



## **Enabling a Sustainable Supply Chain from Design to Operate**

THE BEST RUN







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# Executive Overview

The 2020s have been named the Decade of Action by the United Nations, which calls for the acceleration of sustainable solutions for the world's biggest challenges - poverty, gender, climate change, inequality and closing the finance gap

Climate change, circular economy and sustainability have all come to the forefront over the past few years and our global supply chains sit right in the middle of these challenges, both as a major contributor to the problems, and as a great area of focus where we can take action to address the problems.

It has been estimated that 80% of global trade passes through supply chains. By working together, buyers and suppliers in global supply chains and networks can advance human rights (including labor rights), and work to improve climate resilience, environmental protection, inclusive economic growth and ethical business practices.

End-to-end supply chain transparency is critical, whether unhoused across your own facilities or outsourced to trading partners. Sustainability initiatives must extend from the design to the decommissioning of a product: from raw materials sourcing, to last-mile logistics, and even to product usage, returns and recycling processes.

Digital transformation and the growing sophistication of digital supply chain technologies are playing a major part in the evolution of supply chain transparency and sustainability. Big data management, advanced analytics, artificial intelligence (AI), and security tools, such as blockchain and radio frequency identification (RFID) sensors, have brought unprecedented visibility and accountability to modern supply chains.

Companies now have a much greater ability – and obligation – to demonstrate corporate social responsibility and share best practices for green and sustainable supply chains.



# The Guiding Principles of a Sustainable Supply Chain

Supply chain sustainability is the management of environmental, social and economic impacts, and the encouragement of good governance practices throughout the lifecycles of goods and services. A sustainable supply chain is one that fully integrates ethical and environmentally responsible practices into a competitive and successful model.

As ethical and sustainable supply chain practices become a greater and more immediate priority for businesses, compliance goals and sustainability benchmarks are also becoming more standardized. The United Nations Global Compact has laid out 10 criteria for measuring supply chain sustainability. These cover the following areas:



## HUMAN RIGHTS

- Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights.
- Principle 2: And make sure they are not complicit in human rights abuses.



## LABOR PRACTICES

- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.

- Principle 4: They should eliminate all forms of forced and compulsory labor.
- Principle 5: They should work towards the effective abolition of child labor.
- Principle 6: They should eliminate discrimination in respect of employment and occupation.



## ENVIRONMENTAL RESPONSIBILITY

- Principle 7: Businesses should support a precautionary approach to environmental challenges.
- Principle 8: They should undertake initiatives to promote greater environmental responsibility.
- Principle 9: And encourage the development and diffusion of environmentally friendly technologies.



## ANTI-CORRUPTION

- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

These principles are built upon the realization that socially responsible practices and products are not only good for people and the planet, but are also good for building positive brand awareness, competitiveness, and long-term profitability.



# Three Components of Sustainable Supply Chains

Twenty years ago, the word **sustainability** was almost completely synonymous with eco-friendliness. Today, it is a much more holistic term. Thinking green, embracing circular supply chains, and ensuring transparency are all components of a modern, sustainable supply chain.



## 1. THINK GREEN

A green supply chain is achieved by successfully integrating environmentally responsible principles and benchmarks into supply chain management. This includes product design, materials sourcing, manufacturing, logistics, and end-of-life product management. With the rise of e-commerce, there are more product and shopping choices than ever. To compete, businesses need to find resilient solutions to **green** their supply chains while still growing profit.



## 2. EMBRACE THE CIRCULAR ECONOMY

In a circular supply chain, products are disassembled or reduced to their raw materials form, and remade into sellable products, thus allowing businesses to achieve the environmental benefits of recycling while recouping costs in the process.



## 3. ENSURE TRANSPARENCY

Supply chain transparency refers to the ability and willingness of a business and the supporting network to openly disclose information about the provenance of goods and labor and end-to-end supply chain practices. Many businesses invest significant time and resources into establishing and maintaining ethical and environmentally responsible standards. The problem is, even with the best of intentions, this has traditionally been very difficult to enforce and reliably implement.



# The Traits of a Sustainable Supply Chain

## **COLLABORATE ACROSS A NETWORK**

A surprising number of the world's largest companies use the same raw materials and low-tier suppliers. Global pressure to improve sustainability and transparency has seen improvements. However, compliance with green and ethical operational standards has traditionally been difficult to enforce in many parts of the world.

If supply chain managers are to combat this, they can best do so by working together, sharing information, and sending a message that sustainability compliance is essential to doing business. The Fashion Revolution movement began in 2013 and is a great example of many major – and highly competitive – fashion brands, choosing to work together to combat unethical suppliers in their industry.

Despite some initial skepticism, seven years on, supply chain transparency has overwhelmingly improved in the fashion industry; far from damaging their competitiveness, the collaboration and sharing of data has allowed all players in the industry to benefit from the improved public sentiment this has brought to their brands.

## **LEVERAGE THE BEST AVAILABLE TECHNOLOGIES**

Supply chain sustainability presents a challenge due to the complexity and wide distribution of the many links in the chain. Without modern digital technologies, it's simply not possible to maintain and coordinate the level of accountability and real-time visibility necessary to achieve ambitious sustainability goals.

Luckily, the great thing about digital transformation in supply chains is that it doesn't have to happen all at once to be effective. Incremental steps can be taken to gradually digitize supply chain operations, for example by moving from monthly planning cycles to weekly cycles by tightly aligning supply chain planning and production planning into a synchronized process. Furthermore, smart factory and digital supply chain solutions gather and analyze data by their very nature. So from the moment of integration, connected technologies begin to calculate their own ROI.

## **SET STANDARDS AND GOALS**

For a strategic supply chain sustainability plan to work, it's important that benchmarks, targets, and guidelines are clearly spelled out. They must then be shared – and agreed to – among all the stakeholders and suppliers across the chain. Fortunately, today we have numerous bodies that help businesses set these goals and criteria, and digital technologies make it easier than ever to track and manage compliance.

There are also growing amounts of data and intel to demonstrate the bottom-line value of sustainability benchmarking. Bank of America Merrill Lynch, for example, found that firms with a better environmental, social, and governance record than their peers produced higher three-year returns, were more likely to become high-quality stocks, and were less likely to have large price declines.

## **COMMUNICATE SUCCESSES**

Your customers can't know what you don't tell them. When businesses attain their sustainable supply chain goals, it's important that they share the good news, or risk wasting the powerful reputational benefit of that news. A deserved reputation as a green corporation is always good for the brand and, as Forbes magazine points out, "Utilizing green marketing can improve reputation and brand image, resulting in consumer loyalty and a positive impact on the bottom line".

But that's only part of it. Businesses can lead their industry by example, and to demonstrate how supply chain sustainability initiatives can bring measurable benefit – both financially and environmentally. By sharing their accomplishments and best practices, they associate their brand with innovation and thought leadership in the sustainability space. This not only makes a company and its products more sustainably appealing to customers, but also makes it more appealing to perspective and current employees.

# What Is SAP Doing to Help?

We have embraced an end-to-end sustainability mission as part of our solution strategy to meet the growing needs of our customers. This addresses the three pillars of sustainability – economic, social and environmental – which ultimately addresses the three areas our customers are focusing on – profit, planet and people.

## **CLIMATE 21**

The SAP solution portfolio ensures that these principles of sustainability are embedded in our products.

SAP's Climate 21 initiative address areas like sustainability index reporting and circular economy through the design-to-operate pillars of design, plan, source, manufacturing, delivery and operation. The individual pillars of design-to-operate address the customer needs around:

- Design and manufacture recyclable and environmentally sustainable products.
- Ensure ethical sourcing and traceability of goods across the supply chain.
- Reduce waste and lower emissions in manufacturing and logistics processes.
- Ensure the health and safety of assets and people.
- Reduce the overall carbon footprint through efficient planning and logistics management.
- Manage the operation of assets to reduce energy consumption.
- Improve visibility across your network of outsourced manufacturers, third-party logistics suppliers and other partners.

This eliminates a single-dimension approach to sustainability around just one or two topics.

## **SUSTAINABILITY FROM DESIGN TO DECOMMISSION**

At every stage in the lifecycle of specific products there are social and environmental impacts on the environment and on people.

As a result, governance – or the accountability – is important at every stage throughout the supply chain and product lifecycle.

## **Design products that are recyclable and environmentally sustainable**

- Design to minimize carbon footprint of both processes and products
- Collaborate with suppliers on sustainability issues to foster product innovation – companies embarking on such initiatives have added new features and performance characteristics to existing products and even generated new products.
- Ensure all packaging and products are bio-degradable, re-usable or recyclable.

## **Plan to reduce emissions, and ethically source materials**

- Focus on improving demand accuracy to reduce obsolete inventory.
- Leverage scenario planning to predict end-of-life scenarios and support circular processes.
- Simulate the CO<sub>2</sub> footprint of the plan through the procurement, production, and transportation processes.
- Report actual results against the plan to determine progress and areas of improvement.

## **Source materials that eliminate slave labor and ensure fair trade regulations**

- Improve visibility across all tiers of your supplier network.
- Identify and monitor the most salient risks and gaps within your supply chain and how those may impact business resilience:
  - What are you sourcing and from where?
  - Is the company sourcing directly or through third parties?
  - In which sector or countries directly linked with the company's operations are the main risks of adverse impact on people, environment, or governance most present?
  - What is the company's visibility beyond direct suppliers and how can it be improved?



**Manufacture with minimal waste and environment impact**

- Monitor energy usage as a function of production volume.
- Measure CO<sub>2</sub> emissions against compliance commitments.
- Ensure the safety of the workforce.

**Deliver products and services in a sustainable way**

- Use logistics processes that optimize loads to reduce mileage, and carbon footprint.
- Use CO<sub>2</sub>- and energy-optimized warehousing and transportation.
- Develop a process to ensure the safety of workers and ensure that only qualified personnel can handle dangerous goods.

**Operate assets and equipment in an energy-efficient and safe manner**

- Extend asset life and reduce energy consumption.
- Determine the environmental impact of asset operations.
- Ensure environmental and safety compliance of all assets and workers.

**Leverage the power of the network to support a circular economy**

- Improve visibility across the business network.
- Determine networks to minimize sustainability risks.
- Ensure that trading partners adhere to sustainability commitments.



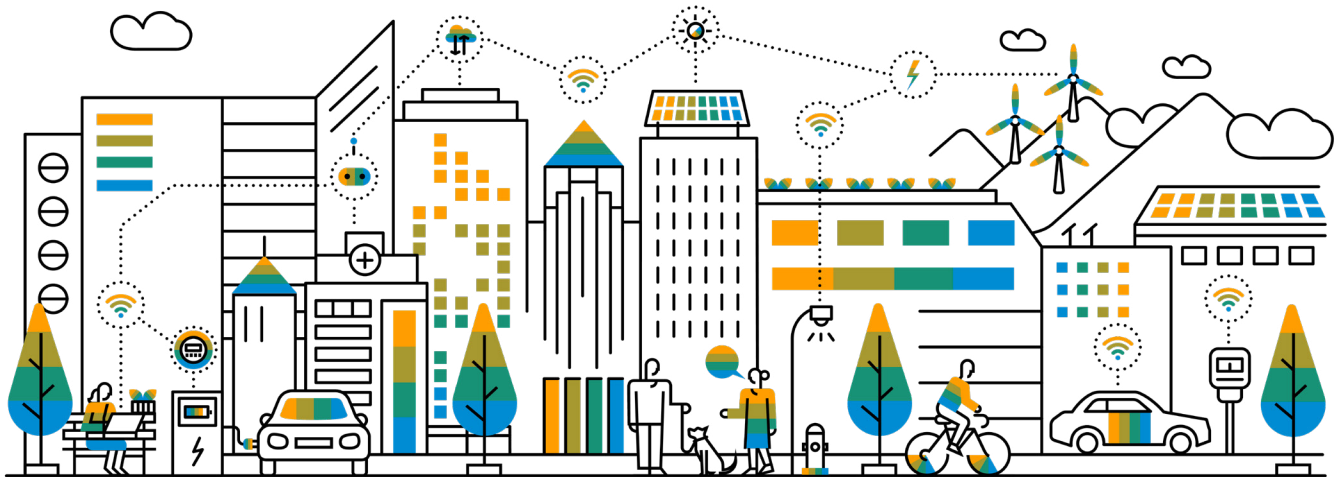
# Where Should I Start?

At SAP we believe that sustainability as a topic can never be a one-size-fits-all approach. How organizations manage this will depend on their industry, geographic location and size. Oxford Economics found that:

- **Consumer products** organizations say that consumer demand is the top influence on their sustainability efforts (52%), followed by increasing competitiveness (45%). However, consumer demands for low prices (56%) and convenience (50%) present the biggest obstacles.
- **Discrete and process manufacturing** organizations are confronting a paradox – These executives say that process innovation is the biggest driver of their sustainability efforts by a wide margin. At the same time – echoing the wider findings from the survey – process complexity is the biggest obstacle to meeting sustainability goals (49%), followed by cost (42%).

- **Energy and utilities** organizations' sustainability efforts are market-driven – They say reducing costs of energy consumption (44%) and increasing industry regulation (40%) are the biggest influences on their sustainability strategies. But process complexity (50%) and limited availability of resources (47%) present the biggest hurdles.
- **Engineering and construction** executives say the top influence on their sustainability efforts is reducing the costs of energy consumption, but the limited availability of needed resources is the biggest obstacle.

Regardless of your company, the industry you play in or the location you live in, sustainability and the future of our planet is critical for this generation, and more importantly future generations. The time for action is now, and how we as business executives choose to design, manufacture, and deliver products to our customers will have a significant impact on the world we leave behind for future generations.







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