

Industry Agenda

# Beyond Supply Chains Empowering Responsible Value Chains

Prepared in collaboration with Accenture

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# Foreword



**Wolfgang Lehmacher**  
Head of Supply Chain and Transport, Mobility Industries

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## World Economic Forum

Supply chains are vital to both business and the economy. Therefore, supply chain decisions determine to a large extent the success of companies and nations. Furthermore, the design and management of supply chains have major implications for the well-being of society and the environment. In this respect, the key challenges range from implementing new technologies to reduce the dependency from fossil fuels as well as carbon emissions, to ensuring work safety and fair wages across the globe.

Companies are well equipped to understand the business impact of supply chain decisions on their own organizations. However, to what extent do business leaders and supply chain managers understand the impact on the external world? In 2014, the World Economic Forum's Global Agenda Council on the Future of Logistics and Transportation proposed to start closing the gap. Jointly with selected partners and leaders in the field of supply chains and transport, the report *Beyond Supply Chains* was prepared to provide guidance in making better decisions to drive shared value.

This report answers among others the following questions: Which supply chain practices brought not only positive impact to business, but also to society and the environment? What cases demonstrate how shared value can be created through better supply chain decisions? It is our goal that the results of this report guide future supply chain decisions towards creating more responsible supply chains for tomorrow's customers and consumers.



**Mark H. Pearson**  
Senior Managing Director, Operations Strategy

A handwritten signature in blue ink, appearing to read 'Mark Pearson', with a horizontal line underneath.

## Accenture Strategy

As Accenture works with supply chain directors on their journey towards high performance supply chains, a new focus has emerged in their strategies. Rather than concentrating exclusively on developing commercial advantage – which has led to a focus on the trade-off inherent in cost versus customer service – the best of the best are balancing commercial advantage with two factors: environmental advantage and the supply chain contribution to local economic development.

The *Beyond Supply Chains* report researched this phenomenon and identified a set of 31 proven supply chain practices which provide companies with a blueprint of where they can gain both commercial and socio-environmental advantage (both environment and local economic development) – driving a triple advantage. The report also provides a framework for evaluating the potential value at stake behind each of these practices, and an implementation framework for different strategic priorities.

The good news: There is commercial advantage (both upside improvement as well as downside risk limitation) and socio-environmental advantage to be gained from driving the right behaviours. We hope the examples in this report will spur others to follow the path to responsible supply chains.

# Executive Summary

The supply chain development of multinational companies can impact both the environment and local economies, especially in emerging markets. This impact can be positive or negative depending on factors including: market pressure to lower costs and the extent to which companies are focused on responsible supply chains.

To ensure the impact is positive, leading companies are looking to adopt what we call “the triple supply chain advantage” – where companies achieve profitability while benefiting society and the environment. Our report, *Beyond Supply Chains* examines how companies strive for this triple advantage and looks at how they intend to achieve it.

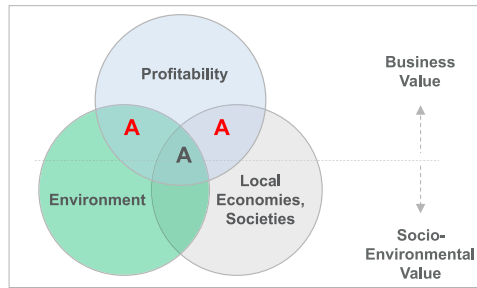


Figure 1. Striving for “triple advantage”

Product Design	Sourcing	Production	Distribution	End-of-Life
<b>Packaging</b> 1 Reduce weight or size of packaging material 2 Design for maximum recyclability and “circularity”	<b>Raw Material and Components</b> 1 Seek for more sustainable, second source alternatives 2 Supplier Relationship 1 Create supplier auditing and control 2 Source from local (micro) suppliers 3 Source from sustainable suppliers	<b>Production Footprint</b> 1 Consider sustainability criteria in location decision 2 Reduce energy, water use and emissions 3 Centralize and optimize waste management <b>Production Process</b> 1 Reduce energy, water use and emissions 2 Centralize and optimize waste management <b>Logistics Network and Warehouses</b> 1 Consider more decentralized distribution network 2 Smart and green building deployments 3 Share network facilities and transport	<b>Innovative Distribution Channels</b> 1 Sell through crowd-shipping 2 Sell through micro retailers <b>Vehicle Optimization</b> 1 Use innovative vehicle technologies and tires 2 Use alternative fuels <b>Transport Planning and Execution</b> 1 Increase vehicle utilization degree 2 Reduce travel distances 3 Use more sustainable (intermodal) transports 4 De-speeding of the supply chain	<b>Disposal</b> 1 Support environment-friendly disposal of products <b>Reverse Material Flows (Product and Packaging)</b> 1 Recycle materials 2 Reuse materials
<b>Cross Functional Practices</b> <b>Technologies</b> 1 Improve supply chain visibility (availability of data & analytics) 2 Use technology to trace materials <b>Labour Standards</b> 1 Implement fair wages policy and empower workforce 2 Enforce high environment, health, safety standards				

Figure 2. Landscape of supply chain practices

- **Profitability:** Revenue uplift of 5-20%; supply chain cost reduction of 9-16%, brand value increase of 15-30%, significant company risk reduction
- **Local development and societies:** Improved customer health, local welfare and labour standards (wages, working conditions)
- **Environment:** Carbon gas reduction of 13-22% on overall footprint

*Beyond Supply Chains* has developed a decision framework that prioritizes the identified practices by their potential to create triple advantage. Although the model uses consumer goods companies as a reference, it can be tailored according to the conditions of a specific industry or an individual enterprise (e.g. its “social archetype”).

But even the triple advantage has its limits because the concept implies a supporting business case. Yet when talking about human rights, a commitment to ethical principles should outweigh financial justification. In this context, the report discusses how to ensure fair wages throughout supply chains and looks at policy changes required to support companies looking to optimize across the three advantage areas.



# Chapter 1: Responsible Supply Chains – Why Act Now?



# Responsible supply chains: Challenge and opportunity

Creating responsible supply chains – driving shared values for local economies, environments and businesses – is a challenge supply chain officers face every day. From the factory collapse in Bangladesh,<sup>1</sup> to the gas leak in Bhopal, business annals are filled with shocking stories of the negative impact commerce can have on society. Underneath the big headlines are smaller dramas that seem to perpetuate despite interventions from governments and business: child labour violations, unethical working conditions, toxic products distributed to a trusting global consumer.

The root cause for many of the world’s worst societal and environmental conditions lies in failures in decision-making and in barriers to implementing improvements, including difficulties in:

- Making a business case for sustainability (according to the UN Global Compact-Accenture CEO Study on Sustainability, many programmes fail because it is too difficult to justify investment in sustainability because the business case is too difficult to quantify<sup>2</sup>)
- Identifying and exploiting the full range of options on sustainability initiatives, driving both value for business and society
- Ensuring compliance in global, non-transparent supply chains, particularly if there is sub-contracting through multi-stage suppliers (e.g. tier 5 suppliers)
- Taking the first move in under regulated areas because companies will face the risk of competitive disadvantage (e.g. when companies hesitate to increase wages for fear they’ll lose their pricing edge)

Against this backdrop, changing market dynamics are increasing the importance of sustainability efforts:

- Customers are becoming more sensitive to sustainability.<sup>3</sup> Younger consumers in particular demand sustainable products and practices and will pay more to get them.
- Increasingly scarce natural resources and rising commodity prices make resource efficiency and waste reduction crucial variables for companies to remain profitable.
- The regulatory environment and NGOs are pushing for more transparency when it comes to socio-economic issues. This, in turn, drives non-compliance costs and can create a backlash from the marketplace.

Companies need to act now and look beyond classical supply chain performance to gain what we call the triple advantage: for profit, society and the environment. The purpose of this report is to empower companies to begin or accelerate such a journey. It explores:

- Options for realizing “win-wins” on profitability (revenue, cost, risk, brand) and socio-environmental benefits (environmental and local economic development)
- Guidelines for better decision-making by assessing the value creation potential of supply chain practices, and by creating a framework to prioritize sustainability investments
- Guidance for moving beyond the business case to making a commitment to ethical commerce



Figure 3. Recent incidents in supply chains

## A new type of responsible supply chain

What are the beliefs companies hold when it comes to sustainability? How do they steer the course from rhetoric to action? According to studies, many companies are pursuing sustainability programmes to mitigate risk (complying with regulations) or to gain efficiency improvements. Fewer companies focus on achieving top-line or branding effects.

Two key drivers influence a company's commitment to sustainability efforts:

**Business strategy:** Companies that strive for cost leadership tend to be more hesitant when it comes to assuming social responsibility in their supply chains. Corporations following a differentiation strategy are more actively engaged in socially responsible practices.<sup>4</sup> The higher profit margins associated with differentiation strategies provide companies with extra room for supply chain innovation and allow them to take more risk when it comes to sustainability and social investments. On the contrary, cost leaders focus more on low-risk eco-efficiencies.<sup>5</sup>

**Supply chain maturity:** Companies with mature supply chains have greater transparency, deeper integration across departments, strong collaboration with partners and solid governance structures. These characteristics of a mature supply chain all facilitate the implementation of sustainability programmes and help companies manage the complexities involved.

There are four core sustainability strategies<sup>6</sup> that frame investment priorities:

Strategy	Description	Example
Compliance-driven	Reducing risks by adhering to laws and external standards on environment and society. Lowest sustainability standard.	Initiative against child labour or corruption
Efficiency-driven	Focusing on cost efficiency and process optimizations driving synergies on environmental aspects	"Green six sigma" initiative in production
Legitimizing	External presentation of sustainability to create credibility and establish a "license to operate"	Integrating smallholders in the supply chain
Holistic	Sustainability is integrated in all facets of the business and is used to enhance overall performance and create differentiation through a unique value proposition	New business models, e.g. selling waste or leasing products

Table 1. Sustainability strategies

Over the years, industry players have evolved from compliance-driven to more holistic sustainability strategies as illustrated in Figure 4. Leading companies in particular have embraced sustainability as a measure of excellence within business performance.

**Cost leaders** tend to evolve from a focus that is primarily on compliance and efficiency that then moves to more holistic strategies. This helps them break out of the commodity trap inherent in their business model, by differentiating offerings based on sustainable practices.

**Differentiators** tend to start with a compliance focus and then move towards legitimating before embracing holistic strategies that offer additional value through new ways of differentiation and branding.

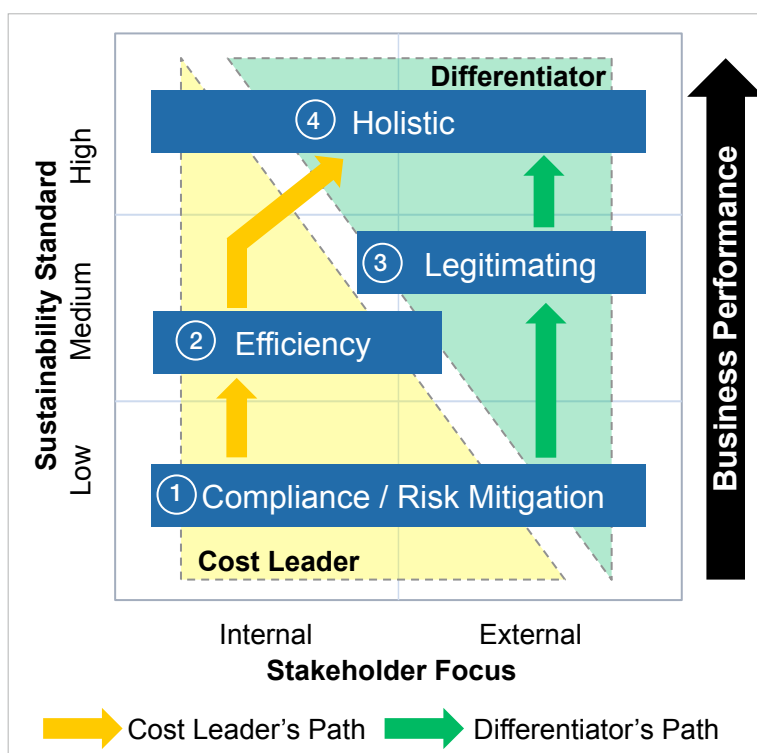


Figure 4. Development path of sustainability strategies

By moving to holistic strategies, both cost leaders and differentiators undergo a paradigm shift where driving profit and socio-environmental outcomes are seen as complementary, rather than contradictory. This is what we call the “triple advantage” – realizing societal, environmental and business benefits at the same time. It is a win for society and a win for companies. Studies have shown a positive link between socio-environmental initiatives and corporate performance.<sup>7</sup> And triple advantage is increasingly rewarded by positive ratings from financial analysts.<sup>8</sup>

To make the business case for triple advantage, leading corporations consider a holistic value concept going beyond short-term financial effects and factoring in long-term revenue growth, cost reduction, brand improvement and risk mitigation, as shown in Figure 5.

What results can manufacturers pursuing the triple advantage expect? Here are some examples:

#### Revenue growth

- New revenue streams through closed loop manufacturing processes (e.g. by re-using products or selling waste)
- Price premium on products manufactured through clean technology

#### Cost reduction

- Resource (energy, material and water) productivity improvement through Green Six Sigma
- Reduced waste and better equipment efficiency through total productive maintenance

#### Brand and reputation

- Sustainable brand image positively affecting credit rating and funding cost
- Better employee morale and talent retention linked to good labour practices

#### Risk mitigation

- Securing “license to operate” – establishing credibility when it comes to sustainability – through regulation compliance (e.g. through proper environmental, health and safety programs providing high ethical standards)
- Developing manufacturing processes for sustainable substitutes that diversify sourcing risk

This chapter highlighted a general shift towards more holistic sustainability strategies, ones that gain a triple advantage. The next chapter explores how companies can drive their journey towards responsible supply chains.

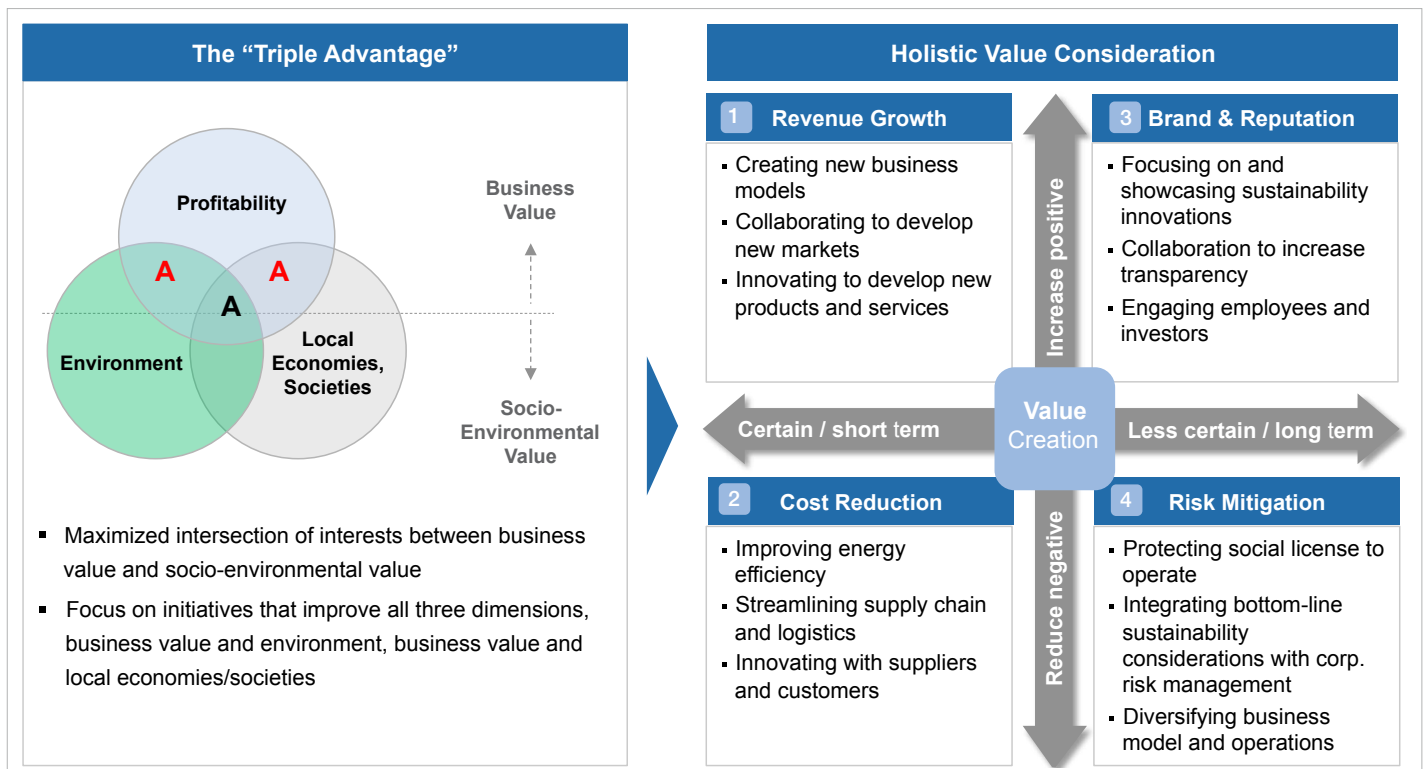


Figure 5. Leading companies capturing the “triple advantage” of sustainability (Source: Accenture)



# Chapter 2: Empowering Responsible Supply Chains



EMPOWERING

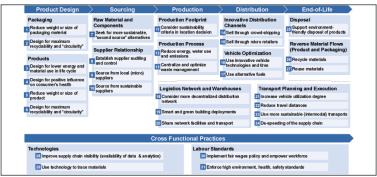
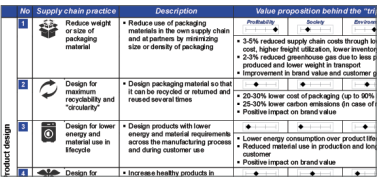
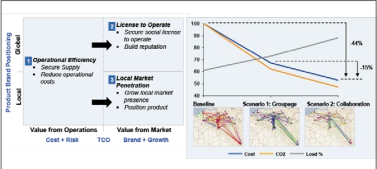
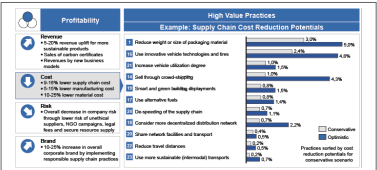


# A framework to empower responsible decisions

As noted earlier, root causes for failures in sustaining societal and environmental conditions often lie in the decision-making process – having full transparency on choices, a clear business case and hands-on implementation guidance. Now is the time to get it right.

Responsible outcomes are increasingly rewarded by markets and consumers alike. It appears that companies are beginning to respond as their sustainability strategies move from compliance or cost focus to more holistic strategies. Too many companies, however, are still lagging when it comes to responsible supply chains.

To help clarify how to move from thought to action, we have developed a decision framework for achieving the triple advantage. A specific toolset is available that allows customization of the decision framework for each company based on its specific industry and focus of sustainability strategy.

**Table 2.** Key elements of the decision framework

Feature	Explanation	How it supports decision-making
<p><b>Landscape of supply chain practices</b></p> 	<p>A comprehensive overview of 31 supply chain practices driving triple advantage – illustrating product design, sourcing, manufacturing, distribution, end-of-life and cross-functional practices.</p>	<p>Creates full transparency on possible measures and options available to tune individual supply chains towards triple advantage, through which companies can identify “white spots” in their own supply chain agenda.</p>
<p><b>Detailed value assessment</b></p> 	<p>A detailed value assessment of all 31 supply chain practices and their potential to drive profitability, social and environmental benefits. It is based on extensive research and data analysis and underpinned by examples for “good practices” of global companies.</p>	<p>Enables executives to understand the full potential behind each of the 31 practices. Also provides numbers to make the case for responsible supply chains or to validate business case calculations, and provides a baseline to track success of socio-environmental initiatives. Contains leading-edge and practice-proven examples as inspirations for adoption.</p>
<p><b>Cases around leading practices</b></p> 	<p>For cases of particular value or innovation, we created a deep dive case with leading companies providing details on how triple advantage was achieved.</p>	<p>Adds additional insights into the concept of supply chain practices and success factors for implementation. This provides further decision variables for initiatives prioritization but also already during implementation.</p>
<p><b>Multiple value perspectives</b></p> 	<p>Initiative rankings by multiple KPIs (e.g. supply chain cost, revenue, community development) based on our data model. In addition, we calculated the overall business case behind the 31 supply chain practices.</p>	<p>Analysis provides multiple perspectives on the value creation potential of each practice, e.g. a ranking of practices based on their supply chain cost savings potential and is targeted to respond to specific change goals.</p>
<p><b>Triple advantage decision matrix</b></p> 	<p>Two decision matrices illustrate the business value and socio-environmental value as well as ease of implementation of all 31 practices.</p>	<p>Provides a graphical overview for senior executives on quick wins and transformational measures. This allows them to create a prioritized sequence of practices. In addition, a toolset allows for customizing our assumptions to different industries and sustainability strategies.</p>
<p><b>Sensitivity analysis on social archetype</b></p> 	<p>Considers different emphasis of companies on business and socio-environmental value in decision matrices for an economist, liberal humanist, social industrialist, philanthropist.</p>	<p>A framework and toolset enables companies to create an individual decision matrix based on their own social archetype. This allows them to make a responsible decision based on an index consolidating both business and socio-environmental value of the 31 practices.</p>

# A blueprint for triple advantage

The “landscape of supply chain practices” is the anchor of our decision framework. It frames the blueprint for corporations to develop their supply chains towards the triple advantage. In this chapter, a comprehensive set of 31 practices is presented, followed by a detailed value assessment for each. The selected practices in the landscape are illustrated through actual case studies from multinational companies that gained the triple advantage. Figure 6 shows the 31 supply chain practices. The landscape can be used as a comparison to a company’s current portfolio of initiatives to identify unexplored areas, and to gather ideas on how to scope future sustainability efforts.

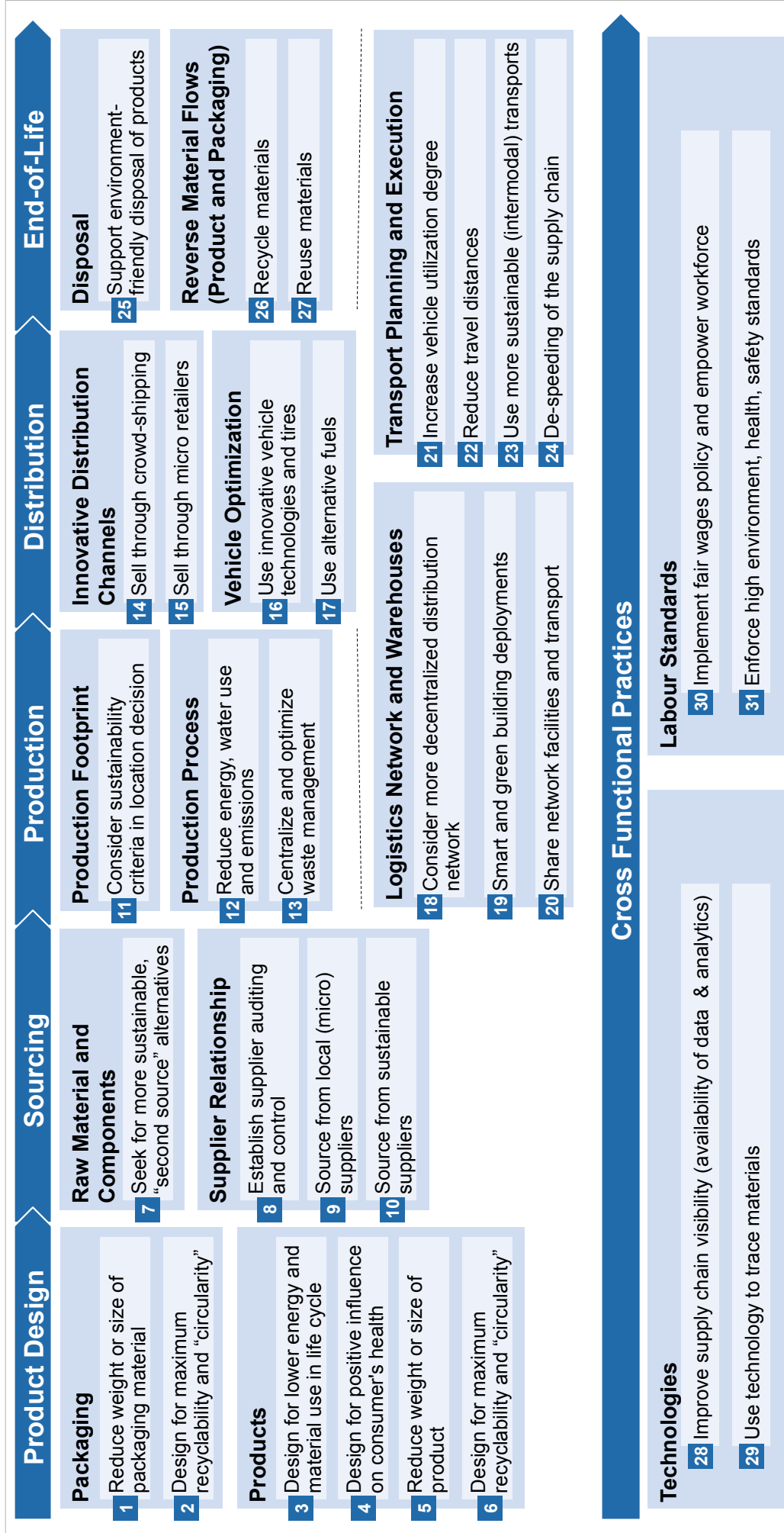











































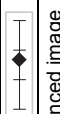

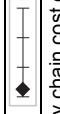






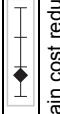


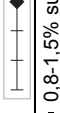

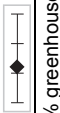




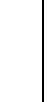













































Figure 6. Landscape of supply chain practices

The following pages explore each of the 31 supply chain practices and their potential to create triple advantage. The table below allows supply chain officers to gain a more comprehensive and in-depth understanding of how individual practices target profitability, society and environment levers. The landscape can also be used to validate business case calculation. In addition, “good practices” are provided to support the value proposition and create concrete starting points for implementation.

No	Supply chain practice	Description	Value proposition behind the "triple advantage"				Good practices	
			Profitability	Society	Environment	Implementation Ease		
Product design	1	 <p>Reduce weight or size of packaging material</p>	<ul style="list-style-type: none"> <li>Reduce use of packaging materials in the own supply chain and at partners by minimizing size or density of packaging</li> </ul>					<ul style="list-style-type: none"> <li>Unilever employs new packaging technology that injects gas during packaging production, reducing material needed by 15% in its body wash product line</li> <li>Walmart reduced its packaging material by 5% leading to cost savings of \$3.4 billion, with the potential to rise to \$11 billion if extended to its suppliers</li> <li>IKEA eliminated air and unused space from the packaging for its GLIMMA tea light candle releasing 40% more pallet space and reducing greenhouse gas by 21%</li> </ul>
	2	 <p>Design for maximum recyclability and "circularity"</p>	<ul style="list-style-type: none"> <li>Design packaging material so that it can be recycled or returned and reused several times</li> </ul>					<ul style="list-style-type: none"> <li>Unilever uses materials that best fit the end-of-life treatment facilities available in each market. This aims to increase recycling and recovery rates for packaging material by 15% until 2020</li> <li>Ecovative, a start-up, uses fungi mushroom to create rigid, moulded materials as a sustainable substitute to plastic packaging material</li> </ul>
	3	 <p>Design for lower energy and material use in lifecycle</p>	<ul style="list-style-type: none"> <li>Design products with lower energy and material requirements across the manufacturing process and during customer use</li> </ul>					<ul style="list-style-type: none"> <li>Henkel develops laundry detergents that deliver their full cleaning power even at low washing temperatures and encourages consumers to wash cloths at low temperatures</li> <li>Samsung uses its "green memory" functions to reduce power consumption of electronics</li> </ul>
	4	 <p>Design for positive influence on consumers' health</p>	<ul style="list-style-type: none"> <li>Increase healthy products in portfolio or replace ingredients with more healthy options</li> </ul>					<ul style="list-style-type: none"> <li>Ahold increases the sale of healthy products to at least 25% of total food sales by 2015 across the group while ensuring that 80% of own-brand food suppliers are certified against the Global Food Safety Initiative (GFSI) standard</li> </ul>
	5	 <p>Reduce weight or size of product</p>	<ul style="list-style-type: none"> <li>Design products with lighter or smaller materials to reduce its weight e.g. by using concentrated products or lighter metals</li> </ul>					<ul style="list-style-type: none"> <li>NIKE's efficient Flyknit technology precisely engineers yarns and fabric variations only where they are needed, reducing waste in the manufacturing process</li> <li>BMW uses of carbon fibre in its cars driving down fuel consumption while improving stability of the car body</li> </ul>
	6	 <p>Design for maximum recyclability and "circularity"</p>	<ul style="list-style-type: none"> <li>Design product so that it can be recycled or returned and reused</li> </ul>					<ul style="list-style-type: none"> <li>IKEA's KAJUT, a table lamp, uses 75% less material than its predecessor. It contains 35% reused or recycled materials, is 100% recyclable and easily stackable making it more efficient to transport</li> <li>Phonebloks' modular mobile phone concept reducing electronics waste</li> </ul>
	7	 <p>Seek for more sustainable, "second source" alternatives</p>	<ul style="list-style-type: none"> <li>Use recycled raw material, components via commodity markets or internal "closed loops"</li> <li>Source non-hazardous, organic materials</li> </ul>					<ul style="list-style-type: none"> <li>Marks and Spencer targets to use one sustainability sourcing criteria (e.g. organic cotton, recycled content, made in eco factory) into all of their products until 2020</li> <li>NIKE uses recycled polyester made from recycled plastic bottles in high-performance apparel and footwear</li> <li>H&amp;M launched a line of denim jeans made from recycled cotton fibre</li> </ul>
	8	 <p>Establish supplier auditing and control</p>	<ul style="list-style-type: none"> <li>Implement a comprehensive auditing system for suppliers and constantly measure their performance against sustainability indicators</li> </ul>					<ul style="list-style-type: none"> <li>Marks and Spencer uses a combination of M&amp;S, third-party and self-audits to assess the suppliers compliance with local and national regulation, in particular on working condition, health and safety, rates of pay, etc.</li> </ul>
	9	 <p>Source from local (micro) suppliers</p>	<ul style="list-style-type: none"> <li>Source raw materials or products from local (micro) suppliers for the domestic market</li> <li>Often embedded in long-term partnerships to empower local smallholders (e.g. farmers)</li> </ul>					<ul style="list-style-type: none"> <li>Coca Cola locally sources beverage ingredients from 50.000 farmers in Kenya and Uganda for its locally produced and sold fruit beverages. This doubles the farmers income while improving the quality of the fruit</li> </ul>
	10	 <p>Source from sustainable suppliers</p>	<ul style="list-style-type: none"> <li>Define guiding principles for supplier selection to increase ethical and "green" suppliers in supplier base</li> </ul>					<ul style="list-style-type: none"> <li>Nestlé expects their suppliers to follow a "no-deforestation" policy on palm oil. Constantly, extends and improves traceability of the key commodities</li> <li>Walmart's suppliers must source 95% of products from factories with a high social and environmental audit score, as well as identifying and declaring every factory used to produce items sold in Walmart stores</li> <li>NIKE's Sourcing &amp; Manufacturing Sustainability Index (SMSI), a component of the company's Manufacturing Index, puts sustainability considerations on equal footing with quality, cost and delivery</li> </ul>
Sourcing								

No	Supply chain practice	Description	Value proposition behind the "triple advantage"	Good practices						
			Profitability	Society	Environment	Implementation Ease				
11	 <p>Consider sustainability criteria in location decision</p>	<ul style="list-style-type: none"> <li>Solving the production location not only based on economic factors, but also considering social and environmental aspects</li> </ul>					<ul style="list-style-type: none"> <li>Relatively new approach</li> </ul>			
			<ul style="list-style-type: none"> <li>Reduce energy, water use and emissions</li> </ul>	<ul style="list-style-type: none"> <li>Deploy efficiency methodologies (e.g. green six sigma) and new production technology to decrease use of energy, water and emissions</li> </ul>						<ul style="list-style-type: none"> <li>Henkel uses new ultra-filter technology for treating wastewater so it can ultimately be reintroduced into the water cycle</li> <li>Sainsbury's has opened a 'Water Neutral' store using water efficient infrastructure (incl. rainwater harvesting) and offsetting partnerships</li> </ul>
					<ul style="list-style-type: none"> <li>Centralize and optimize waste management</li> </ul>	<ul style="list-style-type: none"> <li>Centralize the organization of all waste and by-product flows within the supply chain</li> <li>Deploy central guidelines for concept, process, contract negotiations, trading material, etc.</li> <li>Exploit options to sell "waste" as input factor e.g. for other industries</li> </ul>				
12	 <p>Sell through crowd-shipping</p>	<ul style="list-style-type: none"> <li>Parts of the last mile delivery are executed by private persons. This practice is supported by mobile technologies and apps. It can be used to trade overcapacity on other routes between companies/ industries to increase utilization</li> </ul>					<ul style="list-style-type: none"> <li>Wal-Mart has the idea that in-store shoppers deliver packages on their way home from the store to people who bought items at Walmart.com. In return, in-store customers would get a discount for the delivery efforts</li> <li>DHL pilots a crowd-shipping service "MyWays" particularly for customers doing online purchases and are interested in "flexible delivery". People, for example, commuting past a DHL facility see the delivery information in their smartphone and can earn some extra money for executing the delivery</li> </ul>			
			<ul style="list-style-type: none"> <li>Sell through micro retailers</li> </ul>	<ul style="list-style-type: none"> <li>Collaborate with smaller, demographically targeted stores to increase proximity to end-customers and foster sustainable economic development</li> </ul>						<ul style="list-style-type: none"> <li>SAB Miller is selling beer through 68.000 micro retailers and provides training/ mentoring, and access to finance to them</li> <li>Coca Cola empowers women to become "entrepreneurs" by providing access to business training, financial services and a mentoring network, e.g. as "micro-distributors" they can become connected to Coca Cola's value chain</li> </ul>
					<ul style="list-style-type: none"> <li>Use innovative vehicle technologies and tires</li> </ul>	<ul style="list-style-type: none"> <li>Implement vehicle design changes for better aerodynamics, lower resistance of tires and weight to improve fuel efficiency</li> </ul>				
13	 <p>Use alternative fuels</p>	<ul style="list-style-type: none"> <li>Use alternative fuels such as gas based fuels or biofuels to power the fleet</li> </ul>					<ul style="list-style-type: none"> <li>UPS employs a range of alternative technologies, including a combination of electrified vehicles and electrically assisted tricycles in some dense European urban areas leading to reduced exhaust emissions and less traffic congestion. Further environmental benefits are achieved on some long distance runs in the UK by using trucks powered by a mix of diesel and bio-methane from landfill.</li> <li>Coca Cola has largest fleet of heavy-duty hybrid electric trucks in the world with more than 750 hybrids in North America alone</li> <li>Bayer Healthcare in China redesigned its supply chain model towards a more regional/decentralized approach. Besides service level, stock and transport costs the scenario analysis also considered carbon exhaust as a key decision criteria</li> </ul>			
			<ul style="list-style-type: none"> <li>Consider more decentralized distribution network</li> </ul>	<ul style="list-style-type: none"> <li>Increase decentralization of warehouse network for higher proximity to the market and to decrease last mile transportation cost</li> </ul>						
					<ul style="list-style-type: none"> <li>Smart and green building deployments</li> </ul>	<ul style="list-style-type: none"> <li>More efficient lighting due to sensors, LEDs, using natural light sources, de-lamping</li> <li>Better heating/refrigeration due to intelligent space heating systems, control of air cond.</li> </ul>				

No	Supply chain practice	Description	Value proposition behind the "triple advantage"	Good practices
			<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             Profitability         </div> <div style="text-align: center;">             Society         </div> <div style="text-align: center;">             Environment         </div> <div style="text-align: center;">             Implementation Ease         </div> </div>	
20	 Share network facilities and transport	<ul style="list-style-type: none"> <li>Collaborate with a corporation from a different industry (or even competition) by sharing distribution facilities and by combining vehicle loads</li> </ul>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             10-20% reduction in transportation costs when sharing outbound logistics         </div> <div style="text-align: center;">             0.4-0.6% supply chain cost savings through shared fix costs in warehousing and higher utilization of trucks         </div> <div style="text-align: center;">             0.1-0.8% reduction in companies carbon footprint by reducing miles travelled and warehouse space built         </div> <div style="text-align: center;">             10-20% reduction in transportation costs when sharing outbound logistics         </div> </div>	<ul style="list-style-type: none"> <li>Amazon and Procter &amp; Gamble have entered into several joint ventures distribution centres. Amazon uses P&amp;G's warehouse space for a faster and cheaper delivery and to store higher margin products there. P&amp;G has reduced transportation and warehousing cost</li> <li>Nestlé and PepsiCo bundled their warehousing, co-packaging and outbound distribution of fresh food products leading to logistics cost savings, service level improvements and carbon reductions. Gains are divided through a fair sharing mechanism. The "CO3 consortium" created a legal framework to enable collaboration not conflicting antitrust law</li> </ul>
21	 Increase vehicle utilization degree	<ul style="list-style-type: none"> <li>Reduce sub-optimal loads or less than truck load shipments through load aggregation planning (including returns process)</li> </ul>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             1.0-1.5% supply chain cost and 1.5-2.5% in greenhouse gas reduction through higher truck utilization         </div> <div style="text-align: center;">             Lower transportation cost, and carbon exhaust         </div> <div style="text-align: center;">             Higher living quality due to less traffic jams         </div> <div style="text-align: center;">             1.0-1.5% supply chain cost and 1.5-2.5% in greenhouse gas reduction through higher truck utilization         </div> </div>	<ul style="list-style-type: none"> <li>IKEA eliminated air and unused space from the packaging for its GLIMMA tea light candle. After the tweak, the number of tea light packs that fit in a standard European pallet increased by 40%, reducing emissions by 21%</li> <li>In Turkey, Unilever re-designed packs and pallets to fill trucks more efficiently. This led to savings of €200,000 and a reduction of 277 tonnes in transport-related CO<sub>2</sub> emission</li> </ul>
22	 Reduce travel distances	<ul style="list-style-type: none"> <li>Use (real-time) information on shipments &amp; locations to form a combination of most economical routes with least kilometres travelled to make the deliveries</li> </ul>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             Lower transportation cost, and carbon exhaust         </div> <div style="text-align: center;">             Higher living quality due to less traffic jams         </div> <div style="text-align: center;">             Lower transportation cost, and carbon exhaust         </div> <div style="text-align: center;">             Lower transportation cost, and carbon exhaust         </div> </div>	<ul style="list-style-type: none"> <li>DHL's Smart Truck optimizes kilometres travelled by a vehicle by replacing static route planning with dynamic route planning (using real time traffic data). This leads to significant time savings</li> <li>UPS developed a routing software ("ORION") that uses package level detail and customized map data to provide drivers with optimized routing information. It considers more route combinations than traditional software leading to significant cost and carbon savings.</li> </ul>
23	 Use more sustainable (intermodal) transports	<ul style="list-style-type: none"> <li>Switch to more environment-friendly transport modes, e.g. rail instead of road</li> </ul>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             0.2-0.7% supply chain cost reduction (15-20% freight savings on addressable lanes) and 1.0-4.5% greenhouse gas reduction (50-60% potential when switching from road to rail)         </div> <div style="text-align: center;">             0.2-0.7% supply chain cost reduction (15-20% freight savings on addressable lanes) and 1.0-4.5% greenhouse gas reduction (50-60% potential when switching from road to rail)         </div> <div style="text-align: center;">             0.2-0.7% supply chain cost reduction (15-20% freight savings on addressable lanes) and 1.0-4.5% greenhouse gas reduction (50-60% potential when switching from road to rail)         </div> <div style="text-align: center;">             0.2-0.7% supply chain cost reduction (15-20% freight savings on addressable lanes) and 1.0-4.5% greenhouse gas reduction (50-60% potential when switching from road to rail)         </div> </div>	<ul style="list-style-type: none"> <li>Bosch Siemens Hausgeräte GmbH (BSH) shifted around 13,000 TEUR from road to rail saving use of 120 trucks from the BSH facility to the harbour. This reduced CO<sub>2</sub> emissions by up to 70% without compromising other transport parameters</li> </ul>
24	 De-speeding of the supply chain	<ul style="list-style-type: none"> <li>De-speeding transport chains often is possible for a significant amount of products. This leads to an exponential reduction of carbon exhaust</li> </ul>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             0.5-1.0% supply chain cost reduction and 0.5-1.0% greenhouse gas reduction through lower fuel cost/freight rates and without an invest         </div> <div style="text-align: center;">             0.5-1.0% supply chain cost reduction and 0.5-1.0% greenhouse gas reduction through lower fuel cost/freight rates and without an invest         </div> <div style="text-align: center;">             0.5-1.0% supply chain cost reduction and 0.5-1.0% greenhouse gas reduction through lower fuel cost/freight rates and without an invest         </div> <div style="text-align: center;">             0.5-1.0% supply chain cost reduction and 0.5-1.0% greenhouse gas reduction through lower fuel cost/freight rates and without an invest         </div> </div>	<ul style="list-style-type: none"> <li>Con-Way has turned electronic speed limiters in the fleet from 65 mph to 62 mph. It saves &gt; 3 mio gallons of diesel fuel a year, while reducing its carbon emissions by 72 mio pounds (equals the carbon exhaust of 7,300 automobiles)</li> </ul>
25	 Support environment-friendly disposal of products	<ul style="list-style-type: none"> <li>Facilitate and support adequate disposal of used products in accordance with environmental regulations</li> </ul>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             Opportunity to recycle or refurbish material         </div> <div style="text-align: center;">             Positive impact on brand image and potentially a revenue uplift         </div> <div style="text-align: center;">             Opportunity to recycle or refurbish material         </div> <div style="text-align: center;">             Opportunity to recycle or refurbish material         </div> </div>	<ul style="list-style-type: none"> <li>Marks &amp; Spencer collaborates with the non-profit organization Oxfam where used M&amp;S clothes, shoes and bags can be exchanged against M&amp;S vouchers. Depending on the item's quality, it is either resold or recycled</li> <li>Kesko has more than 220 ecopoints at K-food stores for recycling consumer packaging, paper and discarded clothing. Customers can return their waste electrical and electronic equipment to the stores</li> </ul>
26	 Recycle materials	<ul style="list-style-type: none"> <li>Recycling of used products</li> </ul>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             Reduction of raw material and energy cost.         </div> <div style="text-align: center;">             Positive impact on brand image and potentially a revenue uplift         </div> <div style="text-align: center;">             Reduction of raw material and energy cost.         </div> <div style="text-align: center;">             Positive impact on brand image and potentially a revenue uplift         </div> </div>	<ul style="list-style-type: none"> <li>Nike Grind is a premium-grade raw material made from recycled athletic shoes collected through NIKE's Reuse-A-Shoe program and the recycling of scrap materials left over from the manufacturing of NIKE footwear. Nike Grind has been found to be an ideal component of high-performance NIKE footwear and apparel, and can also be applied for use in high-quality sports surfaces including courts, tracks and more</li> <li>Timberland and the tire manufacturer Omni United designed special tires that can be recycled into footwear outsoles at the end of their life on the road rather than for tire-derived fuel or ending up in landfills</li> </ul>
27	 Reuse materials	<ul style="list-style-type: none"> <li>Use recycled materials or components as input for production or re-use whole product through, for example, refurbishments</li> </ul>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             Remanufacturing leads to net reduction in input cost of 30-40% and a gross profit increase of up to 50% (factoring in higher labour cost)         </div> <div style="text-align: center;">             Remanufacturing creates hundreds of thousands jobs (e.g. in the US around 200,000 full-time jobs)         </div> <div style="text-align: center;">             Remanufacturing requires 85% less energy compared to manufacturing         </div> <div style="text-align: center;">             Remanufacturing requires 85% less energy compared to manufacturing         </div> </div>	<ul style="list-style-type: none"> <li>ASOS features on its online marketplace 750 boutiques through which individuals can sell pre-owned and vintage clothes to a global audience, thus extending the lifecycle of fashion items</li> <li>Rico reuses parts in printers, scanners, etc. when retired to recapture valuable material, energy and components</li> </ul>
28	 Improve supply chain visibility (availability of data/analytics)	<ul style="list-style-type: none"> <li>Leverage technology to increase visibility in the supply chain and apply analytics for more sustainable outcomes</li> </ul>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             Better decision making         </div> <div style="text-align: center;">             Reduced cost and risk along the supply chain.         </div> <div style="text-align: center;">             Avoidance of un-ethical suppliers         </div> <div style="text-align: center;">             Better decision making         </div> </div>	<ul style="list-style-type: none"> <li>Laborlink, a mobile platform that offers companies real-time data from their supply chain or field operations, gives workers and farmers a voice to report on conditions in their workplace or community</li> <li>Risk methods: A collaborative cross-enterprise risk management platform leveraging data from various digital and non-digital sources of information</li> </ul>
















No	Supply chain practice	Description	Value proposition behind the "triple advantage"				Good practices
			Profitability	Society	Environment	Implementation Ease	
29	 <p>Use technology to trace materials</p>	<ul style="list-style-type: none"> <li>Use technology along the end-to-end supply chain process to track product origin, quality, safety, durability, reliability as well as authenticity. This "public transparency" is requested by today's customer and governments/regulations.</li> </ul>					<ul style="list-style-type: none"> <li>Nestlé's key suppliers are required to provide information on their supply chain back to the origin for the products they supply to Nestlé. The intent is to gain a comprehensive picture of the extended supply chain down to the farm level. Nestlé targets a 40% traceability of the volumes of its key commodities until 2015</li> <li>John West Tuna: Through its "Can Tracker" consumers can track the source of the fish in their can, even including the ocean and the boat the caught the fish</li> </ul>
30	 <p>Implement fair wages policy and empower workforce</p>	<ul style="list-style-type: none"> <li>Implement fair wages policy and pay salaries above living wage in own factories and enforce on sub-contractor level</li> </ul>					<ul style="list-style-type: none"> <li>Marks and Spencer implements a process to ensure that clothing suppliers are able to pay workers a fair living wage – starting in its least developed sourcing locations. To be achieved by paying adequate cost prices to their suppliers and by rolling out an ethical model factory program</li> <li>Switcher has setup a "solidarity fund" at one of its suppliers in Bangladesh. For each order an additional 1% of the FOB price is paid directly to the workers increasing the wages of the workers to a living wage</li> </ul>
31	 <p>Enforce high environment, health, safety standards</p>	<ul style="list-style-type: none"> <li>Implement high environment, health and safety standards on operative level (incl. no child labour practices)</li> </ul>					<ul style="list-style-type: none"> <li>Caterpillar created its vision and concept for a safe work environment in 2003. Since then, the amount of accidents has been reduced by 80%</li> </ul>

Table 3. Detailed value assessment of supply chain practices (Source: Team analysis, Accenture)



The World Economic Forum approached partner companies to validate the applicability of the supply chain landscape. Based on those conversations, practices were identified and examined in more detail through deep dive explorations. The specific practices explored in more detail include: sourcing from local suppliers, sharing network facilities and transport, using innovative vehicle technologies and tires, and increasing visibility and traceability.





No	Supply chain practice	Deep dive	Company
9	 Sourcing from local (micro) suppliers	Sourcing locally from thousands of small-holders	SABMiller
20	 Sharing network facilities and transport	Collaborating with the competition	Nestlé
16	 Using innovative vehicle technologies and tires	Use innovative vehicle technologies and tires – aerodynamic truck	DHL
28 29	 Increasing visibility and traceability	Leveraging digital technologies for triple advantage	Vodafone

Table 4. Deep dive topics

### Sourcing locally from thousands of smallholders

In the past 20 years or so, more and more companies have reconfigured their sourcing models to take advantage of low-cost countries. Now companies are again changing their strategies when it comes to local sourcing. Instead of doing it purely to drive down costs and risks, they are taking a more holistic approach and using it to strengthen their brand image and to drive growth, achieving the triple advantage.

#### Business Value

There are three approaches to leveraging smallholders:

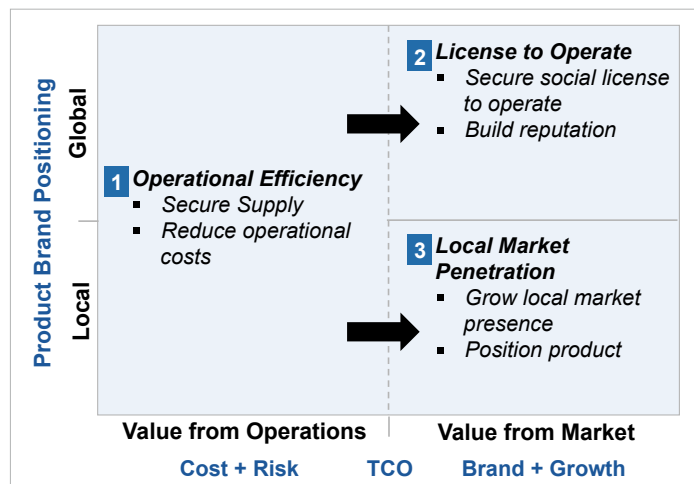


Figure 7. Local sourcing approaches

- Operational efficiency.** Players connect with smallholders to hedge against supply chain disruptions and, in the process, improve quality and reduce production losses.
- License to operate.** Global product manufacturers leverage smallholders to ensure their “license to operate.” By that we mean that doing so gives them the credibility with communities, NGOs, media and governments that they are invested in sustainability, and ensures fewer bureaucratic hurdles and access to more resources, better pricing and government subsidies. It also raises the brand profile of the company in the eyes of consumers and markets rewarding businesses that “get” sustainability.

- Local market penetration.** This involves companies that market products locally. Instead of just using local sourcing as an efficiency play, these companies emphasize the local nature of brands to boost growth through local brand awareness. In addition, they enjoy lower excise taxes and are able to develop market-specific products and services – ones more suited to the specific needs of local customers.

#### Socio-environmental value

Local sourcing can lead to significant savings in carbon exhaust through decentralized logistics structures. In addition, local sourcing has spill-over effects on local economies and welfare, for example<sup>10</sup>:

- Studies show that if farmers are included in long-term contracts and high-value export chains it leads to more benefits for them: better product quality, higher yields and overall income.
- Technology transfer plays an important role in creating local wealth through spill-over effects to other crops. In addition, the food security of rural households is improved.
- Training may lead to higher wages through an “efficiency premium” to motivate trained workers to stay with the same buyer in the long term.
- Additional social benefits come through job creation in labour-intensive sectors, e.g. farming and textile manufacturing.
- Working conditions are more likely to improve when fair trade standards are applied.

SABMiller’s brand, Eagle beer, produced by Nile Breweries Uganda, is one example of how local sourcing can help gain advantage for communities. In 2001, Nile Breweries faced strong market competition that threatened to stymie ambitious growth goals. SABMiller decided to launch Eagle as a low-cost beer, and source the sorghum used in its production from local farmers. As part of their smallholder relationships, Nile Breweries committed to longer term contracts and price agreements. Over 20,000 farmers are now part of the supply chain for Eagle, and the brand represents more than 50% of Nile Breweries’ sales. For farmers, the success of Eagle means more stable income and access to medical care and funding to achieve their own growth goals.<sup>11</sup>



According to a 2008 INSEAD study, Nile Breweries contributes 44,000 jobs to the Ugandan economy. Nile Breweries created a value add of around \$100 million for the local economy, or 0,8% of GDP, through higher household incomes, taxes and local company profits.<sup>12</sup>

### Collaborating with the competition

To achieve their own triple advantage, Nestlé has come up with an unusual recipe for success: collaborating with competitors. Together with PepsiCo, Nestlé combined parts of its supply chain for its fresh and chilled food products in the Belgian market. The horizontal collaboration approach not only addresses low truck fill rates, but it also exploits retail customer overlaps.

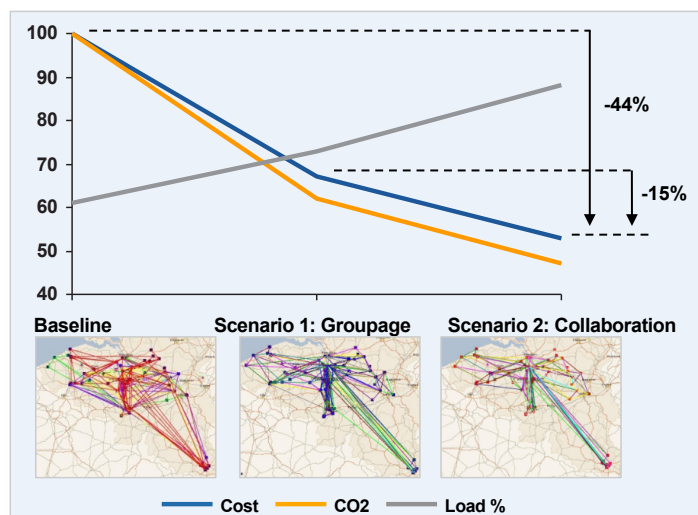


Figure 8. Benefits for Nestlé - Scenario comparison (Source: Nestlé)

Nestlé bundled warehousing, packaging and outbound distribution and synchronized deliveries to retailers to get full truck loads. This drove down transportation costs by 44%. Compared to “classic groupage” optimization, this horizontal collaboration created 15% higher cost savings. In addition, carbon emissions were reduced by 55% with spill-over effects on traffic and a decrease in accidents. Better yet, service levels increased. The approach also allowed Nestlé and PepsiCo to deliver more frequently – a key differentiator in fresh products – driving up the overall satisfaction levels of retailers and end customers.

One key success factor was to create a legal framework between the two companies to safe guard anti-trust compliance. STEF was chosen as third-party supplier to bundle the physical logistics of Nestlé and PepsiCo’s shipments while keeping sensitive information separated (e.g. detailed cost or order details and quantities).<sup>13</sup>

The benefits created are split through a fair share mechanism based on the quantities shipped by each party all of which is mapped into STEF’s invoicing process. The process is audited by an external party bi-annually. Nestlé intends to extend the model for fresh and chilled warehousing and distribution by integrating more companies and extending it to other geographies.

### Use innovative vehicle technologies and tires – Aerodynamic truck

In 2006, DHL and Don-Bur, a manufacturer of vehicle trailers, jointly developed the Teardrop™, an aerodynamic trailer delivering fuel and CO<sub>2</sub> savings of up to 12%. Through the joint project, Don-Bur managed to withstand the local economic recession and became one of the most successful trailer companies in the UK. Don-Bur increased staffing levels by about 20%. Local suppliers have benefitted from increased production rates.



Figure 9. DHL’s Teardrop Truck (Source: DHL)

### Leveraging digital technologies for triple advantage

How can digital contribute to the triple advantage? There are a number of ways, from improving supply chain visibility to allowing better access to financing for smallholder players.

#### Mobile technologies - Connecting farmers in the agriculture value chain

Consider the findings of a recent Vodafone Accenture study.<sup>14</sup> One-third of humanity is fed through an estimated 500 million smallholder farms with less than two hectares of land. The Vodafone Accenture research explored how mobile communications help these small operations cope with the challenge of feeding a growing population. The study also identified a number of opportunities that would increase farmer’s income by 11% or around \$128 billion across 26 of Vodafone’s markets by 2020. Some of the areas mobile technologies can improve in agricultural operations include:

- **Access to finance:** Better access and affordability of financial services allowing farmers to invest independently, driving outputs, local growth and welfare
- **Agricultural information:** Knowledge on agricultural techniques, commodity prices and weather forecasts improving the farmer’s yield
- **Data visibility:** Usage of traceability systems enables a better fleet management and reduces food losses significantly
- **Access to markets:** Better linkage of commodity exchanges, traders, buyers and sellers of agricultural produce

The recommendations would decrease greenhouse gases and reduce freshwater withdrawals while improving overall supply chain efficiency.

There are numerous case studies that illustrate how digital is enabling the triple advantage for supply chains across industries and geographies. Here are two examples:

*Telematics – Improved delivery performance and carbon footprint:* A global transportation company developed a proprietary telematics system that combines information on the mechanical behaviour of delivery vehicles and behavioral patterns of drivers and helps the company increase its fuel efficiency throughout the process. The vehicles are equipped with multiple sensors to gather information on vehicle speed, direction, braking and performance of specific parts and components of the engine. At the end of each driver’s shift all the information is uploaded to a data centre. Off-the-shelf telematics software helps to gather and compile the data. Using proprietary applications, the company’s personnel queries and analyses the data and draws conclusions about vehicle maintenance and logistics processes. Improved driving behaviour helps the company reduce the fuel consumption thereby improving its carbon emissions. Maintenance of vehicles reduces waste (parts, oil, etc.) because of reduced idling time and fewer engine restarts.

*Scalable visibility solutions for supplier information management:* Corporations can use digital platforms to identify and manage different types of risks in real time in their global supply chains or field operations. One global retailer was struggling with low visibility into hazardous material used in colouring processes. There was a need for improved information collection with tier 3 suppliers. A digital platform helped the retailer capture product composition information from its supplier base. The platform also helped data validation through analytics for compliance with restricted substances rules.



# Leaders on triple advantage

The supply chain landscape and its detailed value position is a blueprint for companies driving their supply chains towards triple advantage. Unilever and SABMiller are two companies making headway when it comes to the triple advantage.

## Unilever

Unilever’s vision is clear: “We cannot close our eyes to the problems the world faces. At Unilever we believe that business must be part of the solution. But to be so, business needs to change.”<sup>15</sup> Through Unilever’s “Sustainable Living Plan”, launched in 2010, the company has integrated sustainability at the core of its business strategy. The plan encompasses a wide-range of initiatives driving toward triple advantage including a goal to “decouple Unilever’s growth from environmental impact, while increasing its positive social impact.”<sup>16</sup> A selection of initiatives behind those goals is presented in Figure 10 and mapped to the “Beyond Supply Chains” supply chain landscape.

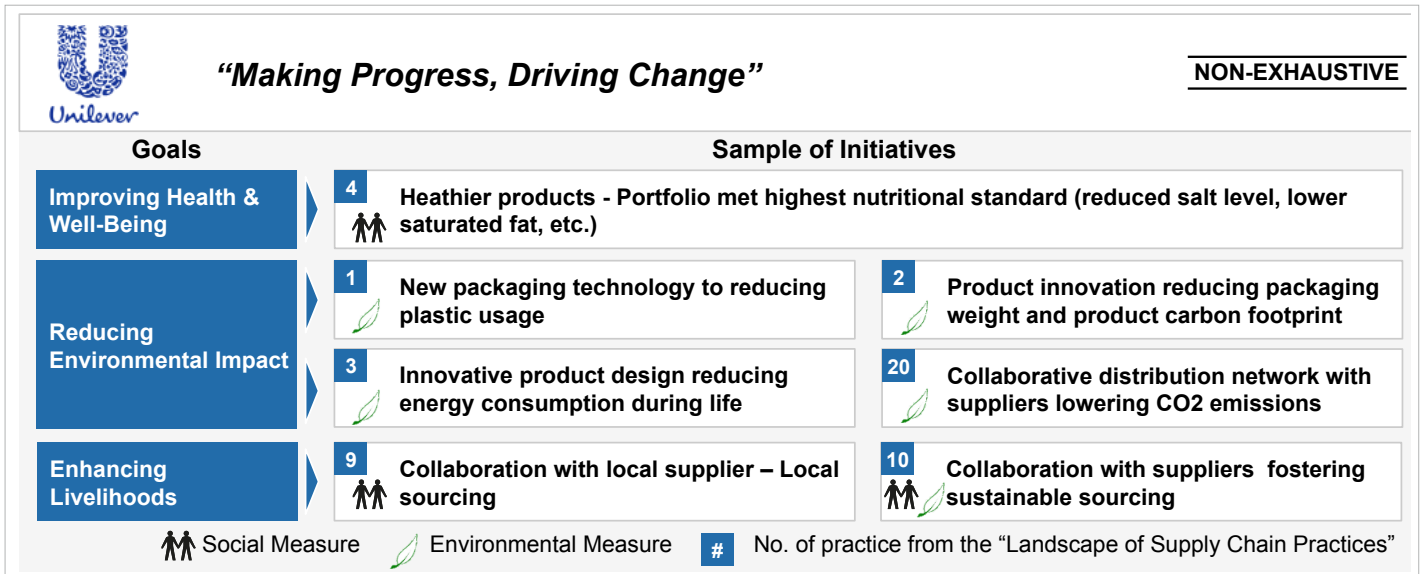


Figure 10. Non-exhaustive view of Unilever’s sustainable initiatives (source: Unilever, Team analysis)

## SABMiller

“We understand that our profitability depends on healthy communities, growing economies and the responsible use of scarce natural resources.”<sup>17</sup> It’s this vision that has propelled SABMiller to define, “Five Shared Imperatives.” “By working together with local communities, suppliers, governments, consumers and beyond, SABMiller can develop shared opportunities to the benefit of all.”<sup>18</sup>

SABMiller is known in the market as being a leader when it comes to sustainability. The company is renowned for its strength in local sourcing. Figure 11 highlights the practices mapped to our landscape.

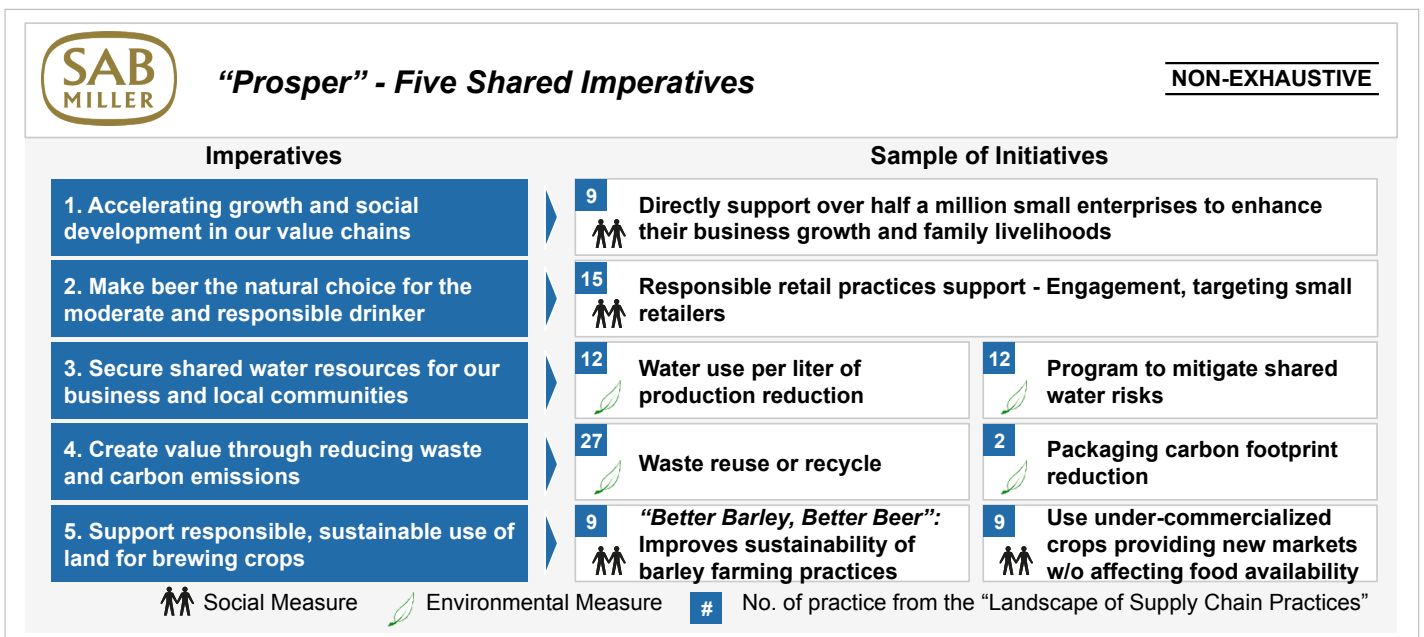


Figure 11. Non-exhaustive view of SABMiller’s sustainable initiatives (source: SABMiller, Team analysis)

# Implementation, prioritization, business case

Companies often struggle when it comes to proving a business case for responsible supply chains. Once they do, setting the right priorities becomes the next hurdle. To help guide companies towards achieving the triple advantage, we have taken our 31 practices and shown how each drives organizational value. Rankings and decision matrices enable companies to set the right investment priorities and implementation sequence.

Leveraging the 31 practices can help companies:<sup>19</sup>

- **Boost profitability:** Revenue uplift of 5-20%; supply chain cost reduction of 9-16%, brand value increase of 15-30%, significant company risk reduction
- **Benefit local development:** Improved customer health, local welfare and labour standards (wages, working conditions)
- **Improve the environment:** Carbon gas reduction of 13-22% on overall footprint

The following figures<sup>20</sup> summarize benefits held within each triple advantage area.

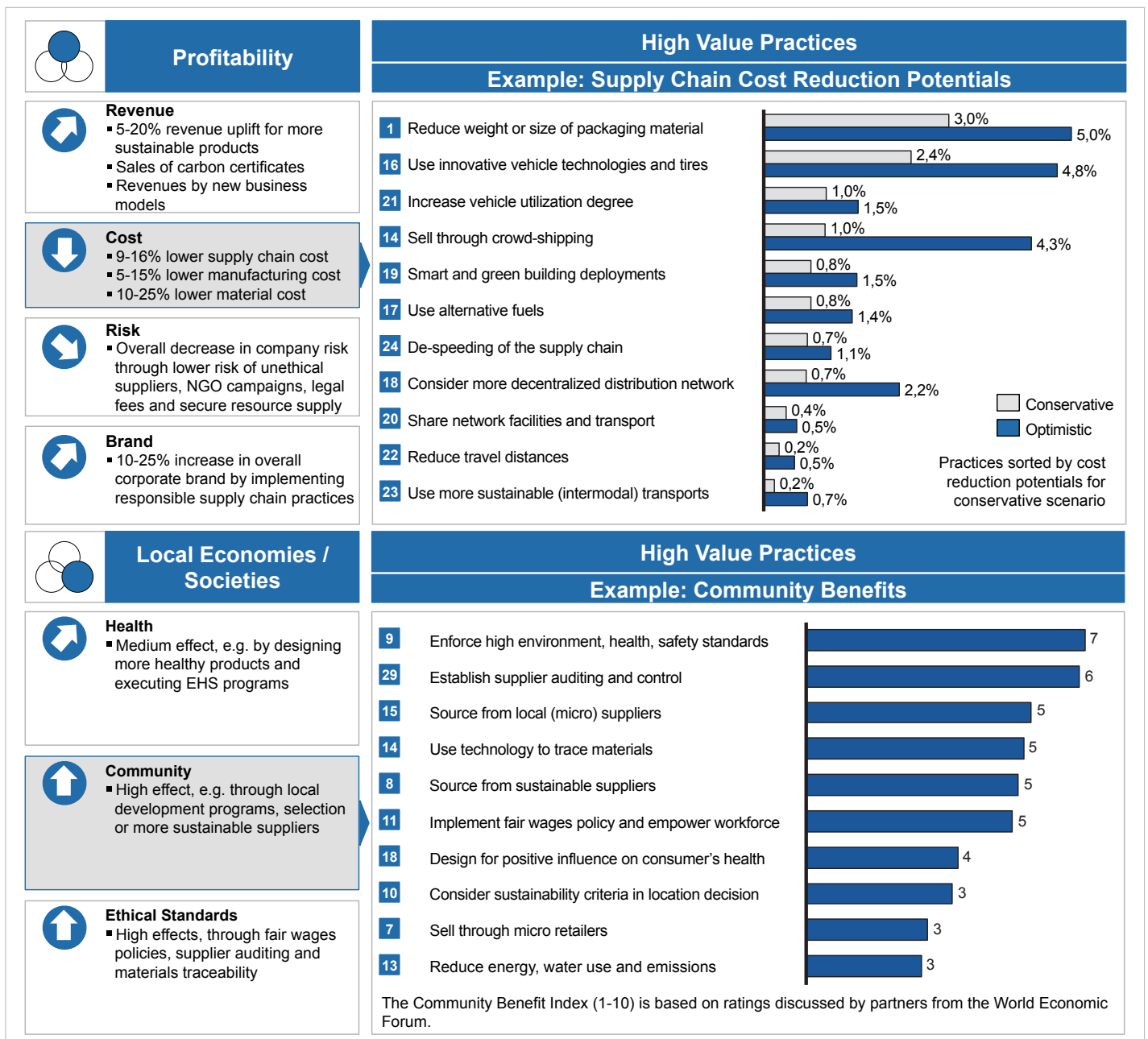


Figure 12. Profitability potentials and benefits for local economies/ societies (Source: Team analysis, Accenture)

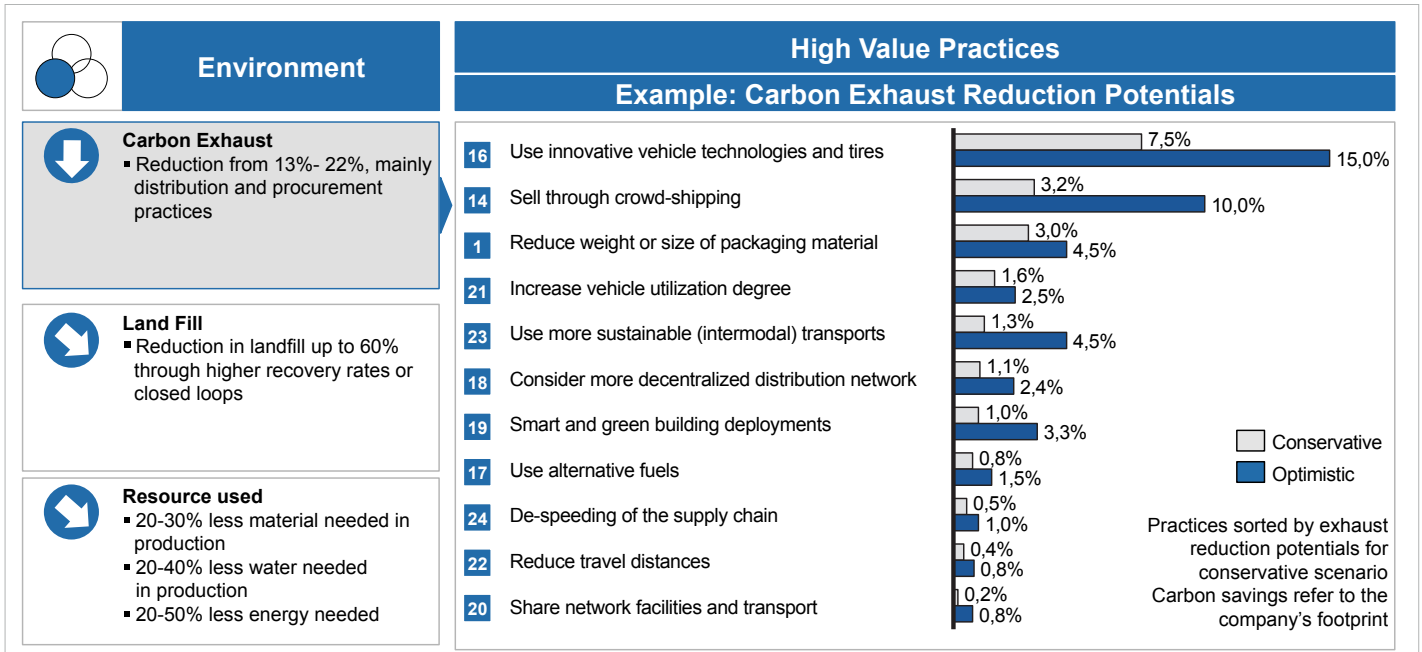


Figure 13. Carbon exhaust reduction potentials (Source: Team analysis, Accenture)

To fully exploit the triple advantage, executives need to set clear priorities and aim for early “quick wins” to prove the efficacy of the approach. To make that possible, our decision framework gives a full view of the value inherent in each of the 31 practices in terms of both profit and socio-environmental benefit (see Figure 14).

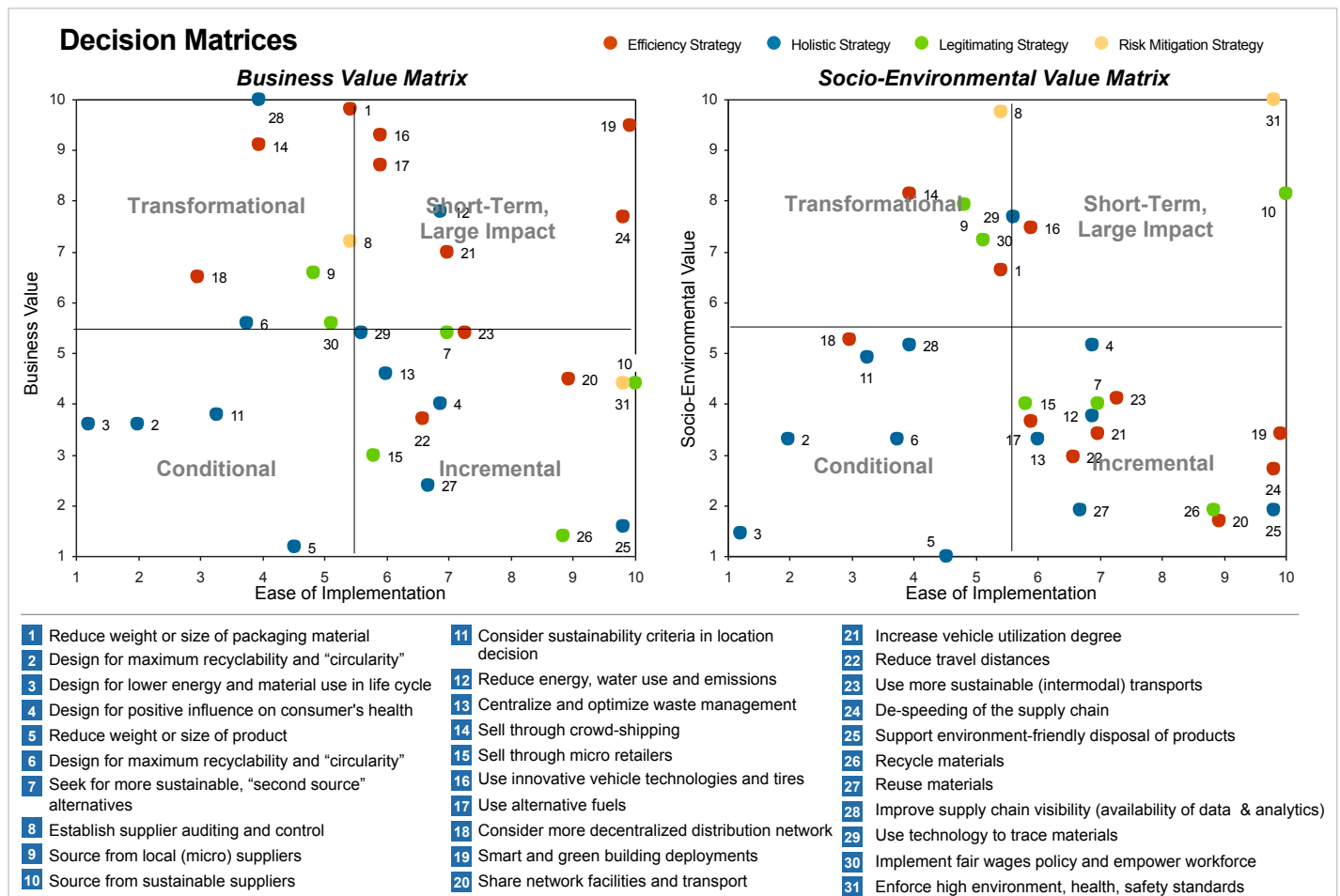


Figure 14. Decision-making support towards “triple advantage” (Source: Team analysis, Accenture)

Based on the decision matrices, “make-to-stock” companies can define their individual path to realizing the triple advantage in the least amount of time.

Decision quadrant	Explanation	Example (business value)	Example (socio-environmental value)
Short-term/large impact	“Quick-win” practices providing high value with relative little effort and cost	Smart and green building deployments (19)	Enforce high environment, health and safety measures standards (31)
Transformational	High-value initiatives, however with high effort (e.g. larger scale supply chain programmes)	Improve supply chain visibility (28)	Source from local (micro) suppliers (9)
Incremental	Lower value, but easy to implement	Support environmentally friendly disposal of products (25)	Increase vehicle utilization degree (21)
Conditional	Lower value, difficult to implement initiatives suitable in certain conditions	Consider sustainability criteria in location decision (11)	Reduce weight or size of product (5)

**Table 5.** Decision quadrants

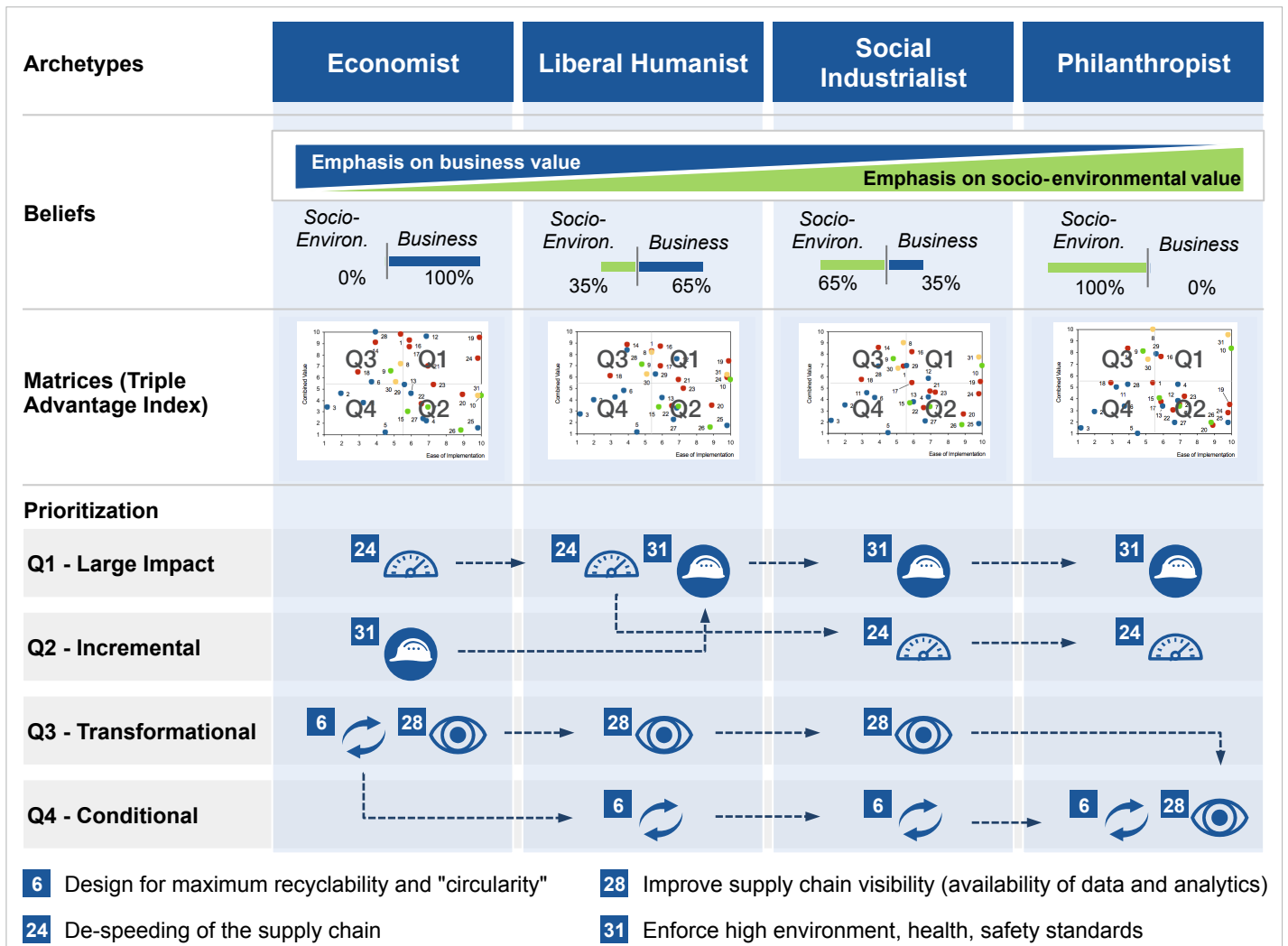
Creating responsible supply chains entails factoring in both business and socio-environmental value. Depending on the organizational mindset towards sustainability, companies emphasize business value versus socio-environmental value differently.

There are four major archetypes that capture companies’ approach to sustainability – economist, liberal humanist, social industrialist and philanthropist – each putting a different weight on socio-environmental value.

The economist archetype places the least amount of value on socio-environmental issues and the philanthropist the highest. The borders between the archetypes are not rigid. Most corporations are within the first three, with cost leaders tending to be closer to economist. Social entrepreneurs (organizations that exist purely to provide social benefit) often appear within the philanthropist archetype. We simulated the changes in decision-making and prioritization in a tool using the data behind our 31 practices for the four different archetypes – defining a triple advantage index<sup>21</sup>.

When it comes to prioritizing the 31 practices, about 35% of them will vary in their ranking depending on the social archetype (see examples in Figure 15 and the changes within the decision quadrants); 65% will remain relatively stable.

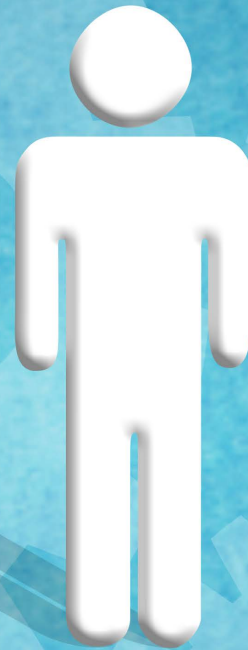
To create maximum impact when it comes to launching triple advantage efforts, it is important to understand an organization’s social archetype and factor it into the decision-making process.



**Figure 15.** Decision-making for different social archetypes (Source: Team analysis)

# Chapter 3:

## Beyond the Business Case – Committing to Human Rights



Everyone should have access to fair pay and a safe working environment. Yet, unfortunately, many companies struggle to balance a commitment to ethical working conditions over managing multiple value chain partners and remain competitive in the process. Retailers in particular seem vulnerable as witnessed by a host of news articles about working conditions especially in developing countries. That may be because they are not trying hard enough to gain control over their networks, or because they lack visibility into their sub-contractor layers. The following deep dive addresses issues surrounding fair wages, highlighting what companies and governments can do to ensure living wages and in general safe and healthy working conditions.

## Paying above the living wage – A deep dive

Below poverty line wages have been an issue that plagued the textile, clothing, leather and footwear industry for years. As Figure 16 clearly shows, wages in producing countries like Bangladesh, Cambodia, India and Indonesia are not enough to supply a living wage – ranging between 14% and 36% of what would be necessary.

Some countries such as India and Indonesia have improved over the last decade, but the pace of change is far too slow. Bangladesh, as one example, shows no sign of improvement over the last decade. In Cambodia, the

workers' purchasing power has even decreased. Still some countries, including China, have made more substantial progress and will close the gap within the next 10-15 years.<sup>22</sup>

The world's garment workforce is comprised primarily of women. Sub-standard earnings lead for many of them to "low calorific intake, limited access to adequate health services, lack of social security, poor housing and limited access to education".<sup>23</sup> In countries like Bangladesh, women made strides in easing poverty in rural areas. When jobs shifted to manufacturing in urban centres, rural development slowed. At the same time, the International Labour Organization (ILO) noted that little progress was made in urban areas in sectors like garment manufacturing.<sup>24</sup>

Legislation in countries like Bangladesh and the resolve of businesses to work ethically are not enough. As demonstrated in Figure 17, Asian manufacturing hubs in Bangladesh and Sri Lanka have set the minimum wage to equal one-fifth of the living wage. What is worse, studies show that most companies do not comply, paying their workers even less than the already paltry legal minimum. For example, a staggering 42% of Indian<sup>25</sup> and 39% of Indonesian<sup>26</sup> garment producers do not follow recommended minimum wage standards. Governments, fearful of losing this lucrative trade, have been slow to respond.

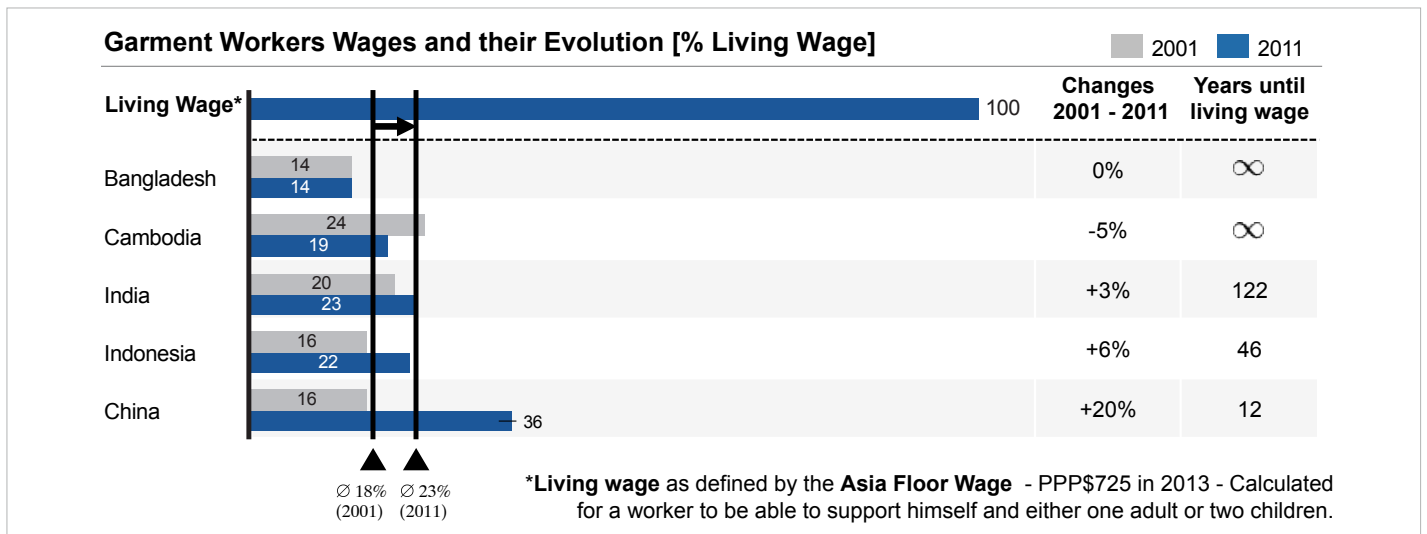


Figure 16. Garment workers' wages and their evolution (Source: Worker Rights Consortium)

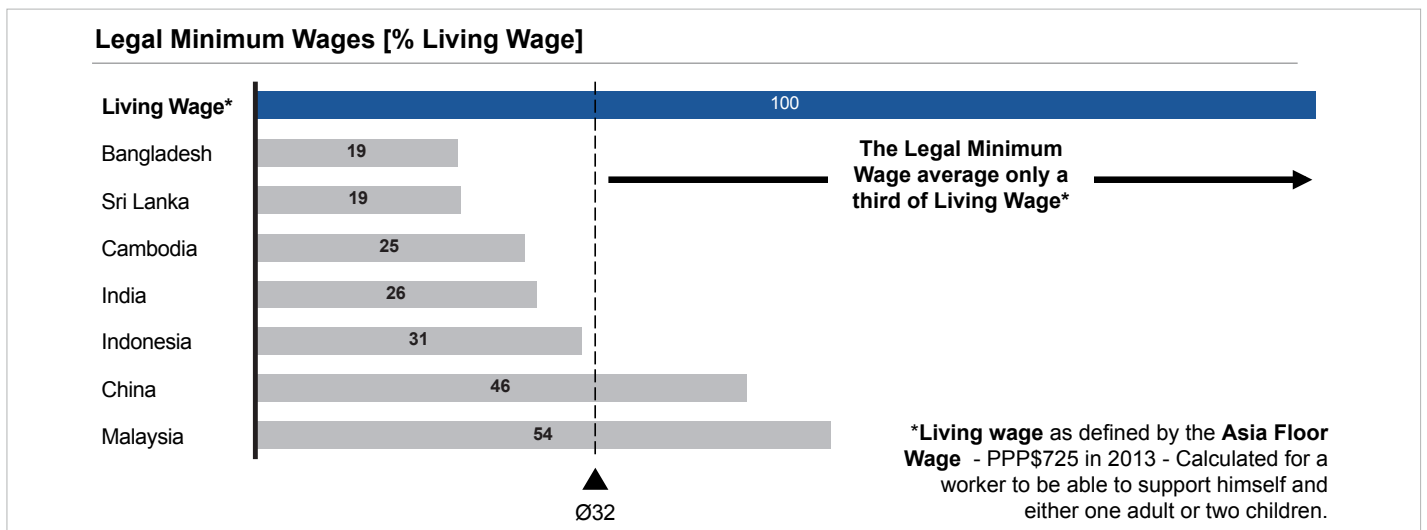


Figure 17. Legal minimum wages (Source: Clean Clothes Campaign)



To break the status quo, companies and their sub-suppliers need to gain clarity on where “the buck stops” when it comes to fair wages. Today, companies look to suppliers to provide solutions and, likewise, suppliers look to governments to solve problems. To address the issue of ethical salaries, governments and corporations need to set standards and ask the following questions:

- What is an ethical salary?
- What is the share of responsibility between business and government?
- Who should absorb these costs along the value chain?
- How can we move from rhetoric to action?

### Earning a living wage is a human right

The United Nations Universal Declaration of Human Rights (Article 23/3) states: “Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection.”<sup>27</sup> In other words: living wages are a basic human right. And following basic human rights should be non-negotiable.

The UN Guiding Principles provide a framework to resolve this issue by clarifying responsibilities between governments and corporations as well as between corporations and their sub-suppliers:

- *Responsibilities between governments and business:* Governments need to protect human rights; corporations need to respect and follow human rights. The principles state that a corporation’s responsibility to protect human rights “exists independently of States’ abilities and/or willingness to fulfil their own human rights obligations, and does not diminish those obligations. And it exists over and above compliance with national laws and regulations protecting human rights.”<sup>28</sup> So, even if governments are failing to implement subsistence level wages, corporations are still obliged to pay fair wages.

- *Responsibilities within the supply chain:* According to Principle 13 of the UN Guiding Principles, companies cannot delegate the responsibility of fulfilling human rights, (paying living wages in this case) to suppliers or sub-contractors. It notes companies should “seek to prevent or mitigate adverse human rights impacts that are directly linked to their operations, products or services by their business relationships, even if they have not contributed to those impacts.” Fashion brands and retailers, therefore, have a responsibility to ensure a living wage is paid in both supply chains and sub-supply chains.

### Fair share of cost between retailer and subcontractor

Looking at the share of value of a t-shirt from Bangladesh sold in Germany exemplifies the degree of freedom companies have within margins. Garment workers there receive around 0,6% of the t-shirt’s retail price. A manufacturer profits 12,5% from the per unit cost, while retailers enjoy a commercial margin of 42,6% compared to a margin of 4% for subcontractors (Figure 18).

Retailers have recognized their responsibility and acted on it with a number of initiatives aiming to improve wage levels.

*Switcher “brand bonus” projects:* Brands like Switcher have come up with their own approaches to closing wage gaps. Switcher, in collaboration with the Fair Wear Foundation, has created a solidarity programme where 1% of every garment’s FOB (the cost of ocean shipping) is pooled and distributed annually as a bonus. For Bangladeshi workers, that translates into a doubling of their annual salaries.

*Limited short-term contracts with subcontractors:* Several major retailers have capped the use of short-term contracts of suppliers. Short-term contracts are often used to undermine the ability of unions to negotiate wages.

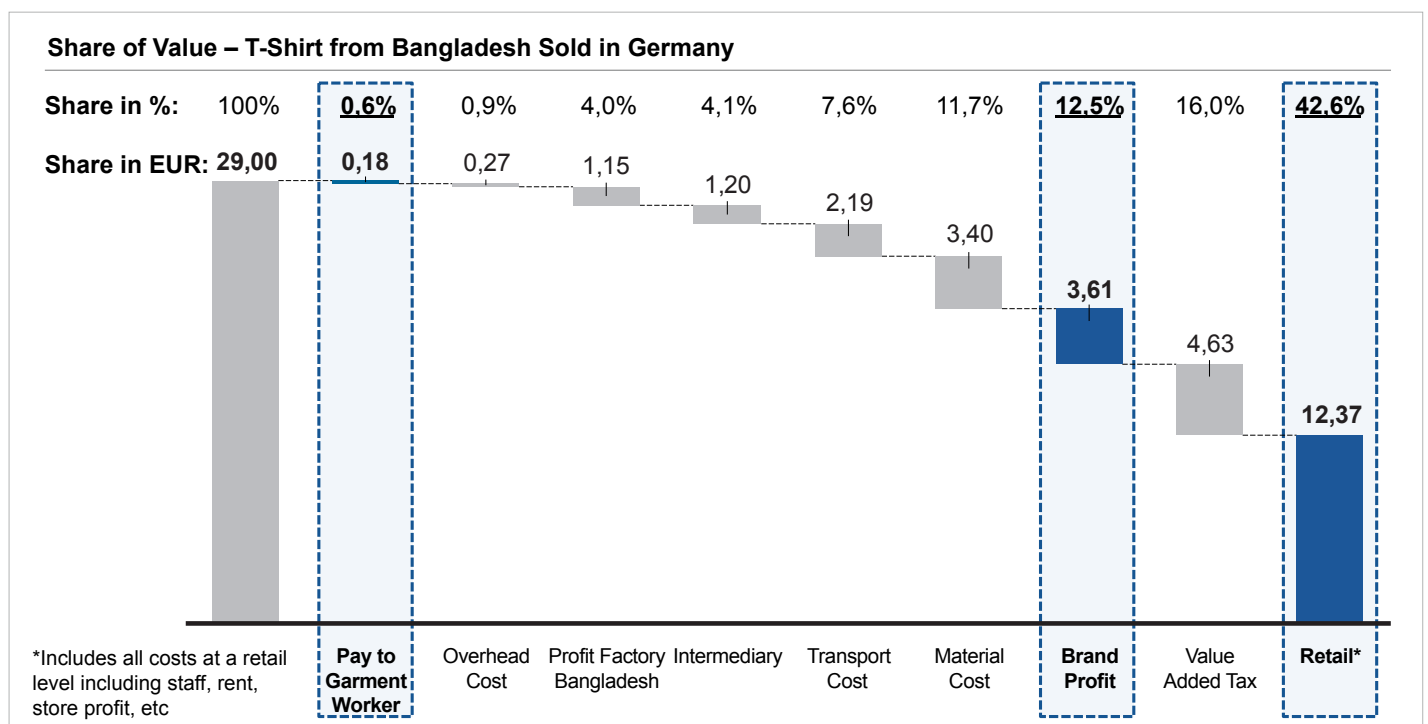


Figure 18. Share of value – T-shirt from Bangladesh sold in Germany (Sources: DPA, Fairwear Foundation)

## Recommended actions for corporations and governments

Earning a living wage is a major step towards establishing acceptable working conditions. Another host of issues should also be addressed: forced labour, discrimination, harassment and workplace safety, among others. Companies and government need to act jointly to ensure that the internationally recognized norms established by the Universal Declaration of Human Rights and the ILO's labour standards are upheld.<sup>29</sup>

### Recommended actions for companies<sup>30,31,32</sup>

*Empower workers:* Workers are first and foremost impacted by wage levels and working conditions, so they have to be given the freedom to claim their rights. As Oxfam noted, "When people have the power to claim their basic rights, they can escape poverty – permanently."<sup>33</sup> Where to start to ensure that happens? Workers need to be given access to formal complaint structures within a company. They should be encouraged to join unions and companies need to require their own suppliers to provide access. That will give workers the ability to negotiate wages and working conditions.

*Set new purchasing practices and benchmarks:* Because of constant pressure on pricing, providing a living wage remains a challenge to suppliers looking to make their margins. To enforce change, companies need to do two things: First, engage in long-term relationships with their suppliers. By doing so, buyers can shape incentives and share best practices to encourage higher standards in their supplier pool. And they can require suppliers to benchmark remuneration schemes against living wage standards. Second, buyers should encourage industry-wide standards. Teaming up to establish standards with other companies forces the market of suppliers to meet requirements, or lose business.

*Raise transparency within the supply chain:* Changing purchasing practices must be complemented by higher transparency over the entire supply chain. Today, too many suppliers maintain a network of subcontractors. Those layers reduce visibility throughout the value chain. And companies should use field validation and worker interviews to ensure an impartial view and more control of supply chain practices. Companies need to work with governments and NGOs to guarantee transparent and independent factory inspections to uphold safety standards.<sup>34</sup>

*Commit to a living wage:* Most companies have committed publicly to working on the promotion of living wages. But to move from words to action, companies need to set up a realistic strategy that includes specific measurable goals and in a realistic timeframe. And they need reporting mechanisms to credibly demonstrate progress.

*Adopt and implement a code of conduct:* Complimentary to a commitment to fair wages, companies should collaborate with key stakeholders (NGOs and governments, factory owners, etc.) to establish a comprehensive and transparent

code of conduct. And they should track its application and act proactively to prevent violations. When it is not followed, manufacturers should refuse to work with subcontractors in violation of the code.

### Recommended actions for governments<sup>35,36</sup>

*Strengthen legislations:* Governments can ratify new or upgrade existing legislations that guarantee fair wages, raising the minimum wage to living wage levels and advocating for acceptable working conditions. Legislation will have a halo effect on the efforts of individual companies and workers, making their goals more obtainable.

*Ensure independent factory inspections:* Governments can enforce regulations. They need to empower an authority with the means to run regular, transparent and independent factory inspection in respect to wages, working condition, and safety standards. Governments should penalize factory owners when they're in non-compliance by, for example, revoking their export license.

*Invest in infrastructure and education:* Governments in countries like Bangladesh are walking a fine line: on one hand they fear that by increasing wages, their cost advantage is lost. And if they lose that, unemployment (arguably worse than low pay) will result. Governments need to invest in infrastructure and education to increase overall productivity and competitiveness. This in turn accelerates the adoption of fair wages by mitigating the risk of companies that "hop" to lower cost countries.<sup>37</sup>

*Regulate investments:* Again facing a difficult trade-off, governments should deal with foreign investment appeal carefully. Although investment in manufacturing means seems genuinely worthy, governments should apply policies that do not compromise working conditions.

Slowly, wages and working conditions are improving in pockets around the world. But to continue to make progress, trust and collaboration between corporations, governments and NGOs needs to strengthen further. Each plays its own part: Corporations need to act ethically, regardless of whether legislation dictates that they do so. Governments provide incentives and underlying legislation that catalyses action. NGOs serve as "checks to the system", watchdogging when abuses happen, and setting global standards that will lead to improved conditions for workers and society at large.

# Chapter 4:

## Conclusions and Outlook

We are in the middle of a paradigm shift. Consumer pressure, fuelled by social media, is driving commercial organizations to do more than pay lip-service to the global socio-environmental impact of their supply chains. This is no longer about risk mitigation, even though that is important; it is about a structural change in the way in which companies gain and maintain competitive advantage.

Leading companies have made the first step by moving from pure efficiency- or service-driven supply chain strategies to more holistic concepts which drive profitability and socio-environmental benefits simultaneously. Today, implementing responsible supply chains is a must for all other companies as well. Doing so promises significant competitive (triple) advantage and higher business performance. Conversely, if neglected, companies face the risk of being left out of the game when market demands change.

It is time to act, but how? There are a seemingly endless number of options for setting investment priorities. This conundrum is addressed by the decision framework we created. It supports the definition of an individual journey towards a triple advantage. A landscape of 31 supply chain practices unveils “white spots” in a company’s current agenda, a good starting point to identify imbalances in the portfolio of sustainability initiatives and a way to screen potential improvements. It is backed by detailed but “hands-on” value information for the business case, delivering a quick overview on practices that drive profitability, environmental or societal benefits.

To make a final decision on when to invest in which initiative, a decision matrix provides orientation for prioritization. It can be customized by a company’s social archetype that defines how strongly an organization emphasizes business versus social value. This suite of decision frameworks and tools supports the entire decision-making process that drives the triple advantage.

Following the landscape of 31 practices, corporations with make-to-stock supply chains achieve revenue uplifts of 5-20% for responsible products, overall supply chain cost reductions of 9-16%, brand value increases of 15-30% and carbon gas reductions of 13-22%, among other benefits.

It is important, however, when deciding on ethical measures, for companies to go beyond the business case. Human rights in particular should be non-negotiable. As illustrated in the deep dive, companies need to commit to paying workers above a living wage.

The journey towards responsible supply chains, ones that capture the triple advantage of business, social and environmental benefit, is challenging. Fortunately, leading companies have proven it is obtainable. Here is hoping that through their efforts, and through reports like this one, more companies will join the mission to improve business and the world.



# Methodology

The supply chain practices value assessment, value rankings, the decision framework and toolset are the result of extensive research, analysis and interviews. The project team reached out to more than 25 corporations across seven industries, as well as several NGOs and more than 20 sustainability experts to test the value proposition behind each supply chain practice and the overall project hypotheses. All results were analysed in depth, documented and supported by evaluation models. The project approach involved three stages as displayed in Figure 19.

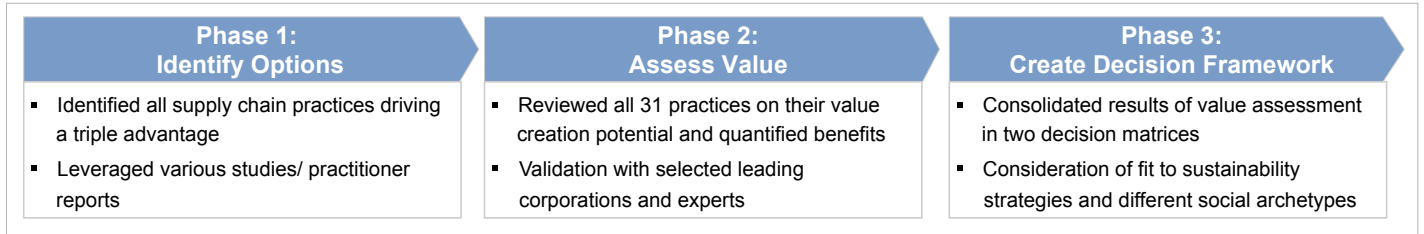


Figure 19. Phases to the decision framework

## Phase 1: Create a comprehensive picture of options to drive triple advantage

As a starting point, a comprehensive set of supply chain practices was created covering all options needed to realize a triple advantage. By researching practitioners' books, academic whitepapers and sustainability benchmarking studies, we identified a set of supply chain practices with environmental and social benefits. We extended the collection, balanced the right depth of practices, and refined the structure through interviews with leading corporations from the consumer goods (retail) and transportation sector, sustainability experts and NGOs. The outcome was a "MECE" landscape of 31 supply chain practices as shown in Figure 6.

## Phase 2: Perform an in-depth value assessment of all identified practices

To create a solid foundation for our decision frameworks and toolsets, we executed a detailed, bottom-up assessment of all 31 practices. For each practice we identified state-of-the-art papers, articles and cases, stating its value creation potential and validated and extended it with corporations, industry experts and academia. The results are applicable to "make-to-stock supply chains" using the consumer goods (retail) and transportation industries as reference industries. The figure below illustrates an assessment of one exemplary practice of "smart and green building deployments".

As Figure 20 shows, each practice was analysed for its potential to create business value and socio-environmental value. To capture the full business value, we took a holistic valuation approach (as described in the second section of the report) by factoring in benefits beyond short-term financial effects. We looked at benefits on revenues, costs, risk and brand. The socio-environmental value is defined through improvements on carbon footprint, customer health, community development/welfare and labour standards. Ease of implementation considers cost and complexity of implementation and risk to fail.

Figure 21 below shows the "quantitative background" of the assessment with supporting numbers behind the business and socio-environmental value. Here we provided facts on energy cost and carbon savings reflecting relevant studies. To allow for cross-practice comparisons on value, we aggregated benefits to the highest possible level, e.g. transformed energy cost savings in the warehouse into supply chain cost savings by reflecting typical cost structures of consumer goods companies. Analogue to the environmental value: transforming energy savings into carbon savings on company level.

The overall results of this bottom-up calculation are reflected in the business case described in the "implementation, prioritization, business case" section. Key to those benefit calculations was to consider interdependencies between baselines of the 31 practices. That is why for example, the overall supply chain cost potentials of 9-16% are less than the sum of individual supply chain cost potentials shown in Figure 12.

## Phase 3: Derive decision framework and toolset

In the final phase, we consolidated the data from the value assessment. We were able to create a decision matrix based on business value and socio-environmental value. The framework is supported by a tool and allows customization of our assumptions to reflect individual company profiles and social archetypes.

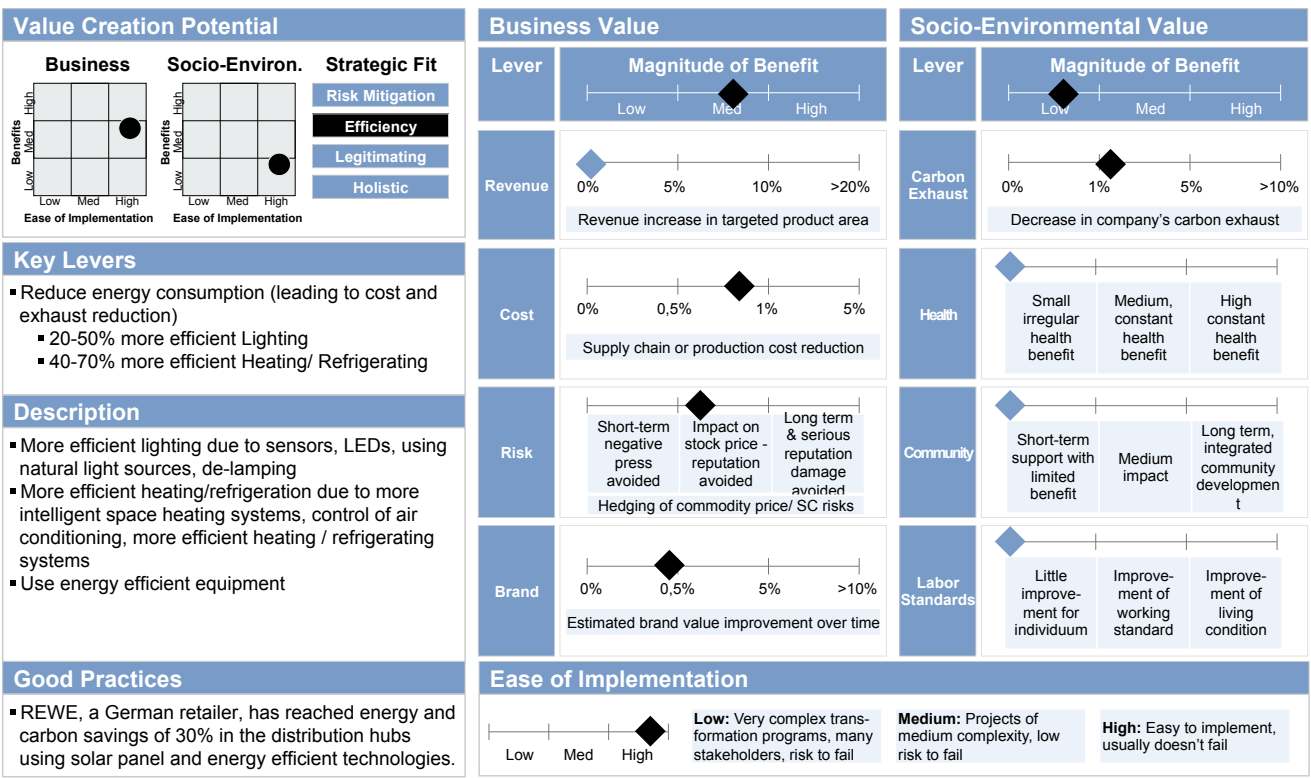


Figure 20. Illustrative overall assessment (Source: Team analysis)

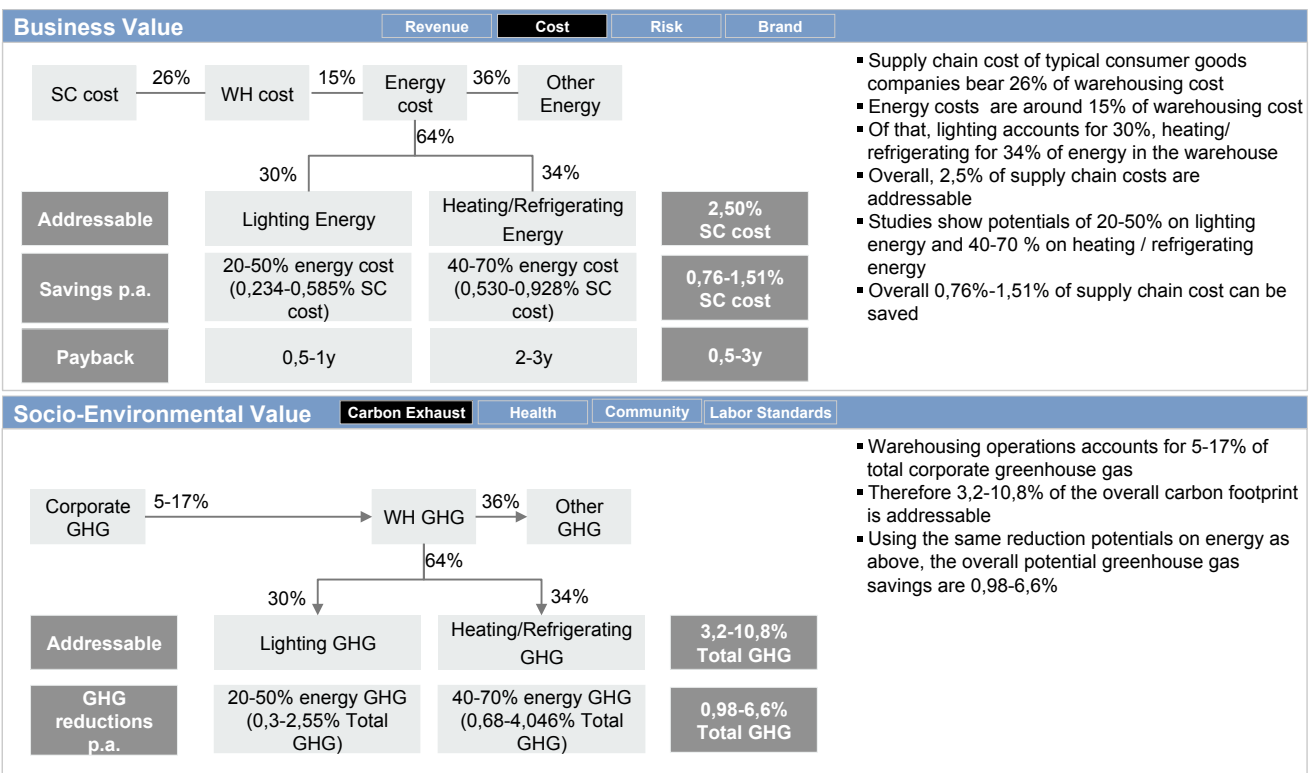


Figure 21. Illustrative quantitative background (Source: Team analysis)

# Acknowledgements

## Project members

John Moavenzadeh, Senior Director, Head of Mobility Industries, World Economic Forum  
Sean Doherty, Director, International Trade and Investment, World Economic Forum  
Wolfgang Lehmacher, Director, Supply Chain & Transport Industry, World Economic Forum  
Jieun Chung, Senior Manager, Supply Chain & Transport Industry, World Economic Forum  
Christina Ferrer, Community Manager, Consumer Industries, World Economic Forum  
Sarah Shellaby, Senior Manager, Consumer Industries, World Economic Forum  
Lullit Jezequel, Associate, Supply Chain & Transport Industry, World Economic Forum

Mark H. Pearson, Senior Managing Director, Operations Strategy, Accenture Strategy  
Markus Hayek, Managing Director, Operations Strategy, Accenture Strategy  
Michael Kraft, Manager, Operations Strategy, Accenture Strategy  
(primary author, secondee at the World Economic Forum)  
Alexander Holst, Managing Director Sustainability Services, Accenture Strategy  
Gary Hanifan, Managing Director Supply Chain Sustainability, Accenture Strategy  
Melissa Barrett, Senior Manager Sustainability Services, Accenture Strategy  
Aditya Sharma, Senior Manager Supply Chain Sustainability, Accenture Strategy

## Contributors and reviewers

Members of the World Economic Forum's Global Agenda Council on the Future of Logistics and Transportation  
UPS  
Deutsche Post DHL  
SAB Miller plc  
Nestlé SA  
International Labour Organization (ILO)

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# Endnotes

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World Economic Forum  
91–93 route de la Capite  
CH-1223 Cologny/Geneva  
Switzerland

Tel.: +41 (0) 22 869 1212  
Fax: +41 (0) 22 786 2744

[contact@weforum.org](mailto:contact@weforum.org)  
[www.weforum.org](http://www.weforum.org)