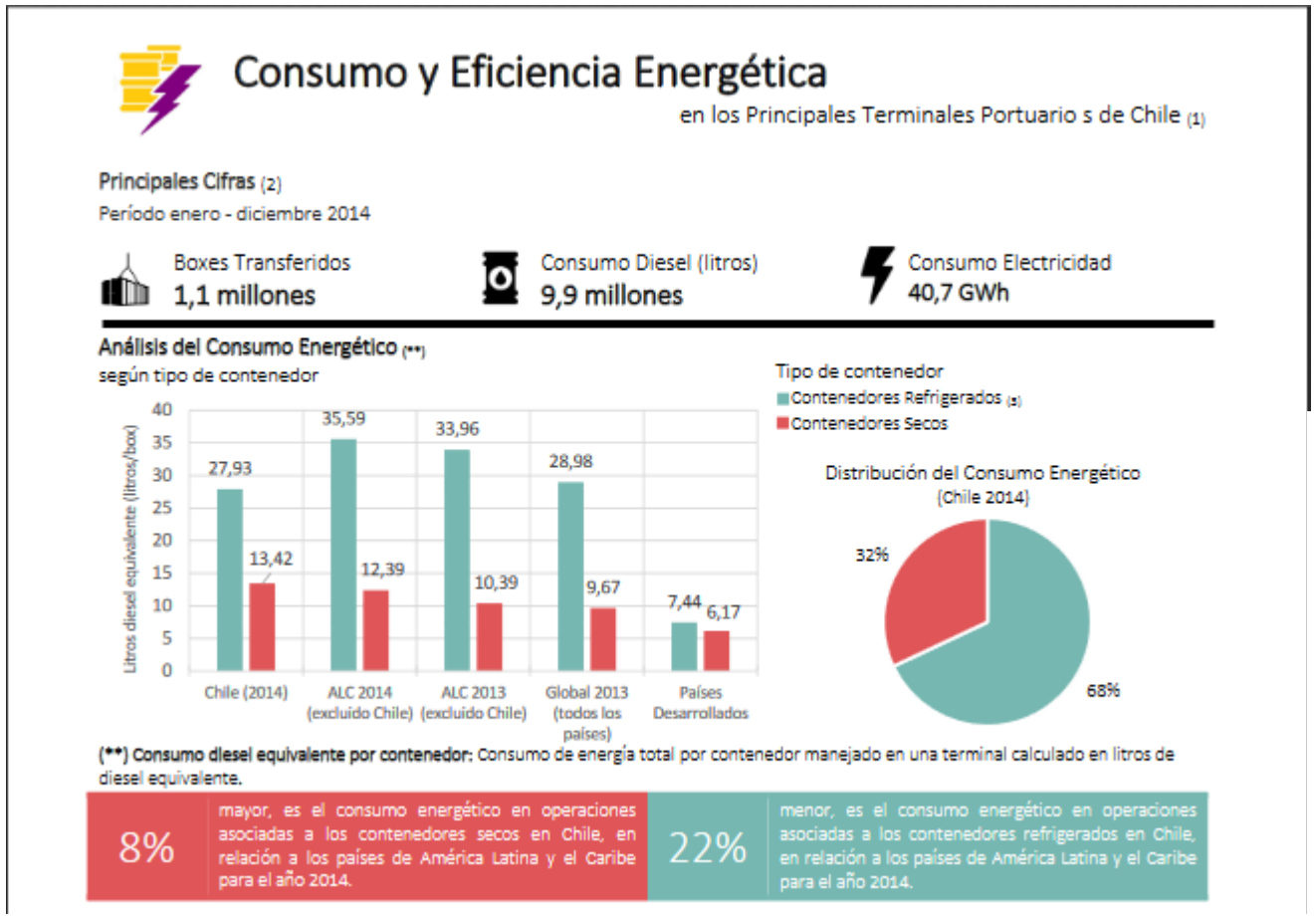


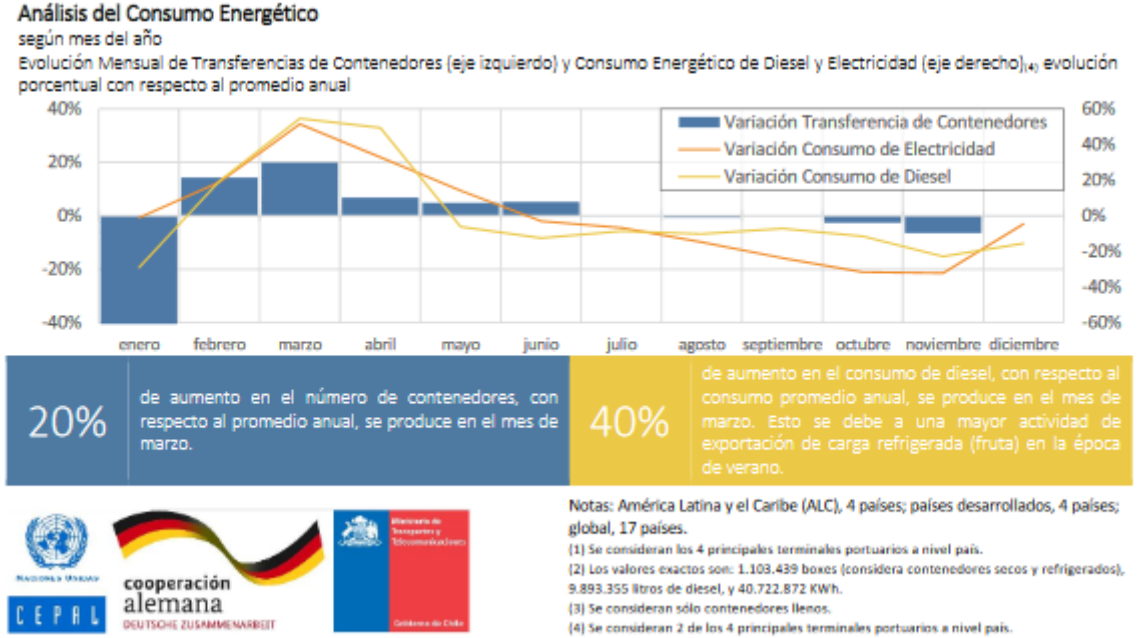
example:
an activity based approach to allocate energy consumption



Source: Spengler 2015

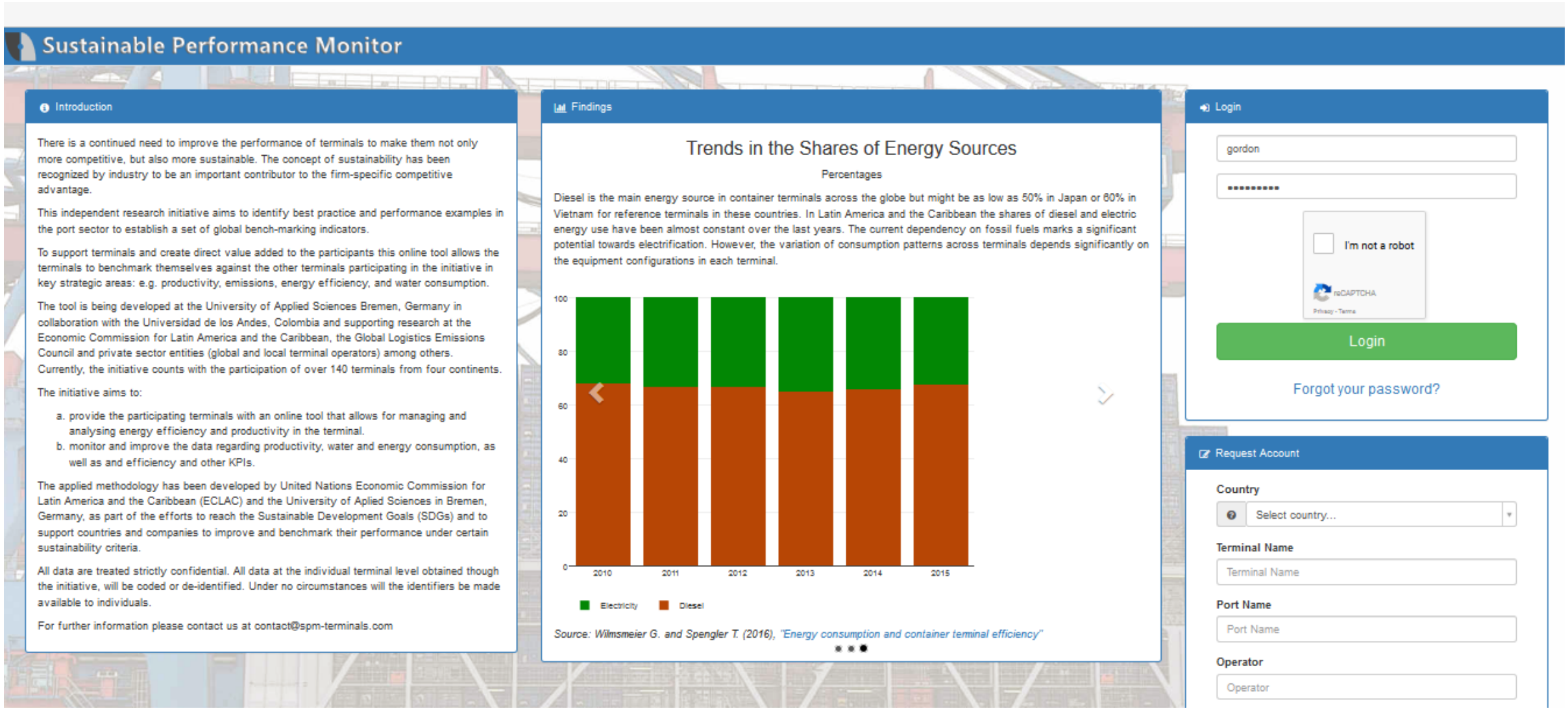
Example: new collaborations - Chile





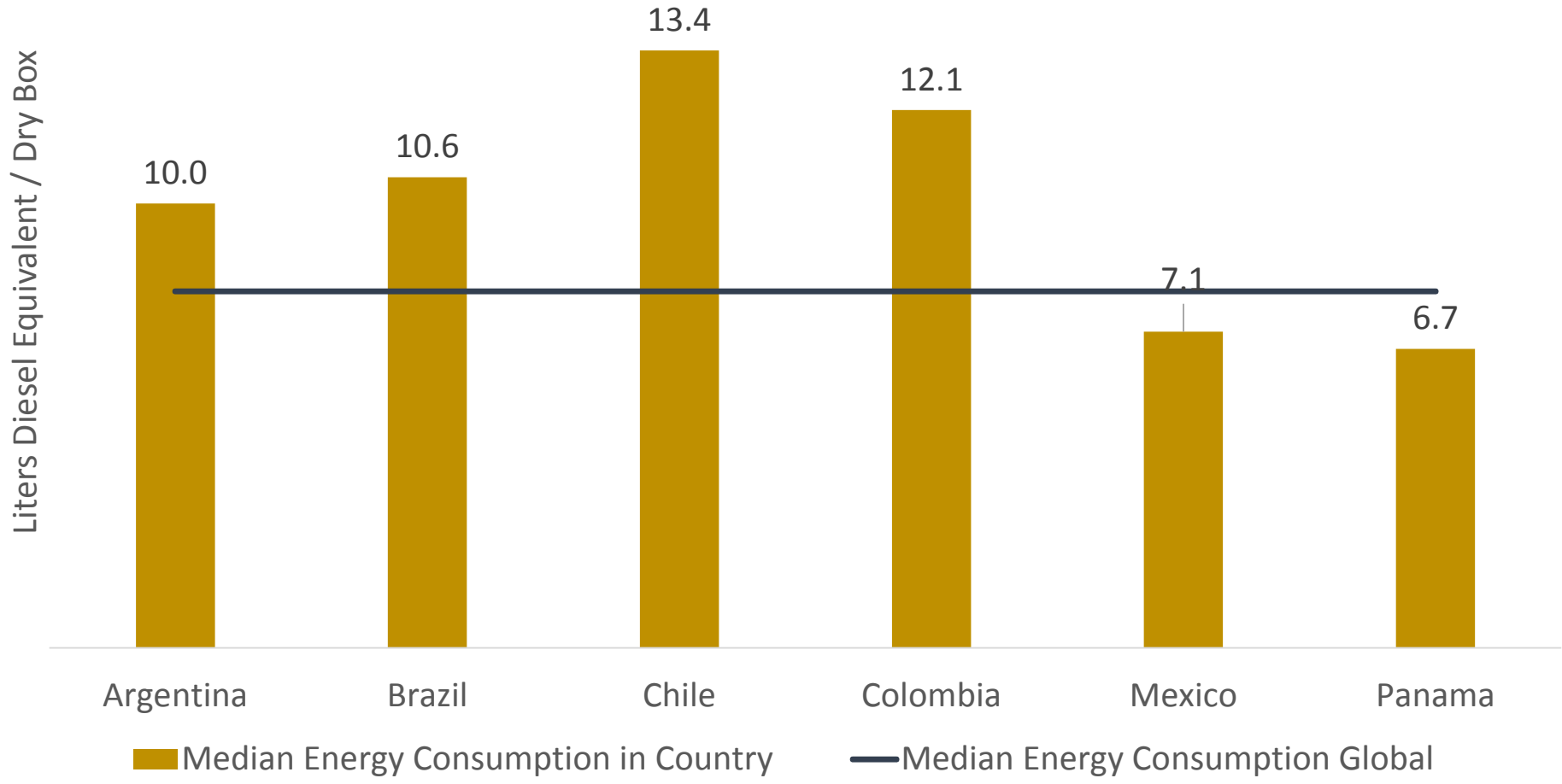
Source: http://www.cepal.org/sites/default/files/events/files/boletin_ee-puertos-chile-cepal-mtt.pdf

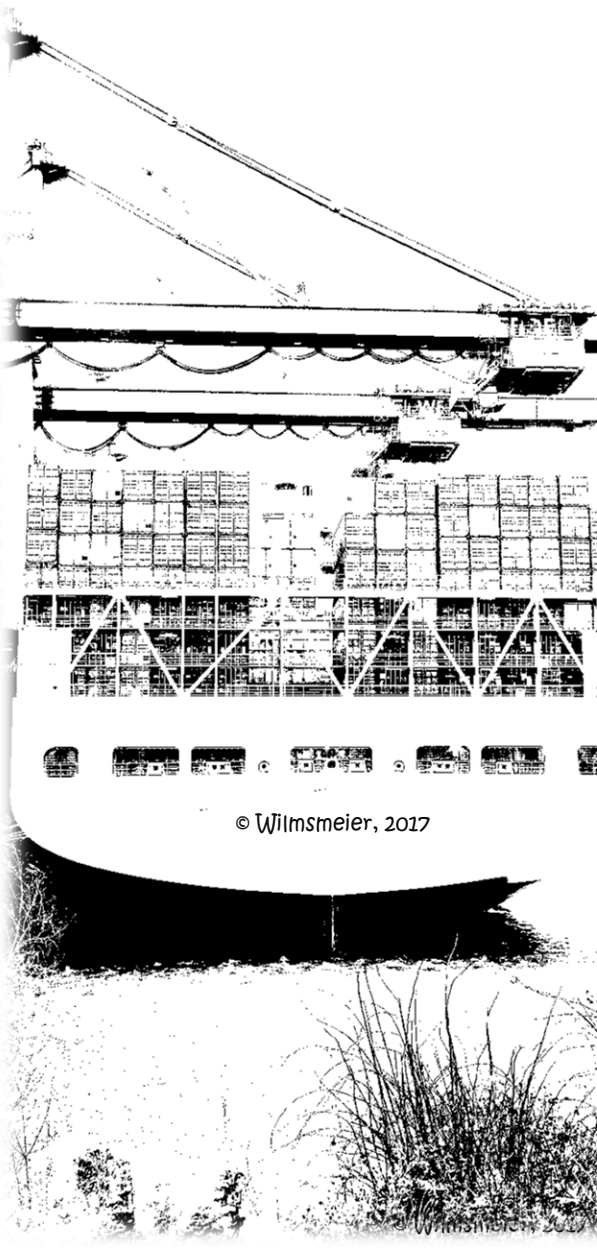
new tools



Visit: https://spm-terminals.com

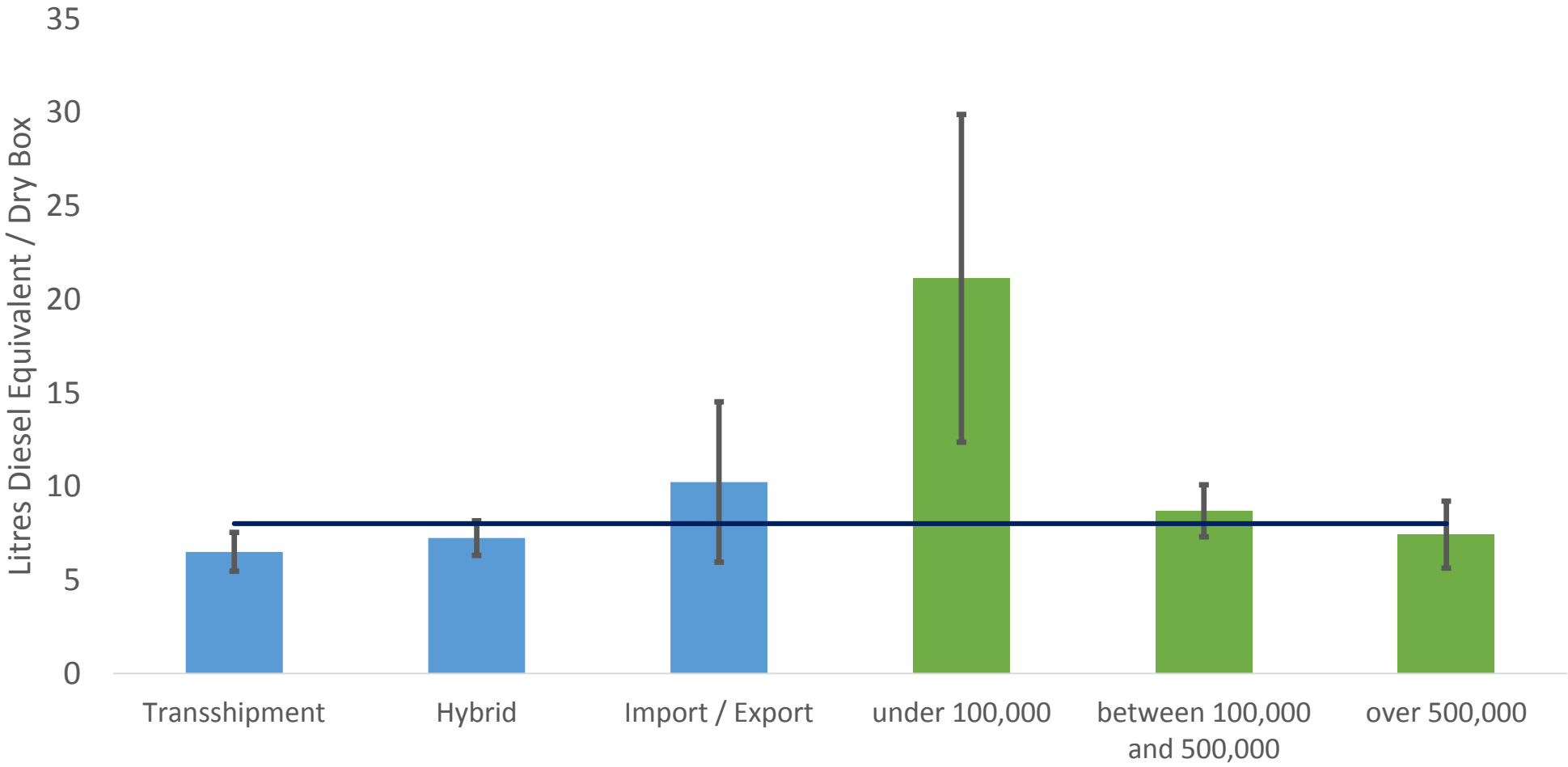
Median litres of diesel equivalent consumed for handling one dry box (excluding reefer consumption), by country, 2012-2015

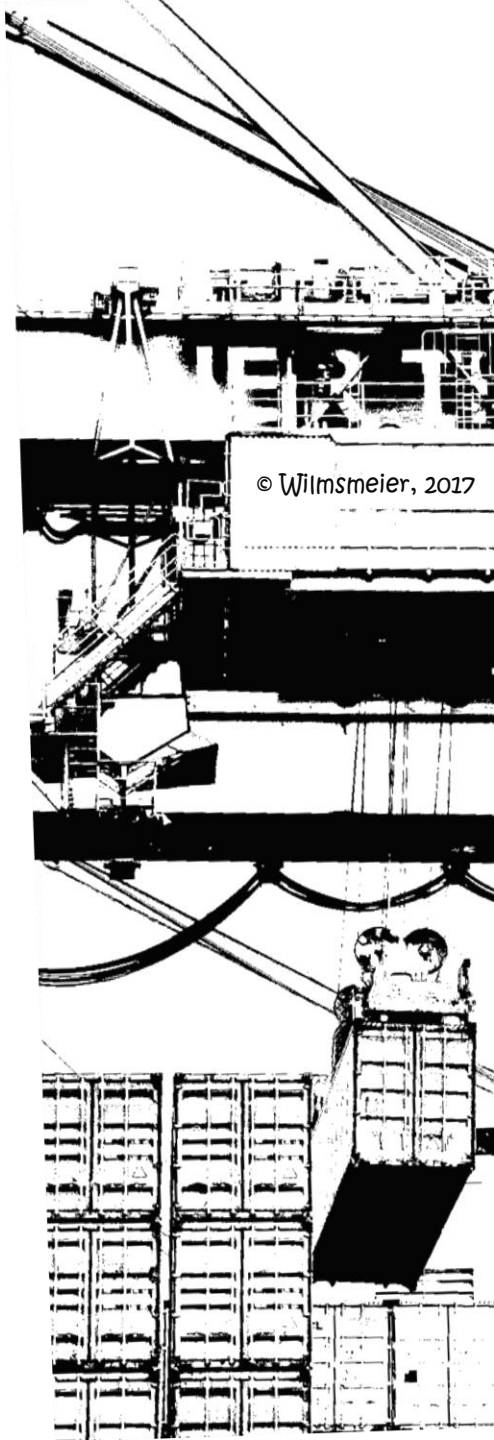




Source: Authors based on Wilmsmeier and Spengler (2016) and ECLAC Infrastructure Services Unit

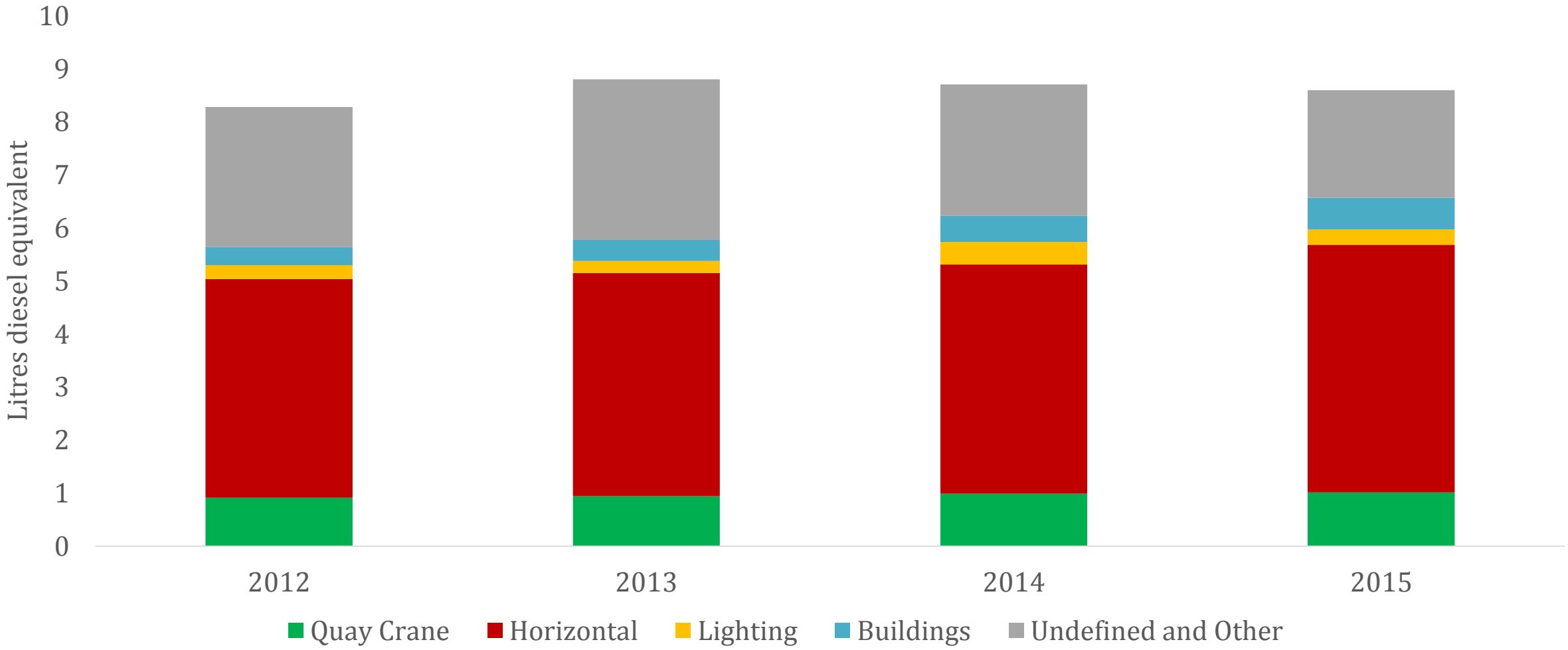
Median litres of diesel equivalent consumed for handling one dry box (excluding reefer consumption), by type and size of terminal, years 2012-2015





Source: Authors based on Wilmsmeier and Spengler (2016) and ECLAC Infrastructure Services Unit
Note: The calculations are based on data for 25 terminals in 8 countries

Median litres of diesel equivalent consumed per activity cluster (excluding reefer cooling), 2012-2015



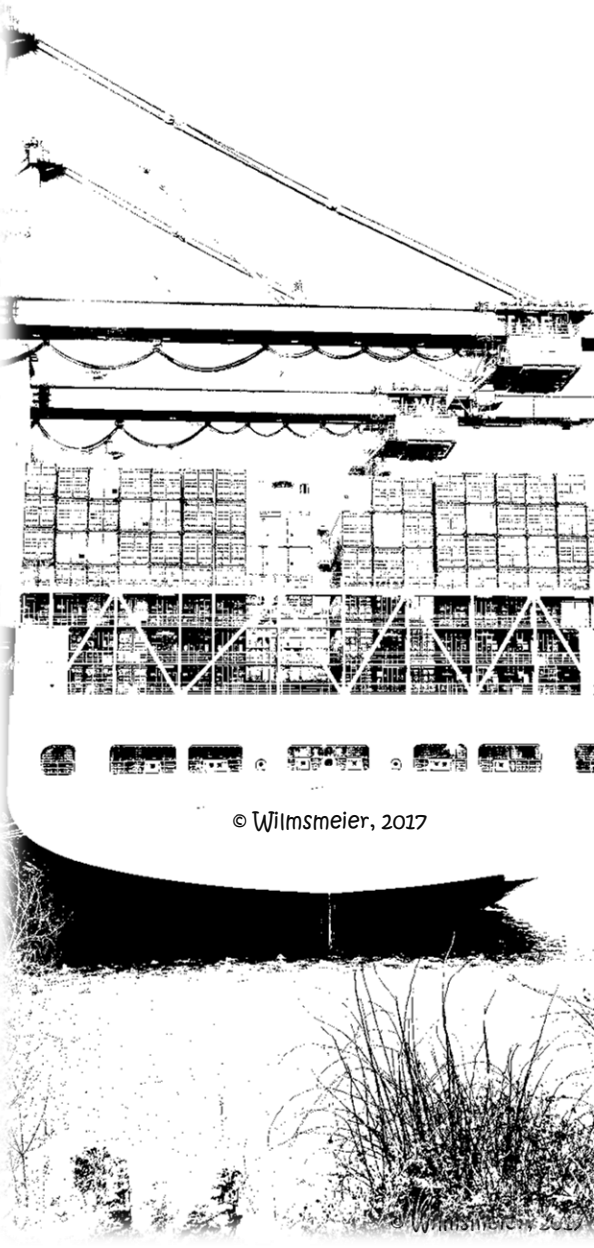
Source: Authors based on Wilmsmeier and Spengler (2016) and ECLAC Infrastructure Services Unit
Note: The calculations are based on data for 31 terminals in 16 countries

Next steps for moving ahead

- strengthen concerted effort of public and private sector
- further develop and use tools to gather new data
  - Water
  - Energy
  - Emissions, and
  - Social indicators

- collaborate towards a new standard of information

- can we walk the talk of a sustainable future?



questions?

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