



The Fast and the Furious:

A Company's Guide to Reducing Transportation Emissions

28. June. 2017





a project of



Sustainable Food
Trade Association
organic leaders for sustainability

Our industry can and must
respond to climate change.

Make a commitment to climate in one or more areas!



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



**Increase energy
efficiency**



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



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



**Responsible
engagement in
climate policy**



**Reduce the
climate impact of
packaging**



**Commit to 100%
renewable power**



**Reduce short-lived
climate pollutant
emissions**



**Reduce climate
impacts of
transportation**

Our
Impacts

↑ 29%
since May!

77

COMMITTED
COMPANIES

Together: \$6.3 Billion
in revenue!

Doubled since May!

375
COMMITMENTS

8 Companies committed
to all 9 Areas

1ST
CLIMATE
DAY

500⁺ ATTENDEES

1,500⁺
LIVESTREAM
AUDIENCE

6000⁺
*Views of the
Climate Day Video*

Made possible by these generous donors!

Climate Collaborative Catalysts



Climate Collaborative Champions



INFRA



Presence
PRESENCE MARKETING DYNAMIC PRESENCE

Climate Collaborative Leaders



LOTUS
FOODS
RICE IS LIFE™



Climate Collaborative Allies





Commit. Act. Impact.



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Our Speakers




Lisa Spicka
Associate Director
SFTA



Jason Mathers
Director, Supply Chain
Environmental Defense Fund



Katie Clark
Director of Sustainability
Happy Family Brands

The background of the slide is a faded photograph of a white semi-truck with orange lights on its roof, parked in front of a large, reddish-brown desert cliff. The truck is facing away from the camera, and the cliff rises steeply behind it.

**Our
Program**

Transportation's Climate Impacts

Best Practices: Emission Reduction

Happy Family Case Study

Benchmarking and Goals

Public Policy: Freight Transportation



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Best Practices

Reducing Transportation Emissions

The Fast and the Furious: A Food Company's Guide to Reducing Transportation Emissions

Jason Mathers
June 2017

The Company We Keep



Emissions from Freight Transportation



Local Air Pollutants From Freight

- Criteria air pollutants: Ozone, NO_x, PM, CO, SO₂, Lead
- Toxics – benzene, formaldehyde, DPM, etc.

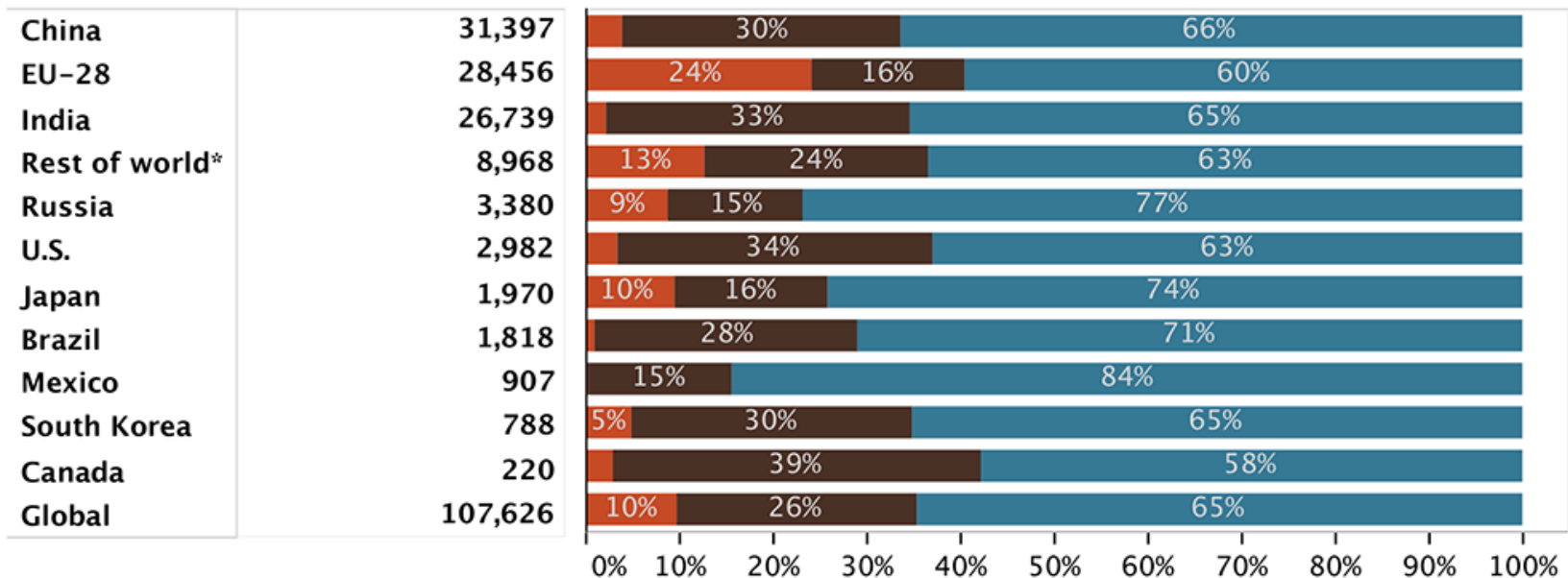
Pollutant	Guideline (WHO)	Standard (US)	Standard (Canada)
Ozone	51 ppbv (8-hr) (100 µg/m ³)	70 ppbv (8-hr) (2015)	62 ppbv (8-hr) (2015)
PM _{2.5}	10 µg/m ³	12 µg/m ³	10 µg/m ³

100,000 Annual Deaths from NOx

Annual premature deaths attributable to on-road diesel vehicle NOx emissions, 2015

Total deaths

Share of deaths by source

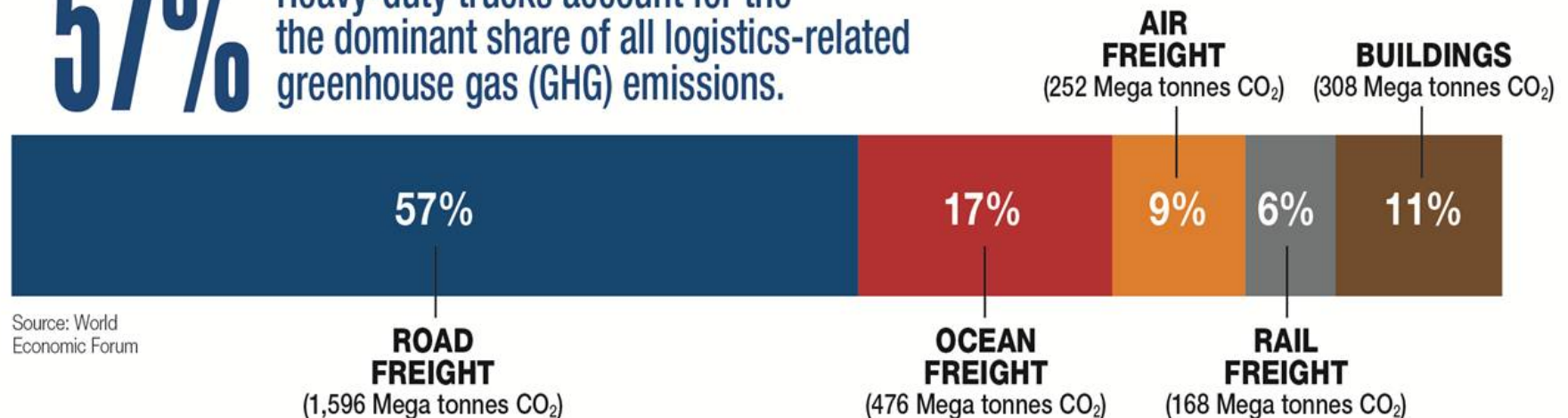


*Counts only those premature deaths resulting from NOx emissions produced in the other regions shown here.

■ NOx within regulated limits
■ Excess NOx from trucks and buses
■ Excess NOx from cars and vans

Freight Greenhouse Emissions

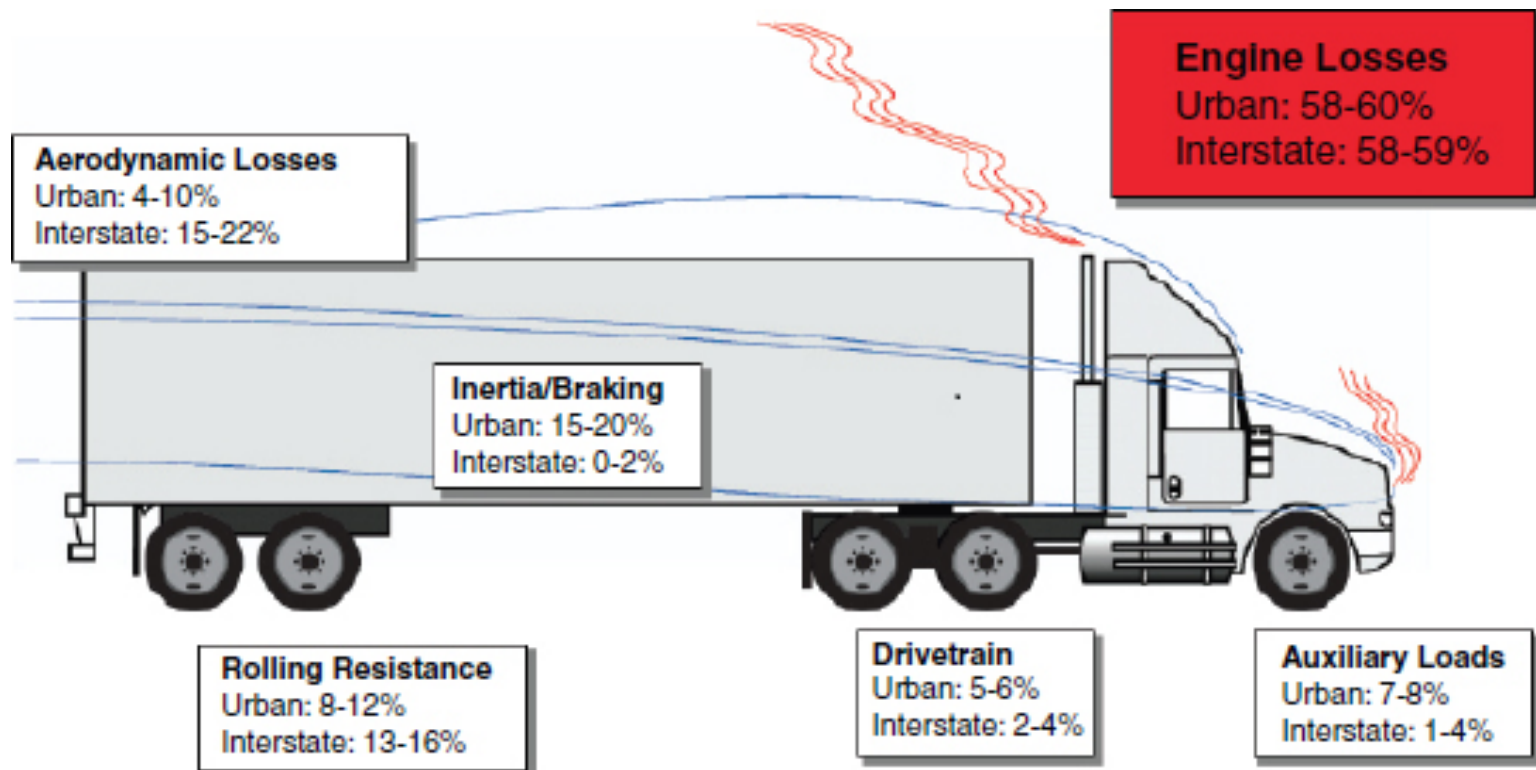
57% Heavy-duty trucks account for the the dominant share of all logistics-related greenhouse gas (GHG) emissions.



Source: World Economic Forum

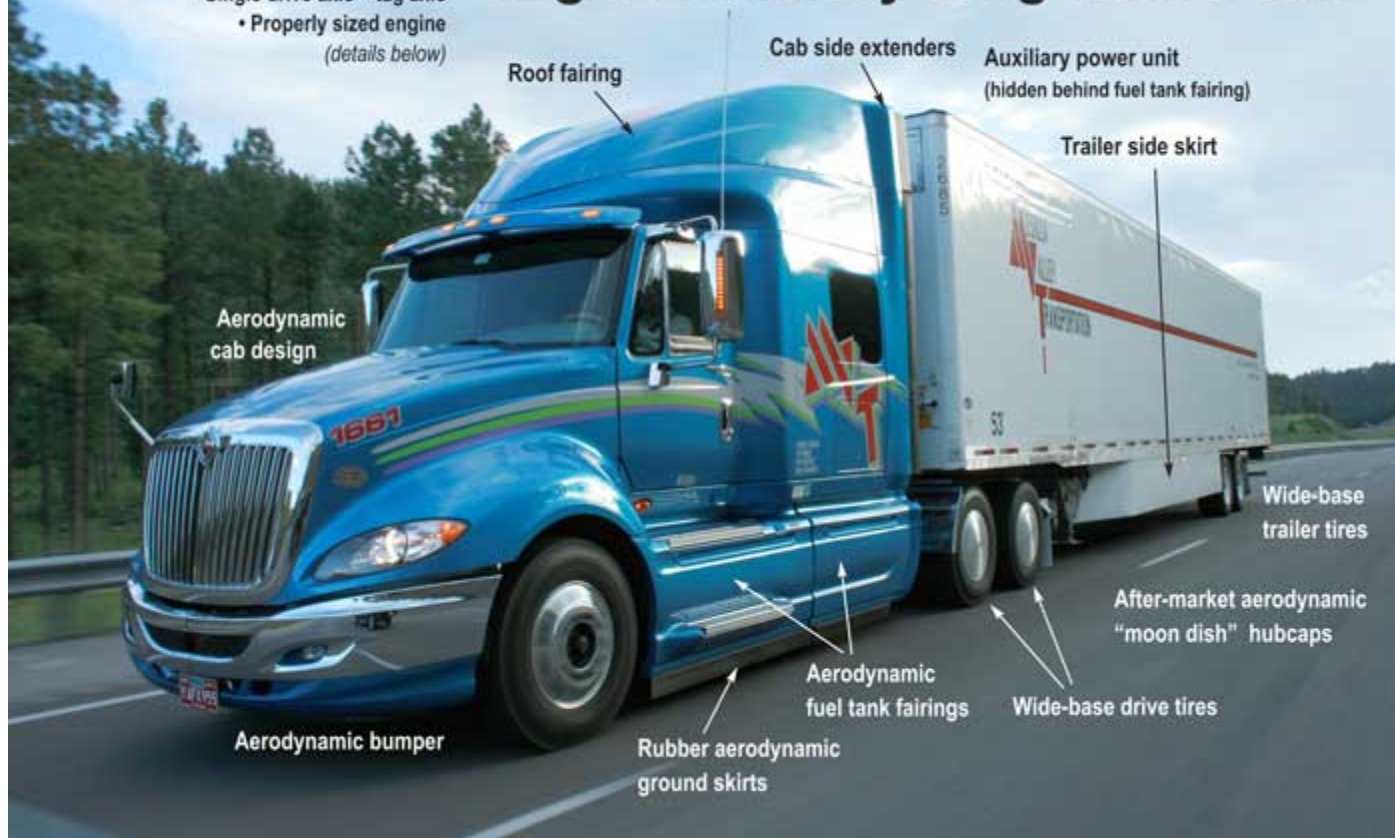
Reducing Emissions Private Fleets





High-efficiency long-haul truck

- Tractor specs
- Single drive axle + tag axle
 - Properly sized engine
(details below)



Aerodynamic
cab design

Roof fairing

Cab side extenders

Auxiliary power unit
(hidden behind fuel tank fairing)

Trailer side skirt

Wide-base
trailer tires

After-market aerodynamic
"moon dish" hubcaps

Wide-base drive tires

Aerodynamic
fuel tank fairings

Rubber aerodynamic
ground skirts

Aerodynamic bumper

Resources



www.truckingefficiency.org



www.epa.gov/smartway

Reducing Emissions from 3rd Party Distribution



Drivers of GHGs from Freight

Solutions

Emissions

Reduce distribution miles

X

Use most efficient modes
& equipment

X

Use lower impact fuels

Cube/weight

X

Distance

X

Equipment Efficiency

X

Fuel Footprint

5 Principles for Greener Freight



Get the most out of every move.



Choose the most efficient transport mode possible.



Demand cleaner equipment and practices.



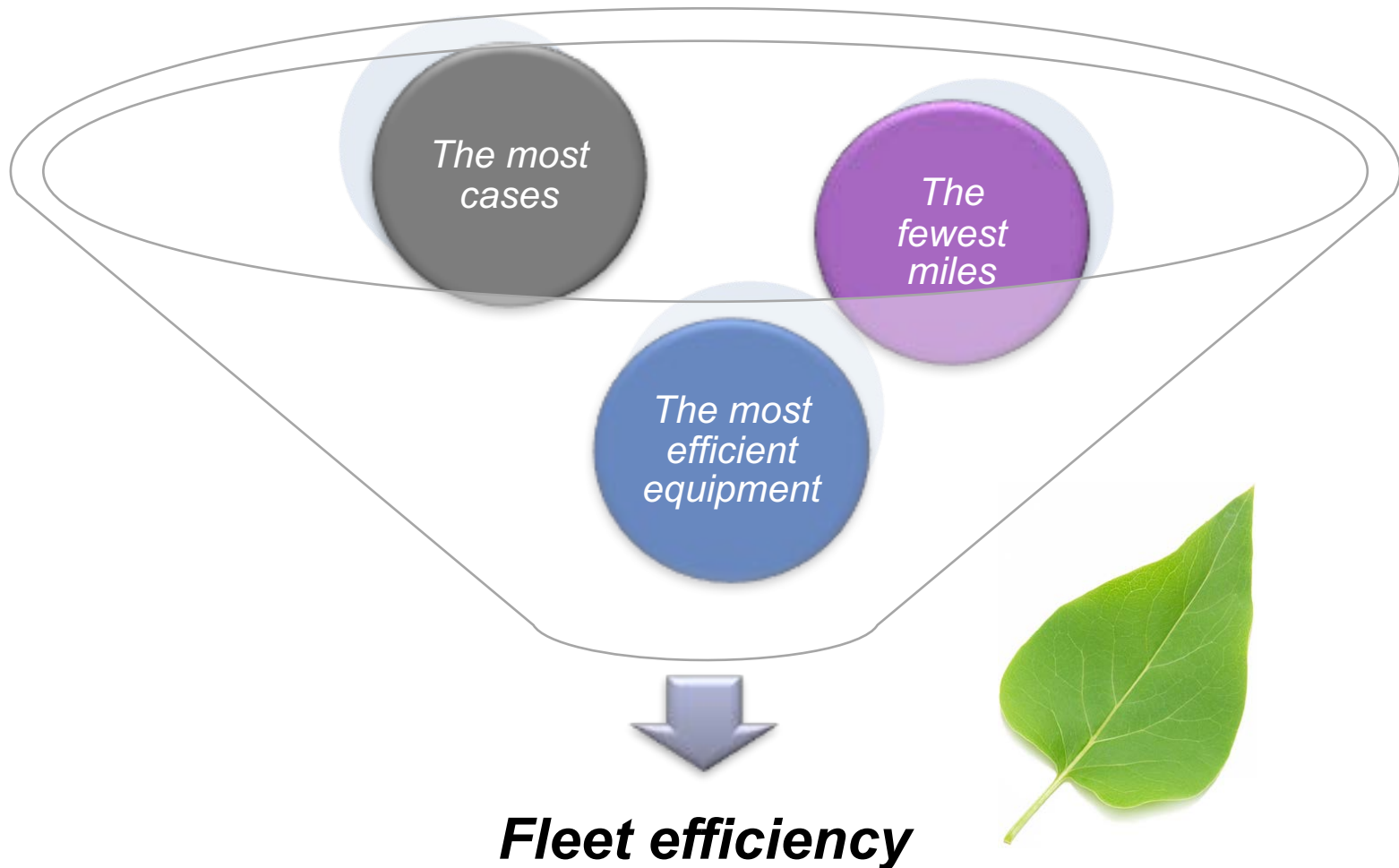
Redesign your logistics network.



Collaborate!

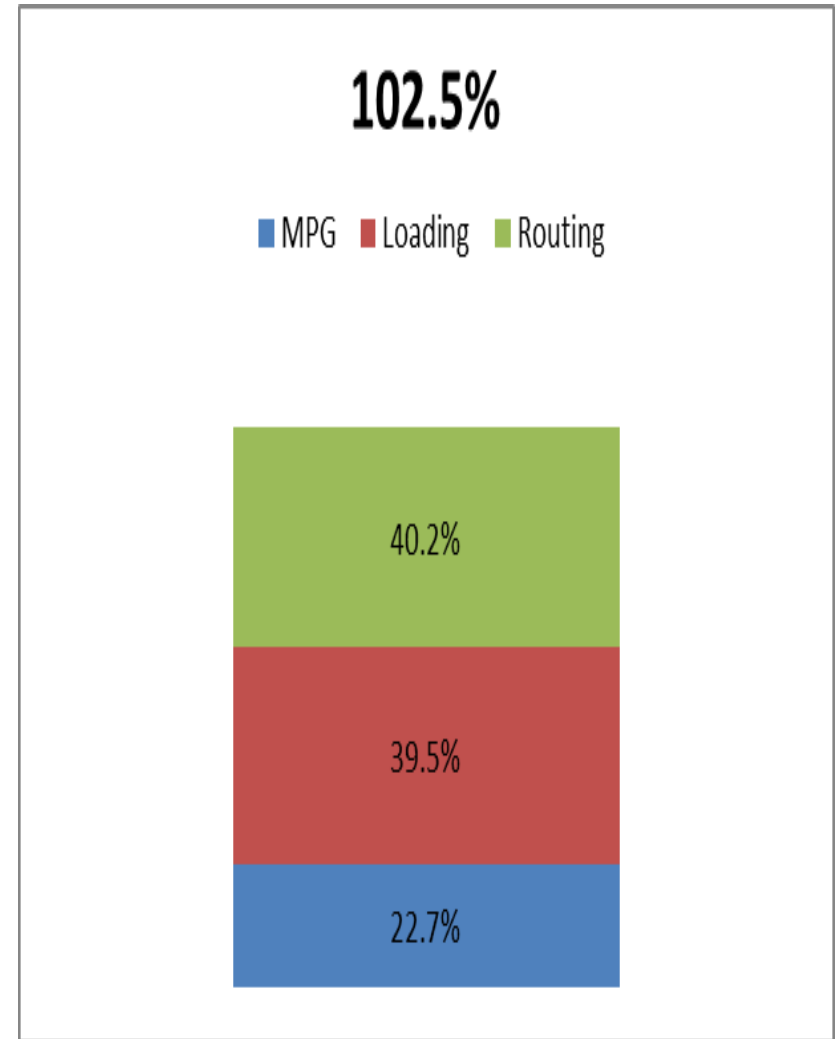
Case Study: Walmart

Walmart Fleet Efficiency = Cases shipped / Gallon Burned



Case Study: Walmart

- Saved nearly \$1B in FY2016 alone
- Delivered 1 billion more cases and drove 460 million fewer miles as compared to FY2006
- Avoid emissions of almost 650,000 metric tons of CO₂
 - Equivalent to GHG emissions of 136,842 passenger cars driven for one year
 - OR, 97 Olympic swimming pools of fuel



Case Study: Ocean Spray



SHIFTING TO RAIL

**Intermodal
Backhaul**
Fruit Co. + CSX +
3PL

40% cost
Savings

65% CO₂
Savings

External
Collaboration

NETWORK REDESIGN

Reduced Miles
Florida DC

15% cost
Savings

18% CO₂
Savings

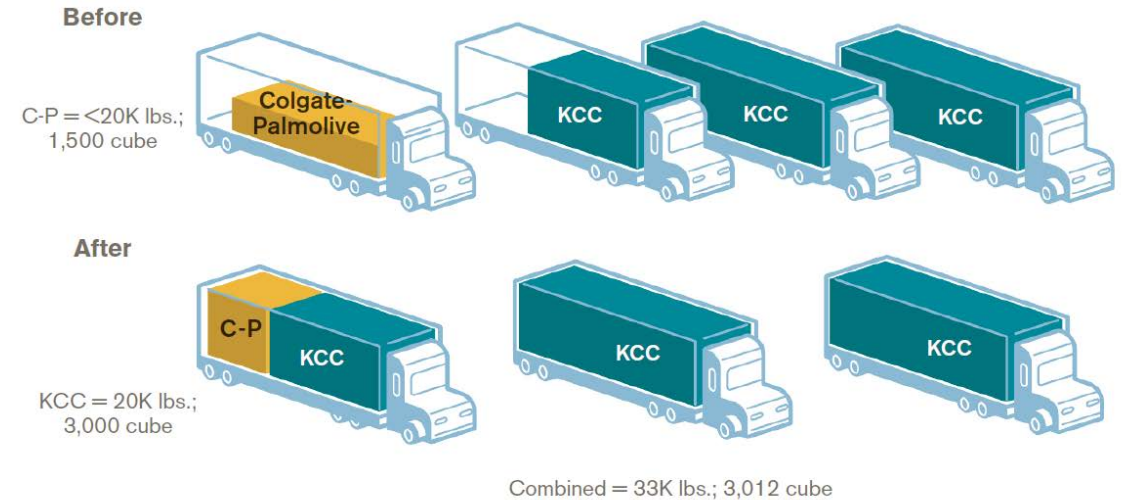
Internal
Project

Case Study: Colgate + Kimberly-Clark



Order pattern illustration

(based on average weekly order cycles)

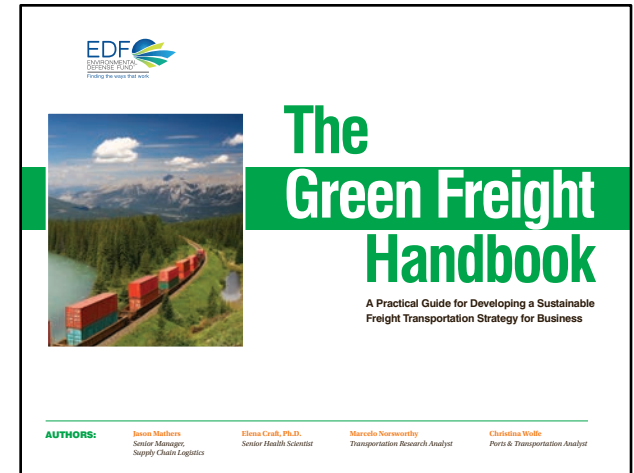


By coloadng freight bound for CVS, Colgate & Kimberly-Clark:

- Cut overall trucks trips (109 less)
- Lower emissions (28 tons avoided)
- Increased business value (7% lower inventory & 2% fewer out-of-stocks)

EDF Tools & Resources

- EDF Green Freight Handbook
 - Green freight diagnostic tool to ID project types
 - Advice for building support
 - Recommendations for goal setting



EDF Tools & Resources



CLIMATE CORPS

- EDF-trained graduate/MBA students
- 10-week fellowship
- nearly \$1.4 billion in energy savings identified
- average of \$1 million in savings identified for each participating organization
- Companies pay fellows directly

Visit <http://edfclimatecorps.org> for more information



Jason Mathers
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<http://edf.org/freight>



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Happy Family Case Study

Implementation & Measurement: Emissions Reductions



ORGANICS
HappyFAMILY®



OUR MISSION
is to change
THE TRAJECTORY^{OF}
CHILDREN'S HEALTH
through nutrition



This is how we achieve our mission:

Nourishing
Lives

Supporting
Families

Protecting
our Planet



This is how we achieve our mission:

Protecting
our Planet



Do everything in our power
to leave the babies that we
serve now a healthy and
happy planet to grow up on
in the future



This is where we start:

#1



Farms

#2



Logistics

#3



Manufacturing



2nd largest emitter of GHG emissions in our supply chain



Most control over logistics practices





One Step at a Time

#1

Measure what matters

#2

Prioritize opportunities

#3

Take action

#4

Repeat



#1

Measuring What Matters (choosing metrics)



GHG Emissions

Absolute logistics emissions

Emissions per \$ of revenue

&

% of Ton Miles

For each mode of transport



#1

Measuring What Matters (establishing a baseline)

Carbon Footprint

from logistics in 2016

based on

Origin

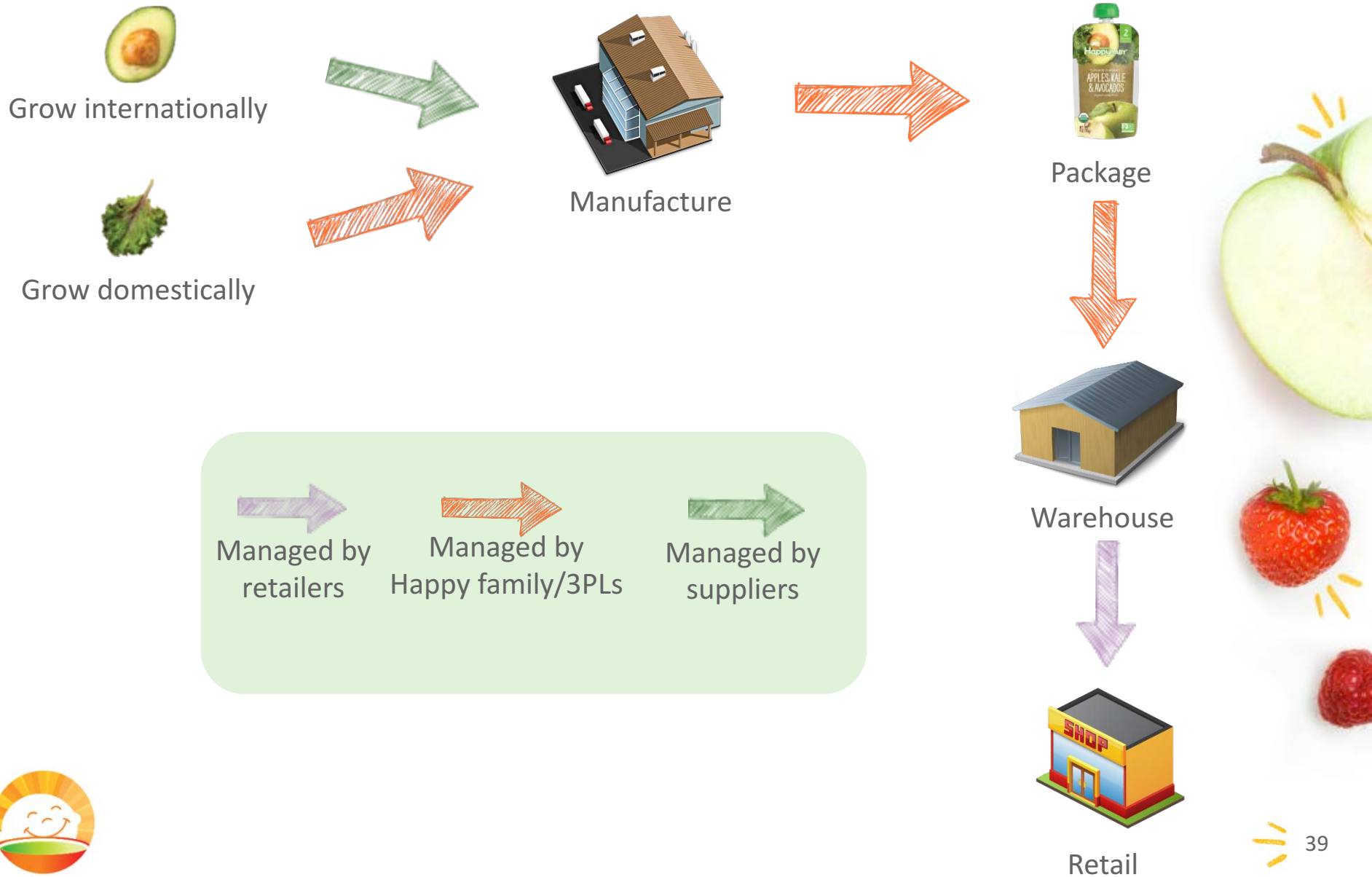
Destination

Volume

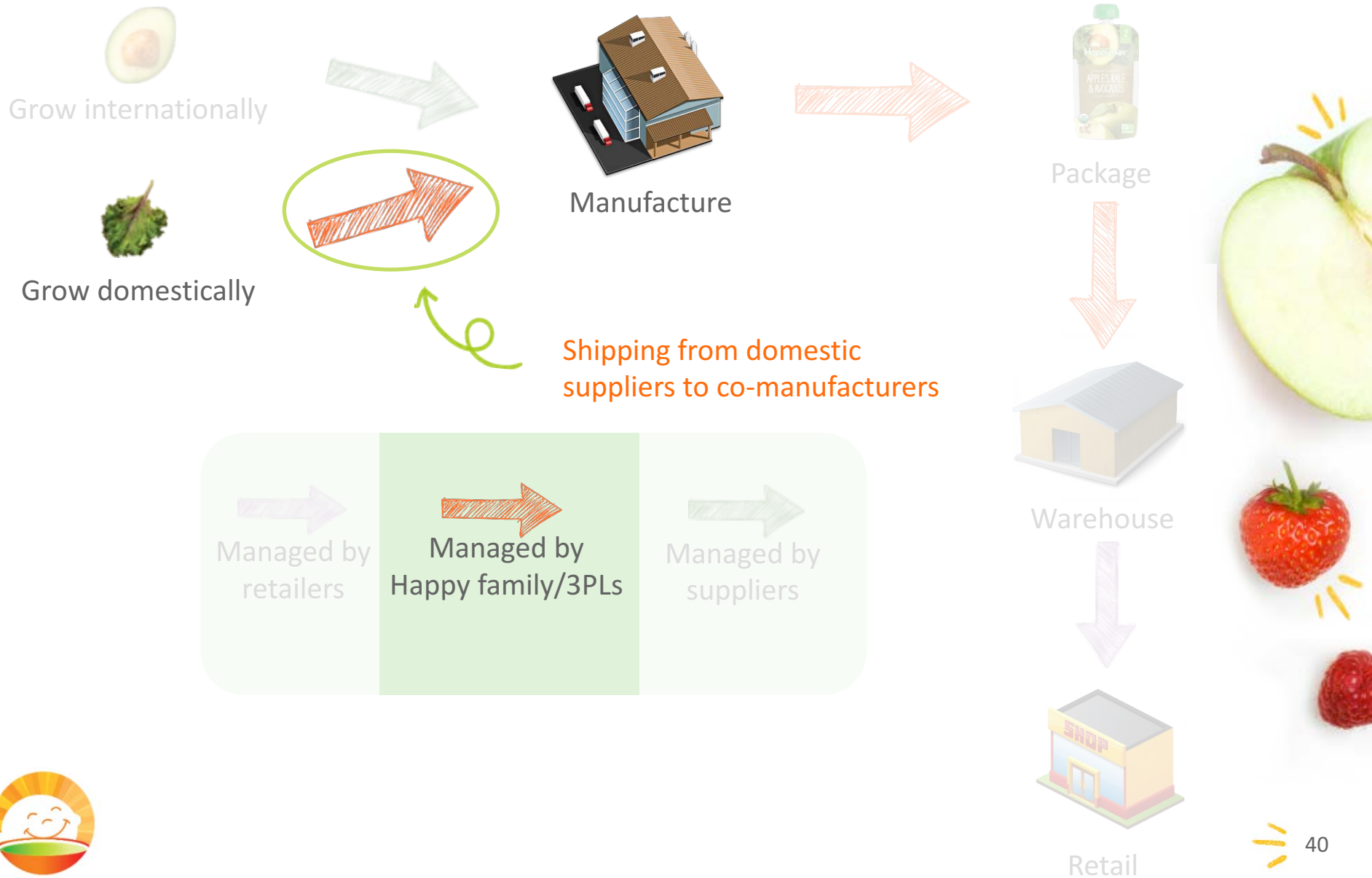
of materials shipped



Prioritizing Opportunities (our supply chain)

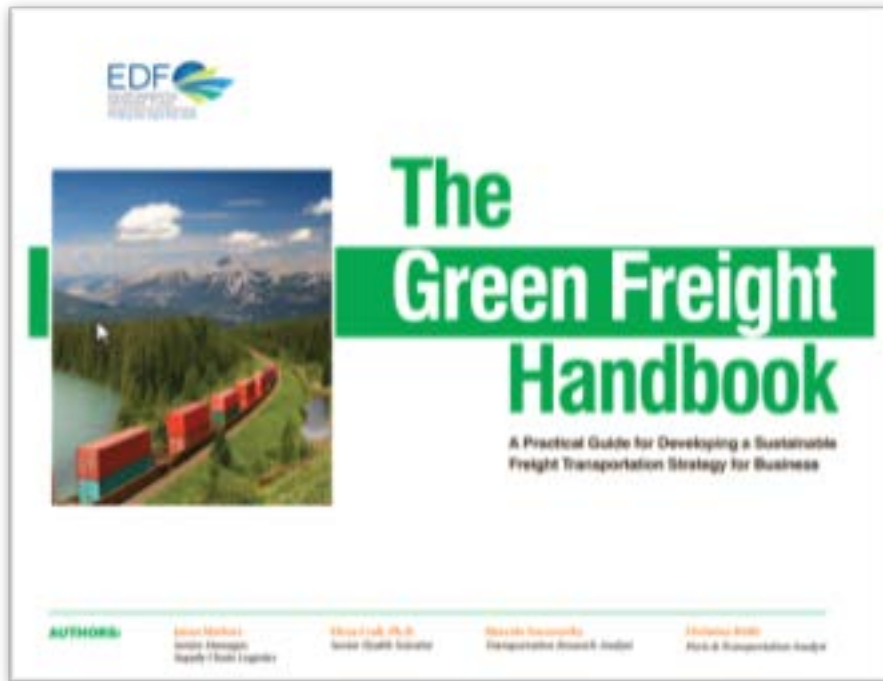


Prioritizing Opportunities (our leverage)



#2

Prioritizing Opportunities



5 Principles for Greener Freight

- | | |
|--|---|
| | Get the most out of every move. |
| | Choose the most carbon-efficient transport mode possible. |
| | Collaborate! |
| | Redesign your logistics network. |
| | Demand cleaner equipment and practices. |



Tools to Organize Our Action Plan



#2

Prioritizing Opportunities



- Large % of trucks are maxed out by weight or volume
- Lack of analysis tools to increase weight max out frequency



- Rarely (if ever) moving empty miles
- Complicated supply chain → complex project to implement immediately



- Time consuming and complex
- Would likely need to bring in a consultant



- Little leverage as small brand to influence large 3PLs
- Easier to influence changes upstream through advocacy



- Majority of inbound domestic raw materials being shipped by trucks
- New hire in logistics motivated by potential for cost savings



Intermodal



Easiest conversion



Largest opportunity for cost savings



#2

Taking Action (our approach in 5 steps)



Generated annual purchasing forecast



Sent out RFPs to 3PL providers



3 rounds to eliminate non-competitive bids



Awarded suppliers for Q2 based on best pricing



(For example)



Repeat every quarter with updated forecast



#2

Taking Action (the outcome)



57%

Of loads by volume could be converted to intermodal



30%

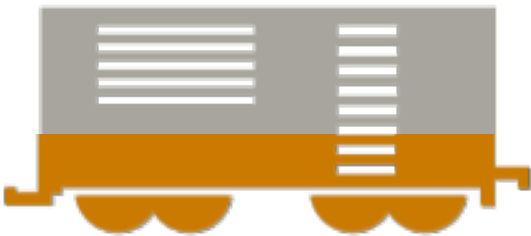
Of loads by volume were more cost efficient on intermodal



#3

Taking Action (the impact)

18% domestic inbound raw materials
going by intermodal since May 2017



82 trucks taken off the road/year

150 Tons CO2e saved/year

\$90,000 projected cost savings



Benefits

- Didn't have to change a lot about our process
- Substantial cost savings
- 5% reduction in transportation emissions annually
- Opportunity to share our efforts with other brands to create a ripple effect of action

Challenges

- Increased lead time by 3-4 days
- Price and availability of refrigerated rail cars limits moving more to intermodal transit
- Some loads have less flexibility on lead times





Repeat!

Continually seeking ways to increase cost and environmental efficiency, such as:



Analyzing ordering process to find ways to shorten lead times



Finding ways to max out weight capacity on more loads





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Benchmarking & Goals

Emissions Reductions

Benchmarking Freight Leadership

Declare a Goal

28% of companies are setting performance-based sustainability goals



Double fleet efficiency
by the end of 2015
(compared to 2005)



Reduce CO2 emissions
from logistics network to
2010 by 2020

Goals II



Reduce CO2 per kilogram of goods moved by 10 percent by 2020



Reduce greenhouse gases from its global logistics operations by 15% per hectoliter sold



Reduce fuel use for its outbound moves by 35% compared to its 2005 consumption.



Reduce supply chain-related greenhouse gases by 20 percent by 2020

Benchmark: Invest in future

Companies investing in
fuels/equipment or advocating
for policy change

11%



If you are...

starting out

1. Designate a clear lead
2. Define objectives & scope
3. ID priority projects and launch pilots

If you are...

established and ready for more

1. Set public improvement goals
2. Scale successful projects
3. Benchmark performance

If you are...

already an industry leader

1. Meet and expand goals
2. Assign resources to support market development
3. Participate in industry collaborations



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Public Policy

Freight Transportation

Public Policy on Freight Transportation

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Making Trucks More Efficient



Truck Efficiency: A Bi-Partisan Goal



2007: Call for NHTSA to study and set heavy truck efficiency standards

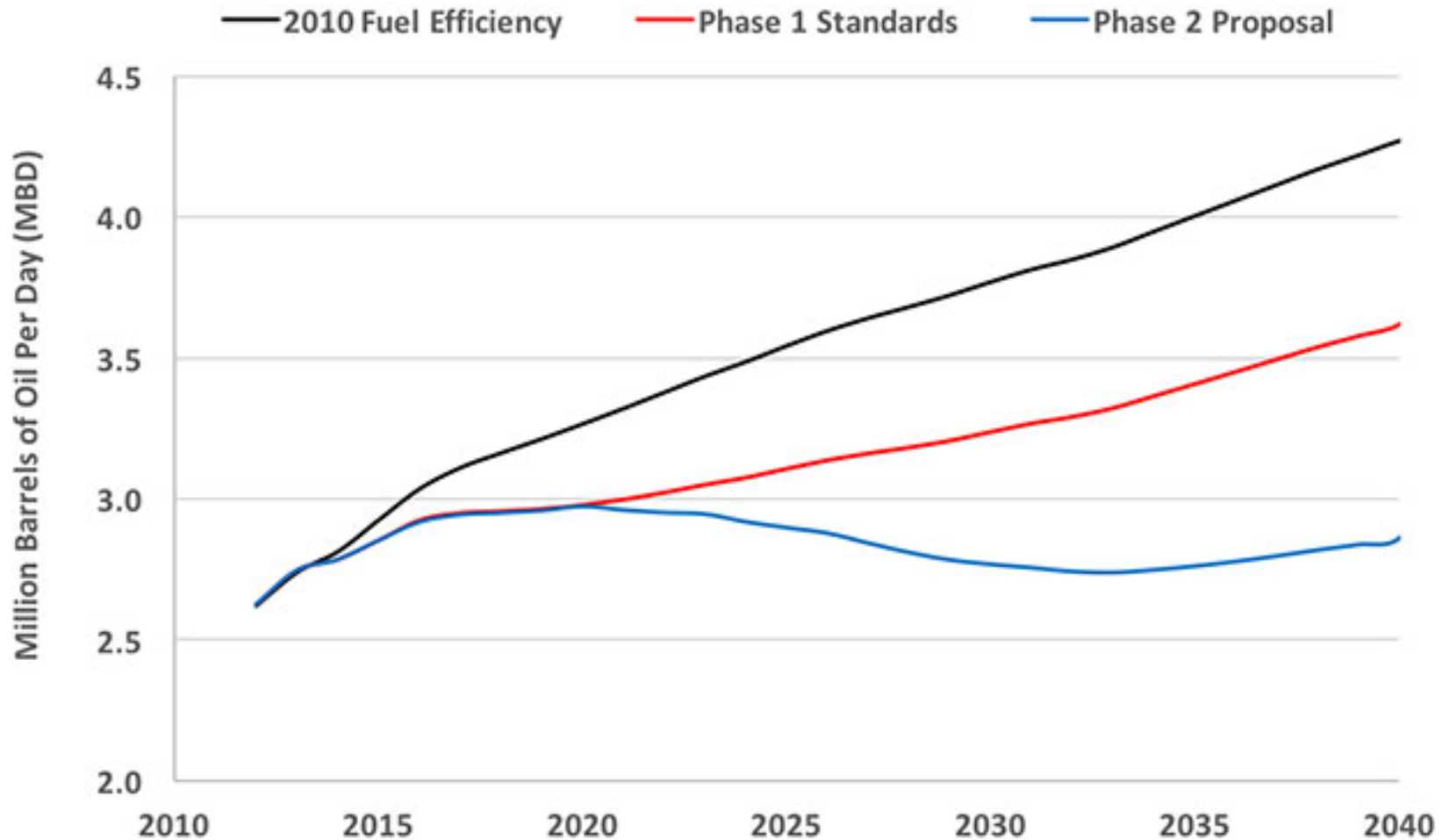


2011 & 2016: NHTSA fuel efficiency rule & EPA greenhouse gas rules finalized

Rule Regulates Class 2b-8 trucks



Oil Savings from EPA 2021-2027



Source: Siddiq Khan, ACEEE, On EPA Proposal
<http://aceee.org/blog/2016/02/fuel-efficient-heavy-trucks-are>



12 Companies and BICEP Coalition Sign On to Ad for Strong 2025 Truck Fuel Economy Standards.

BETTER FUEL ECONOMY DRIVES OUR COUNTRY

As food companies and retailers, we drive more than
1/2 billion freight miles for our customers.

Better fuel economy reduces shipping costs and cuts emissions.
The EPA is set to boost heavy-duty truck fuel economy standards.
THAT'S GOOD NEWS. AND WE CAN DO EVEN BETTER.

WE CALL
FOR STANDARDS
THAT WILL
**REDUCE
TRUCK FUEL
CONSUMPTION
40% BY 2025**



GENERAL MILLS

patagonia

Stonyfield
DAIRY



Annie's

Happy FAMILY

LATE JULY
SNACKS



Amy's



BICEP

BUSINESS for INNOVATIVE
CLIMATE & ENERGY POLICY
a project of Ceres



PEPSICO



THE WALL STREET JOURNAL.

OPINION | COMMENTARY

Delivering a Greener Fleet of Trucks

The Obama administration's new proposal will reduce fuel use, cut pollution and spur transportation innovation.

By Indra K. Nooyi And Fred Krupp

June 19, 2015 7:17 p.m. ET

When you walk down the aisles of a supermarket, you probably don't stop to consider how the array of products made it to the shelves. But as the heads of two organizations deeply involved in supply chain logistics—PepsiCo and the Environmental Defense Fund—we do think about the U.S. distribution system and the potential environmental impact of the delivery fleets that keep stores well-stocked. And we see an enormous opportunity on the horizon.




The New York Times

Sunday Review | EDITORIAL

A Rare Agreement on Climate Rules

By THE EDITORIAL BOARD AUG. 20, 2016

“....There are aspects of this agreement worth celebrating besides its positive effect on the planet. One is the trucking industry’s thumbs up — a rare departure from the legal blitzkrieg that has greeted most of the administration’s other efforts to reduce greenhouse gases. ...”





FUELING YOUR MIND FOR THE ROAD AHEAD

EPA Court Filing May Signal Trump Review of Strict Heavy-Duty Truck Emissions Rules

CLARISSA HAWES || APRIL 26, 2017 || FINANCIAL



Funding for the U.S. Environmental Protection Agency



The Washington Post



Energy and Environment

EPA remains top target with Trump administration proposing 31 percent budget cut

By Brady Dennis and Juliet Eilperin May 23



Truckinginfo



News Equipment Fleet Management Safety Drivers Maintenance Products Fuel Smarts Aftermarket

PASSING ZONE

EPA Aims to Toss Away SmartWay

Commentary by David Cullen, Executive Editor

April 4, 2017

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Author Bio



David Cullen
Executive Editor

Executive Editor David Cullen comments on the positive and negative factors impacting trucking – from the latest government regulations and policy initiatives coming out of Washington DC to the array of business and societal pressures that also determine what truck-fleet managers must do to ensure their operations keep on driving ahead.

More by this author



Greening The Fuel Supply



California's Low Carbon Fuel Standard *is working*

From 2011 through 2016, the LCFS has helped result in:

8,500,000,000

gallons of petroleum avoided ... and growing



CLEAN FUELS

57%
increase
in use



MARKET VALUE

\$1.6 billion
invested in
clean fuel
production



HEALTH


\$2 billion
in avoided
public health
impacts



CO₂ POLLUTION

26 million
tons of carbon
pollution
avoided

Actions Your Company Can Take

1. If you buy trailers – tell your suppliers to drop their lawsuit.
 2. Tell Congress to say no to proposed cuts to EPA budget.
 3. Let California legislators know you want access to clean fuels.
- 



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