Taking on Transport:
A Roadmap to Reducing Your Freight-Related Footprint

COMMIT. ACT. IMPACT.
Climate Collaborative Commitment Areas

**Agriculture**
Integrate carbon farming into the agricultural supply chains

**Energy Efficiency**
Increase energy efficiency

**Food Waste**
Reduce food-waste in the supply chain

**Forests**
Remove commodity-driven deforestation from supply chains

**Policy**
Responsible engagement in climate policy

**Packaging**
Reduce the climate impact of packaging

**Renewable Energy**
Commit to 100% renewable power

**Climate Pollutants**
Reduce short-lived climate pollutant emissions

**Transportation**
Reduce climate impacts of transportation
More companies are taking action to reverse climate change than ever before. They're tackling this global challenge not only because it's essential to the future of our planet but also because doing so offers tremendous opportunities for growth, job creation, and prosperity.

Companies can help reverse climate change by making a commitment to one or more of these initiatives.

**WHY TAKE ACTION?**

Climate change is both the greatest threat our planet has ever faced
How many companies have committed?

389 Companies Committing to Action

1475 Commitments
Why Commit To Reducing the Climate Impact of Transportation?

Total greenhouse gas emissions from U.S. freight activities grew by more than 50% between 1990 and 2013, and are slated to quadruple globally by 2050. This significantly grows our planet’s greenhouse gas emissions using current technologies and systems.

Learn more about how to reduce your transportation’s impact at: https://www.climatecollaborative.com/transportation

Climate Collaborative Resources Include:

- The Fast and the Furious: A company’s guide to Reducing Transportation Emissions (webinar)
- EPA Smartway: Leveraging EPA’s SmartWay Program to Improve Your Distribution Emissions (webinar)
- EDF’s Green Freight Handbook: Establishing Metrics, Targets, Strategies, Tips

See more at: https://www.climatecollaborative.com/transportation_resources
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Our Speaker

MODERATOR

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Agenda

1. About Us - Transport & Logistics Practice at BSR
2. Megatrends Affecting Freight
3. The State of Freight
4. Reducing your Transport Footprint – Levers and Guide
5. Procurement Maturity Ladder - Overview
6. Resources for further learning
7. Facilitated Discussion, Questions, and Thank you!
Transport Logistics at BSR
An Overview
BSR Transport & Logistic Practice

We work with companies and stakeholders across the T&L supply chain to advance the full spectrum of sustainability issues.

Scope of Activities

1. Translation
2. Solutions
3. Collaboration
4. Hot-topic Research

Sample BSR T&L Member Companies

Amazon
Agility
CSX Transportation
Cummins Inc.
General Motors Company
Expolanka Holdings
Hutchison Ports
The Maersk Group
Michelin
Swire Pacific Limited
The Boeing Company
United Parcel Service, Inc. (UPS)
Metalsa
OIA Global
DHL Deutsche Post AG
Connecting buyers-suppliers and other stakeholders together across modes to collaboratively develop solutions to sustainability challenges

- **Clean Cargo Working Group**: A B2B initiative of leading cargo carriers and customers dedicated to environmental performance improvement in marine container transport through measurement, evaluation, reporting, and sharing best practices.

- **Sustainable Air Freight Alliance**: A collaboration between shippers, freight forwarders, and airlines to track and reduce carbon dioxide emissions from air freight and promote responsible freight transport.

- **Future of Fuels**: A North American road freight initiative working toward a sustainable, resilient, and affordable freight fuel system.

- **Green Freight Asia**: An industry-led network focused on driving sustainable road freight in the Asia Pacific region to improve fuel efficiency, reduce CO2 emissions and lower logistics costs across the entire supply chain.

- **Maritime Anti-Corruption Network**: A cross-sector initiative working toward a maritime industry free of corruption that enables fair trade to the benefit of society at large.

- **Railponsible**: An industry initiative focused on sustainable procurement across the railway industry supply chain.
BSR Transport & Logistics – Green Freight Leads

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Megatrends Affecting Freight
Megatrends Impacting Freight

• **Urbanization** As the number of inhabitants is increasing in urban cities, space grows smaller and is too expensive.

• **Demographic Shifts** As populations in China, India, and the rest of the developing world gain more purchase power, the demand for goods is set to increase.

• **Car ownership** no longer a given, with many not even getting a license.

• Change in **shopping behaviors**, more online sales, more deliveries, leading to more commercial vehicles in the city centers.

• **Air pollution**, noise pollution and congestion making the cities unhealthy and stressful environments.

• **Policy** makers taking action, with many cities implementing low or zero emission zones.
### Sustainability Trends and Transport

*Increased expectation of social, ethical and environmental stretch targets and proactive engagement to respond to demands for better performance from customers*

<table>
<thead>
<tr>
<th>Transparency</th>
<th>Ethics - Human Rights and Corruption</th>
<th>Sustainability Regulations</th>
<th>Health, Safety, Security and Wellness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast-paced, transparent, internet enabled world of social media and technological advances making real-time monitoring feasible and affordable</td>
<td>Increased scrutiny on workers in the transportation industry as well as corruption. More liability on end customer from Ruggie Principles and UK Bribery Act</td>
<td>Regulation has focused on 'traditional issues' to date. Expect more sophisticated regulatory approaches across the agenda, e.g. the MLC for shipping.</td>
<td>Implement best practice in leadership and employee development to attract people to T&amp;L careers.</td>
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<tr>
<th>Future of Energy</th>
<th>Adapting to Climate Change</th>
<th>Technology Innovation</th>
<th>Governance</th>
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<tr>
<td>The age of easy oil is over, predicting higher and more volatile pricing with peak oil. Concerns over energy security and climate change may drive major changes in fuel types and efficiency</td>
<td>Risks include increase the frequency and severity of climatic extremes affecting transport infrastructure facilities; disrupted transport chains influenced by moving global trade production</td>
<td>New materials, alternative energy technologies, digitalization and fuel efficient design potential for radical improvements. Technology also brings social disruption e.g. automation, blockchain</td>
<td>Increased expectation to work with policy makers and involve in regulatory fora with relevant stakeholders to balance the rights and responsibilities for use, access and improve governance of land / ocean spaces where transport operators have influence</td>
</tr>
</tbody>
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Source: Adapted from BSR MegaTrends; The Forum For the Future Sustainable Shipping Initiative Case for Action; BSR research and discussions with members and stakeholders
Effective response to trends: BSR’s *Redefining Sustainable Business* guidance

**Act**
Create resilient business strategies, governance, and management approaches that ensure achievement of sustainable business goals.

**Enable**
Catalyze sustainability action by building mutually beneficial relationships and collaborating with stakeholders and partners across the whole value chain.

**Influence**
Promote policy frameworks that strengthen the relationship between commercial success and the achievement of a just and sustainable world.
The State of Freight
The State of Freight

- Freight is ~ 15% of global energy demand, representing ~ 8% of global GHG emissions.
- Demand is expected to more than quadruple by 2050, after having already increased 50% between 1990 and 2013.
- Freight represents over 50% of NOx total emissions and over 20% of particulate matter emissions inventory in the U.S.
- Within transportation, heavy-duty trucks are the fastest-growing contributor to emissions.
Some transport facts by mode

Road, Sea, Air, Rail: all modes will need proposed solutions to be proven, reproduced and scaled

Road freight is responsible for 2/3 of absolute CO$_2$ emissions from transport

Sea freight is responsible for moving the most freight by distance (measured in MT x km)

Air freight is responsible for highest intensity of emissions (measured in CO$_2$ / km)

Rail and inland waterways offer relatively low-carbon solutions, but development of these modes in the US lags compared to the rest of the world
Academia has defined key decarbonization levers

**Shipper (buyer) influence**

**Reduce Freight Transport Demand**
- Supply chain restructuring
- Standardized modules/boxes
- 3D printing
- Dematerialization
- Consumer behavior

**Optimize Freight Transport Modes**
-Modal shift
-Multi-modal optimization
-Synchronmodality

**Increase Asset Utilization**
- Load optimization
- Load consolidation and asset sharing
- Logistics centers and warehouse management

**Improve Fleet Energy Efficiency**
- Cleaner and efficient technologies
- Efficient vehicles and vessels
- Driving behavior
- Fleet operation
- Fleet maintenance

**Reduce Carbon Content of Energy**
- Cleaner and lower-carbon fuels
- Electrification
- Fuel management

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Smart Freight Centre; categories based on A. McKinnon 2018
Looking forward…

• Progress has been made
  – Improved fuel efficiency for vessels (air/ocean) & trucks
  – Improved aero/hydrodynamics
  – Improved supply chain management
  – Proliferation of renewables has changed prospects for green-electric vehicles

• What’s next
  – Fleet electrification
  – Low carbon fuels (and blending with gas)
  – Fuel efficiency standards
  – Changing land use patterns/urban design
**How do we get there?**

Collaboration is key.

However, the landscape is busy with several initiatives that work with companies and other stakeholders on zero-emissions logistics.

BSR works with a number of these initiatives and helps companies navigate which are most relevant for their needs...

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**Graphic developed by the Smart Freight Centre**
Clean Cargo Working Group – An important Starting place

Our Mission

• Creating **practical tools** for measuring, evaluating, and reporting the environmental impacts of global goods transportation for over a decade

• Helping ocean freight carriers **track and benchmark their performance** and easily report to customers in a standard format

• Allowing shipping customers to **review and compare carriers’ environmental performance** when reporting and making informed buying decisions

• Actively engaging in **alignment and harmonization of freight emissions measurement** across all modes of transport – including now via the Smart Freight Centre's Global Logistics Emissions Council (GLEC)

• Exploring opportunities to **drive performance improvement**
Reducing your Transport Footprint
Guide for Sustainable Freight
Reduce your Transport Footprint

The following slides present the steps toward establishing an action plan for decarbonizing your supply-chain transport emissions:

1. Setting Emission Reduction Targets
2. Reporting Emissions
3. Implementing Solutions
4. Collaboration and Advocacy
5. Engage Proactively in Policy Development

We have, in addition, mapped these steps against existing initiatives that can provide objective-specific support and resources.
Step 1: Setting Emission Reduction Targets

• Example Targets:
  - Commit to 30 percent aggregate GHG emission reductions in scope 1, 2 and 3 of the Greenhouse Gas Protocol Corporate Standard by 2030 against a baseline of no earlier than 2015
  - Commit to analyzing and setting a decarbonization pathway drawing on methodologies from the Science-Based Targets Initiative
Setting Emission Reduction Targets

The following is a sample of companies that have set SBTs that include transport:
Step 2: Reporting on Transport Emissions

• Example Target:
  – Quantify, track and publicly report our GHG emissions, consistent with standards and best practices of measurement and transparency
Reporting on Transport Emissions - Clean Cargo

- **CO2 emissions**: Clean Cargo shippers use the Clean Cargo scorecard mainly to report on their CO2 emissions, but sulfur-oxide (SOx) and nitrogen-oxide (NOx) emissions are becoming increasingly important.

- **Carbon footprint calculation**: 80 percent of all interviewed shippers joined Clean Cargo because their companies wanted to access the primary data of ocean carriers in order to identify their baseline emissions in ocean transportation, calculate their carbon footprint, and set emissions reduction targets with a more accurate methodology.

- **Intermodal transport comparison**: Shippers highlighted that access to Clean Cargo data enables them to compare different modes of transportation and make informed decisions where it may be possible to shift certain flows to ones with lower emissions (e.g., from air freight to ships or from road to trains or inland water transport).
Step 3: Implementing Solutions

- **Example Targets:**
  - *Partner with experts, businesses, investors, environmental advocates and other stakeholders to develop and implement a decarbonization strategy, including by developing a work program and tools necessary to achieve the GHG emission reduction targets*
  - *Commit to continuously pursue energy efficiency measures and renewable energy in our value chain;*
Implementing Solutions

Case Studies

Anderson-DuBose: EV Case Study
Fuel Type Tested: Electric
SEE THE CASE STUDY

IKEA: 90% Diesel/10% HVO Blend Case Study
Fuel Type Tested: Diesel Blend
SEE THE CASE STUDY

IKEA: EV Case Study
Fuel Type Tested: Electric
SEE THE CASE STUDY

IKEA: Renewable Diesel Case Study
Fuel Type Tested: Renewable Diesel
SEE THE CASE STUDY

PepsiCo: CNG Case Study
Fuel Type Tested: CNG
SEE THE CASE STUDY

UPS: Renewable Diesel Case Study
Fuel Type Tested: Renewable Diesel
SEE THE CASE STUDY

Walmart: Solar Electric Auxiliary Power Units (APUs) Case Study
Fuel Type Tested: Electric
SEE THE CASE STUDY

To read more, please visit: https://www.bsr.org/en/collaboration/groups/future-of-fuels/case-studies
Step 4: Collaboration and Advocacy

• Example Targets:
  • Support the movement towards circular business models and acknowledge the positive impact this will have towards reducing GHG emissions within the fashion sector
  • Establish a closer dialogue with consumers to increase awareness about the GHG emissions caused in the use and end-of-life phases of products,
Collaboration and Advocacy

GreenBiz

IKEA and shipping giant CMA CGM to pilot first sustainable marine ...
IKEA and shipping giant CMA CGM to pilot first sustainable marine ... The biofuel took three years to develop by GoodFuels, and is made from ...
Mar 15, 2019

Green Car Congress (blog)

Maersk to offer customers carbon-neutral biofuel; H&M Group first to trial
The container vessel Mette Maersk, one of the largest containers vessels in the world, sailed on a blend with 20% biofuel from used cooking oil.
2 weeks ago
Step 5: Engage Proactively in Policy Development

• Example Targets:
  • Engage with local, state, federal and supranational regulators to share your company’s views on the need for more funding for sustainable transport projects
  • Contribute to conversations around international climate objectives, such as the Paris Climate Agreement
Engage Proactively in Policy Development

International Chamber of Commerce

In its capacity as UNFCCC Focal Point for Business and Industry, ICC will bring a business perspective to the UN...

Business participation in climate change discussions is essential when it ... to meet the goals of the Paris Agreement and foster global efforts to ...

3 weeks ago
Sustainable Procurement Guide – maturity ladder
Overview

Stages of Maturity in Sustainable Procurement

STAGE 1: INITIATING

In the process of establishing sustainability priorities for logistics. The company is getting involved with leading initiatives and communicates with suppliers to explore how to handle its most important sustainability issues in logistics.

STAGE 2: RISK MANAGEMENT

Priorities on how to manage basic sustainability risks in logistics have been defined. The company is actively involved with leading sustainability initiatives in logistics, to learn from best practices and explore how to drive further improvements beyond its current practices.

Material sustainability issues are meaningfully addressed in business decisions. The company has established minimum sustainability supplier requirements and is making investments to improve sustainability performance across its supply chain.

STAGE 3: INTEGRATION

Cutting edge supply chain engagement and demonstrated leadership around material logistics sustainability issues. The company uses sustainability as a decision-making factor in supplier selection based on transparent sustainability criteria, rewards best-performers, and regularly partners with suppliers on sustainable innovation initiatives. The company is transparent about how high sustainability performance among its suppliers creates value.

STAGE 4: VISIBLE LEADERSHIP
Learn More - Resources
Resources

- **BSR**
  - [https://www.bsr.org/](https://www.bsr.org/)
- **Clean Cargo**
  - [https://www.clean-cargo.org/](https://www.clean-cargo.org/)
- **Future of Fuels – Case Study Library**
- **US EPA SmartWay**
  - [https://www.epa.gov/smartway](https://www.epa.gov/smartway)
- **EDF Green Freight Handbook**
- **The Smart Freight Centre**
  - [https://www.smartfreightcentre.org/en/](https://www.smartfreightcentre.org/en/)
- **The GLEC Framework**
- **The Science Based Target Initiative**
  - [https://sciencebasedtargets.org/](https://sciencebasedtargets.org/)
Thank you & questions
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