



Improving Products and Supply Chains Through Multi-stakeholder Engagement

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Today, the world is facing alarming sustainability challenges on multiple fronts.

How do we create a world in which people are living well and businesses can prosper within the limits of the planet?



By 2050, world population will surpass **9 billion** which requires active conservation of cropland, freshwater, energy, and biological resources

By 2020, global emissions will **increase by 33%** from 2002 levels which translates into a loss of 5% of annual GDP if no action is taken



Over 1.4 billion people in developing countries live on \$1.25 a day or less

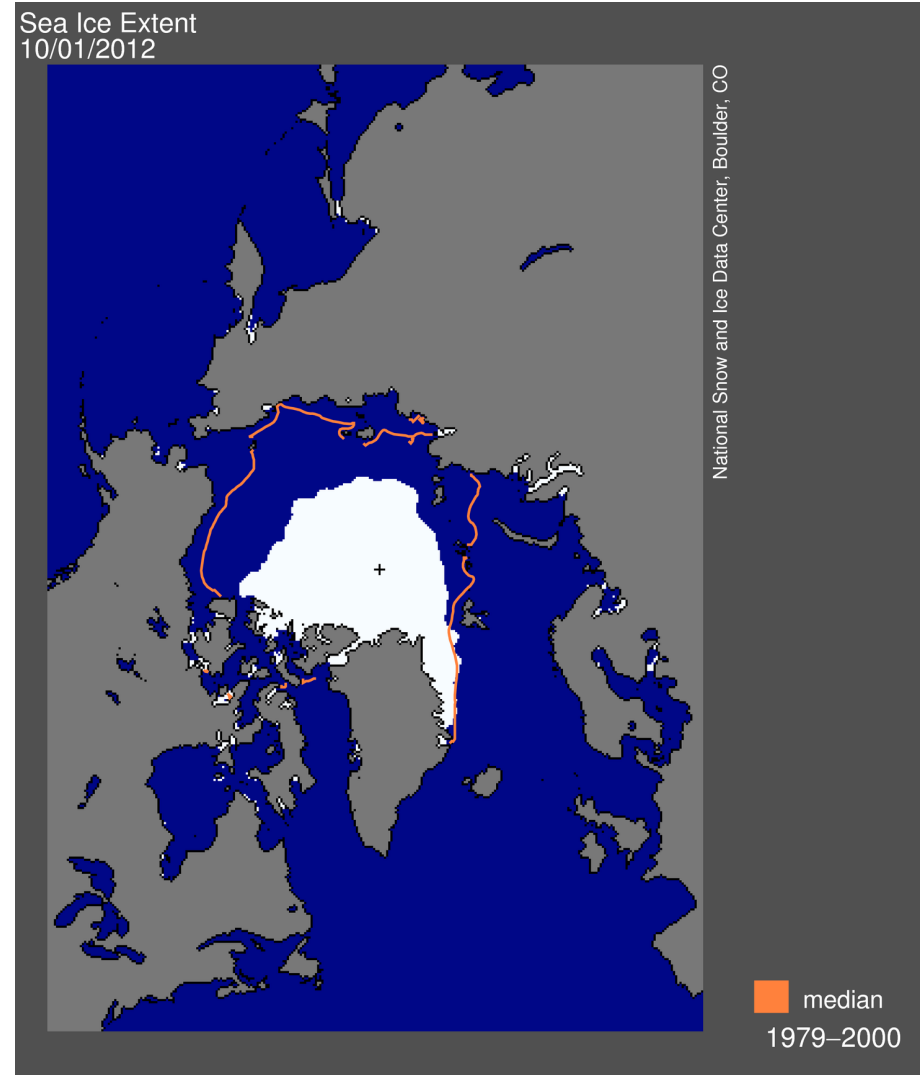
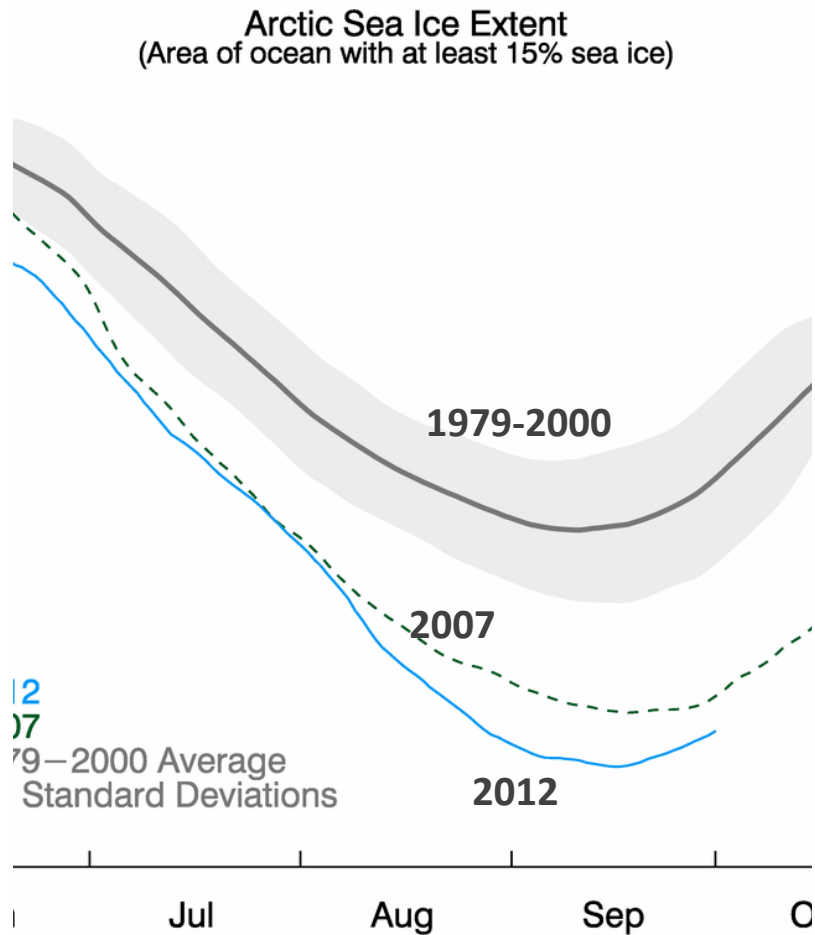
1.6 billion people are facing water shortage



Source: McKinsey Global Institute; World Economic Forum; The Guardian; The Climate Group, SMART 2020; IFAD Rural Poverty Report 2011



The ice cap cometh, and go-eth...



ARCTIC SUMMIT

A NEW VISTA FOR TRADE,
ENERGY AND THE ENVIRONMENT

MARCH 12TH 2013
HOTEL BRISTOL, OSLO

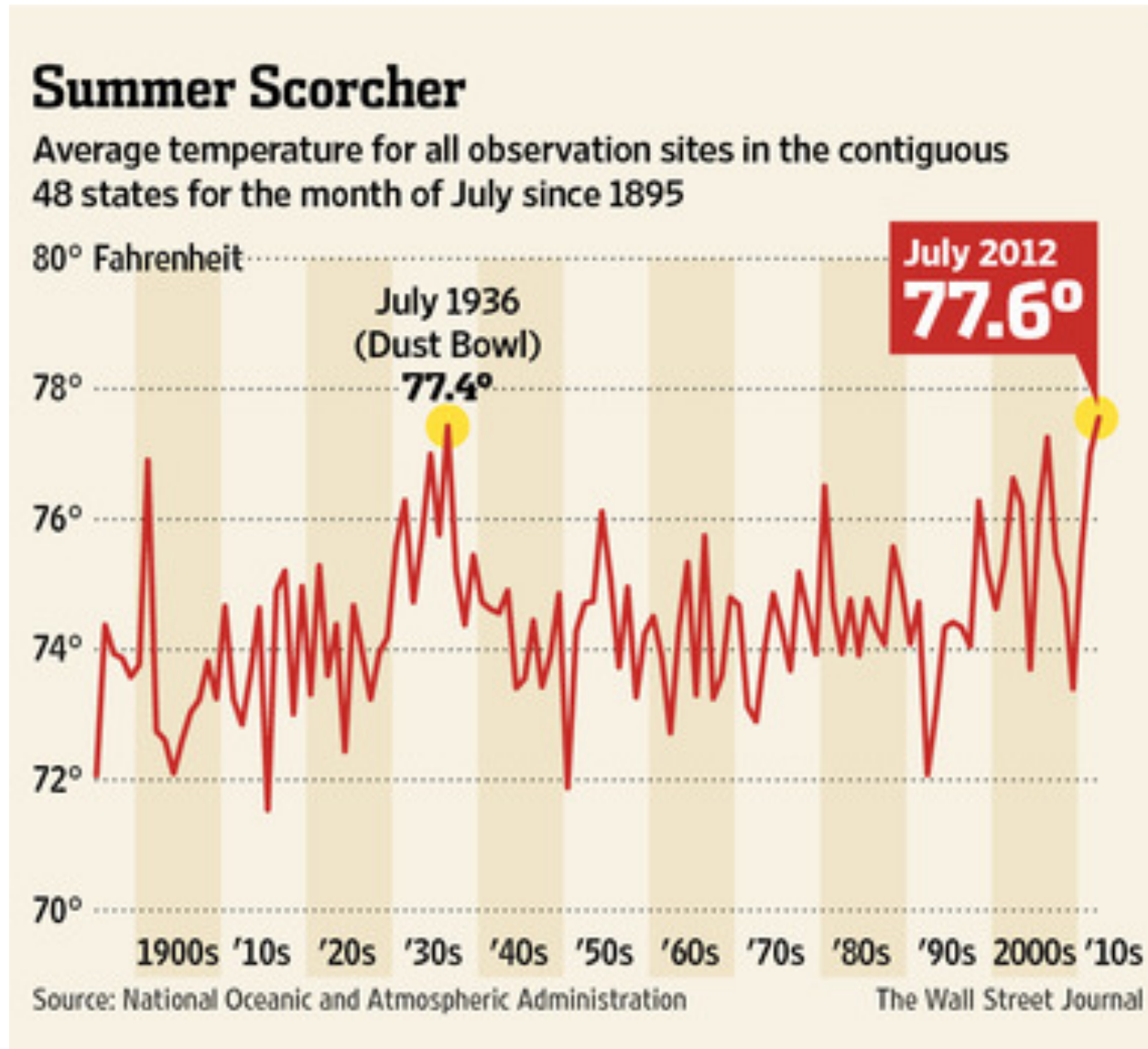
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Arctic future-reconciling global, national and community interests

The resource-rich Arctic is changing faster than anywhere on Earth, and its biggest transformation is just ahead. Due to climate change, the polar ice cap is shrinking and floating summer ice is projected to disappear altogether, setting alarm bells ringing for environmentalists, but opening up new perspectives for trade and development.



And the US recorded its hottest month in 118 years



“Extreme weather events” not so rare anymore...

EDITORIAL

Sandy: Act of God or act of man?

Scientists are reluctant to attribute any single weather event to man-made global warming. But the storm's devastating effects give us a picture of our future.



Comments

128



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6



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49



Recommend

584



An aerial view of the New Jersey coast is seen after the damage caused by Hurricane Sandy. (Master Sgt. Mark Olsen / U.S. Air Force / October 31, 2012)



Addressing product sustainability will play a big role in resolving challenges.



Nitrogen



Transportation



Dishwashing at Home



Raw Materials Extraction



Manufacturing of Components



At Home Usage



Cotton Production



Worker Health



Machine Washing & Drying



Source: TSC Product Category Dossiers



Measurement and reporting systems are crucial to progress in product sustainability but are coupled with an array of challenges.

Today



Science is enabling an understanding of social and environmental impacts and benefits



Various corporate and social initiatives launched in attempt to address product sustainability



Global regulations are emerging with unpredictable metrics

But challenges exist...

Challenges include

Lack of a **harmonized measurement and reporting approach**:

- **Complexity** driven by the vast variety of products
- No **holistic view** of the value chain
- No capability to **credibly differentiate** products based on sustainability
- Need for **consistency and transparency** in measurement and reporting

Source: TSC team analysis



The Sustainability Consortium improves decision making for product sustainability throughout the entire product life cycle across all sectors.



“Enabling the consumer goods industry to do things that matter about things that matter.”



Vision

To advance science to drive a new generation of innovative products and supply networks that address environmental, social, and economic imperatives



Mission

To design and implement credible, transparent and scalable science-based measurement and reporting systems accessible for all producers, retailers, and users of consumer products

Source: The Sustainability Consortium



Translating TSC's mission into impact requires doing four things:

Approach

1

Using a multi-stakeholder approach...



2

... to create practical measurement tools...



3

... that enable proactive innovation in sustainability...



4

... and unlock value in the supply chain



Impact

Source: TSC team analysis



A unique and influential network of stakeholders



Spanning

- Industry sectors
- Environmental and social issues
- Life cycle stages
- Stakeholder groups
- Global regions
- Business functions

Source: Networkweaving.com



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TSC's membership includes the world's most recognized companies representing about \$1.5 trillion in revenue...

Tier 1 Members - Asterisk denotes founding members



Source: www.sustainabilityconsortium.org/members



1

... top academic institutions and leading non-profit organizations.

Top academic institutions committed to developing Science-based measurement and reporting methods...



... and leading non-profit organizations to provide guidance and credibility



Source: www.sustainabilityconsortium.org/members



Delivering products

Current products – Level 1

Future products – Level 2

Understand product category hotspots¹ and drivers

Share information on best practices

Differentiate products against baseline

Declare Communicate to consumers

Level 1 – Category Level

- Broad product categories
- Qualitative assessment of hotspots¹

Level 2 – Product level

- Product-specific
- Quantitative tool to benchmark against baseline

¹ Areas of adverse environmental or social impact across product supply chain



Three products characterize knowledge about a product category's sustainability issues

COLLECT

Category Dossier



Collection of evidence on product category and its supply chain, environmental and social hotspots, and improvement opportunities

SYNTHESIZE

Category Sustainability Profile (CSP)



Synthesis of product sustainability knowledge and improvement opportunities

MEASURE

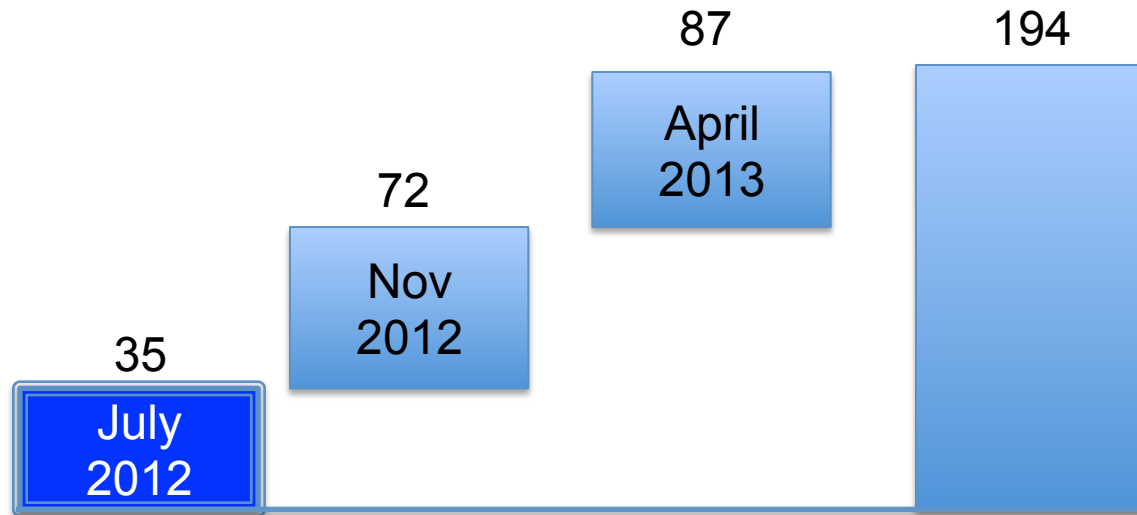
Key Performance Indicators (KPIs)



Metrics / questions to measure and track product category sustainability



TSC technical progress



Number of Product
Categories
Covered

Some of the
categories:

- Computers
- Displays/Monitors
- Mobile Devices
- Printers
- Televisions
- Beef
- Beer
- Bread
- Farmed Salmon
- Grains/Cereals
- Milk
- Packaged Cereals
- Wine
- Cotton
- Laundry Detergent
- Showering Products
- Surface Cleaners
- Copy Paper
- Toilet Tissue
- Plastic toys



Improvement opportunities that make a difference

Managing stocking density and water quality in farmed salmon

Integrated pest management for cattle diet crops










Managing chemicals of concern in home and personal care, toy, & electronic products

Increasing recycled content and recyclability and managing end of life in packaging and electronics



(excerpt)




Example – Computer laptop

Hotspot	Life Cycle Stages	Environmental Impacts	Social Impacts
1. Mining and raw material extraction: Acid-based extraction of metals such as copper, gold, and silver; handling/storage of tailings (waste); particulate generation during mining and refining operations.	 	 	
2. Manufacturing of laptop components: Laptop component production, including integrated circuits (ICs), displays, and printed wiring boards (PWBs), use energy intensive processes. The electricity generation required to manufacture a laptop contributes to the global warming potential (GWP) and the release of particulates, nitrogen dioxide (NO ₂), and sulfur oxides (SO _x).		   	



Improvement Opportunities

Actionable design, production and/or management practices that are known to reduce the negative impact of one or more life cycle hotspots.

Product Attribute	Addresses
I. Design for EOL: Incorporate design elements into laptops that allow for ease of disassembly, simplified recycling and/or upgrading and reuse increase the sustainability of the laptop. These design elements can help the laptop be processed more efficiently at the EOL stage for maximum recovery of parts and materials, which reduces the amount of virgin material needed for new products.	 HOTSPOT 1
II. ENERGY STAR(R) certification: Devices with the ENERGY STAR certification such as a laptop typically use 20-30% less energy than non-certified laptops.	 HOTSPOT 3
Consumer Goods Manufacturer Practice	
III. Recyclability calculation and reporting: Calculating and reporting the recyclability of a product measures the use of recyclable materials. This calculation is a proxy for the amount of material that can be recovered at the end-of-life (EOL) stage, when then reduces the amount of raw material extraction needed for new products.	 HOTSPOT 1

Manufacturing Energy Tracking

KPI 2

A. Scope

Supply Chain Engagement

B. Relevance/Rationale

Hotspot 2: Manufacturing of laptop components; primary energy and GWP

Improvement Opportunity I: Manufacturing energy consumption

Impacts: Climate, Resources, Ecosystems, Human Health

C. Question

Do you track energy consumption at the manufacturing facilities that produce your computers and major computer components?

D. Answer Options

- A) No
- B) Yes, we track or require our suppliers to track energy consumption at facilities that account for at least 50% of total manufacturing energy consumption.
- C) Yes, we track or require our suppliers to track energy consumption at facilities that account for at least 75% of total manufacturing energy consumption.
- D) Yes, we track or require our suppliers to track energy consumption at facilities that account for at least 75% of total manufacturing energy consumption and we have programs in place to increase energy efficiency.
- E) Yes, we track or require our suppliers to track energy consumption at facilities that account for at least 75% of total manufacturing energy consumption and we have programs in place to increase both energy efficiency and the use of renewable energy.

E. Additional Guidance

The term "suppliers" includes suppliers of the final assembly and suppliers of major components.

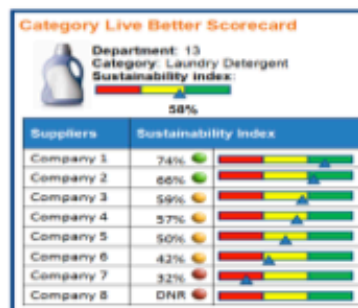
The term "major components" includes the Mainboard (PWB), IC (Processor and Chipset), Display, Hard Drive, Chassis, Battery, External Power Supply, Optical Disk Drive, and Packaging.

Walmart is incorporating Category Sustainability Profiles and Key Performance Indicators in its merchandising processes...



Science & Scorecards

Collaborating to develop science-based, credible industry standard metrics for product category sustainability



Business Integration

Business processes, systems, training, and incentives to enable supplier and category assessments



Product Transparency

Transparency into sustainability for our top products and suppliers



Opportunities & Issues

Innovation, continuous improvement and communication of progress

Source: Walmart



... and in its supplier scorecard

Category Live Better Scorecard



Department: 13
Category: Laundry Detergent
Sustainability index:
58%

Suppliers	Sustainability Index
Company 1	74%
Company 2	66%
Company 3	59%
Company 4	57%
Company 5	50%
Company 6	42%
Company 7	32%
Company 8	DNR



Company 5

Laundry
Sustainability
Index Results

Laundry Performance Summary

Sustainability Score	50%
Category Rank	5 th / 8
Points to Green	10%

Laundry Performance Detail

Energy and Climate	10 / 25
Materials and Natural Resources	13 / 25
Ecosystem and Human Health	18 / 25
People and Community	10 / 25

Key Opportunities

Key Opportunities	Business Case
Energy and Climate Increase use of dosage control mechanisms Increase on-pack cold water wash education	Improved customer experience Customer cost savings
Materials and Natural Resources Improve packaging to product weight ratio	Potential cost savings
People and Community Increase sourcing of sustainable palm oil	Reduce supply chain risk Reduce reputational risk

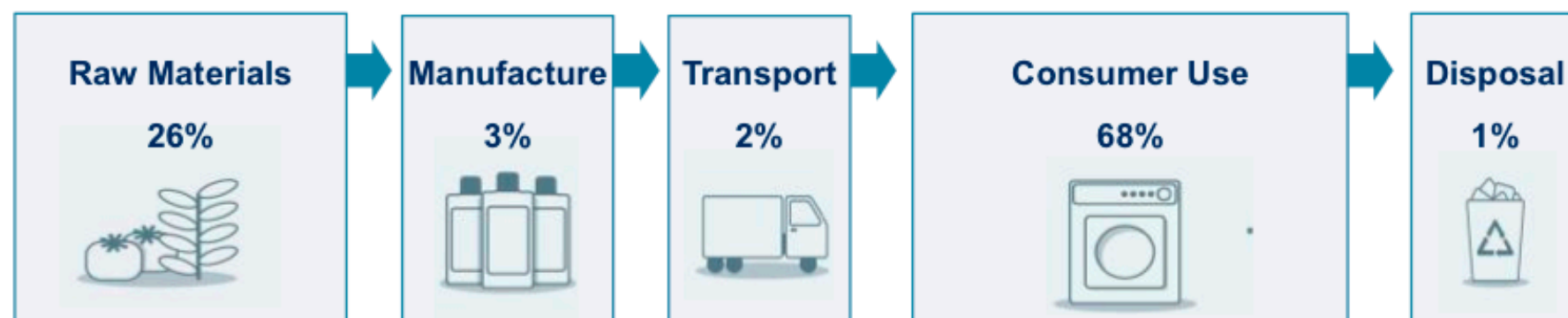
Source: Walmart



Unilever recognizes the potential of TSC tools to educate and engage consumers on product sustainability.



Greenhouse Gas Footprint



“The scientific basis of TSC work helps us focus on activities that matter and distinguish ourselves from other companies”

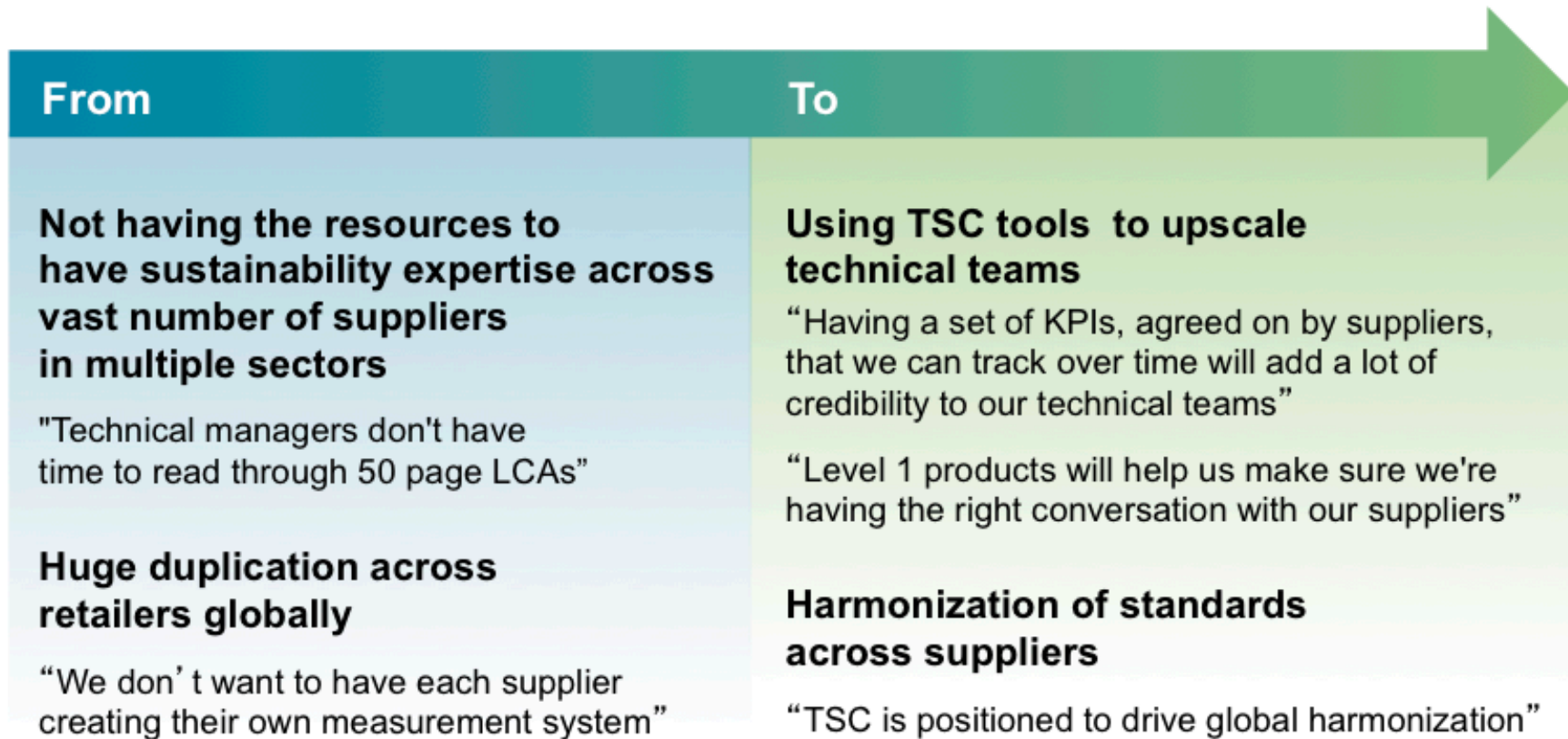
“We’ve identified opportunities and impact... It’s not only about how we manufacture it, but also how a consumer uses it”

“TSC’s approach provides the first step for companies to drive consumer engagement”

Source: Unilever; Baseline study of 1600 Unilever products representing 70% of its sales across 14 countries, 2008



TESCO: Having the right conversations with suppliers.



Source: Tesco



World Wildlife Fund engages with TSC to create and refine its tools ensuring a holistic view of the hotspots along the value chain.

WWF strengthens TSC process...

- ▶ Active participation in creating TSC products
 - 235 product-specific comments for 50 dossiers
- ▶ Inclusion of broad commodity challenges into hot spot analysis, including:
 - Deforestation, Biodiversity, Climate Change, Water Risk, Land Use/Competition and Soil impacts
- ▶ Complementing TSC product category methodology with other assessment methods

...which results in fruitful collaboration for both WWF and TSC

- Subject matter expertise and experience
- Credibility and on-the-ground knowledge
- Partnership with Civil Society organizations
- Public interest perspective
- Access to new markets



Provide access to:

- Academic research
- Integration of expertise with practice
- Expansion of sustainability research to further drive impact

Source: WWF





A time for heroes

A time for herds



THE SUSTAINABILITY CONSORTIUM

The Sustainability Consortium is administered by Arizona State University and University of Arkansas with locations in The Netherlands and Santiago, Chile.

ASU GLOBAL INSTITUTE
of SUSTAINABILITY
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For quality of life



FUNDACIONCHILE
Movemos la frontera de lo posible