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## ARTICLE **SUPPLY CHAIN**

# What Supply Chain Transparency Really Means

by *Alexis Bateman and Leonardo Bonanni*

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The concept of supply chain transparency was virtually unknown 15 years ago, yet today it commands the attention of mid- and senior-level managers across a broad spectrum of companies and industries.

The reasons for this increased interest are clear: Companies are under pressure from governments, consumers, NGOs, and other stakeholders to divulge more information about their supply chains,

and the reputational cost of failing to meet these demands can be high. For example, food companies are facing more demand for supply-chain-related information about [ingredients](#), [food fraud](#), [animal welfare](#), and [child labor](#). Less clear, however, is how to define transparency in a supply chain context and the extent to which companies should pursue it: an [MIT study](#) that mapped definitions of supply chain transparency related to labor practices in the apparel industry found vastly differing definitions across organizations.

In this article, we offer some clarity on the meaning of supply chain transparency and guidelines to map and extend progress. The recommendations derive from the experience shared by dozens of companies up and down the supply chain across industries of all sizes over the last decade with [MIT Sustainable Supply Chains](#), an initiative based at the MIT Center for Transportation and Logistics; [Sourcemap](#), a provider of supply-chain-transparency solutions; and ongoing research in this area.

### Defining Transparency

Supply chain transparency requires companies to know what is happening upstream in the supply chain and to communicate this knowledge both internally and externally.

One reason the process has become increasingly important is that more consumers are demanding it. For instance, researchers at the MIT Sloan School of Management [found](#) that consumers may be willing to pay 2% to 10% more for products from companies that provide greater supply chain transparency. In this study, consumers valued information about the treatment of workers in a product supply chain and the seller's efforts to improve working conditions. Across industries, this growing segment of discerning consumers seeks information on product ingredients and materials, where products come from, and the conditions in which they were produced.

As these demands have increased, so has the reputational risk for companies from media and NGO campaigns. Over the last decade, numerous scandals have inflicted considerable damage on the reputations of companies. Notable examples include the [Rana Plaza factory collapse](#) in the fast fashion industry, [slave labor in the Thai seafood industry](#), and [deforestation in Malaysia and Indonesia](#).

The fallout has resulted in a raft of new laws pertaining to transparency. These include the policing of conflict minerals ([Dodd-Frank](#)), forced labor ([Australian](#) and [UK modern slavery acts](#), and [California Transparency in Supply Chains Act](#)), and food safety ([U.S. Food Safety Modernization Act](#)) with further regulation on the horizon in the [Netherlands](#) and [Switzerland](#), among others.

A lack of supply chain transparency can now stop businesses cold. For example, shipments that are missing origin documents are being held up and turned away at ports, causing costly disruptions that ripple through supply chains. [U.S. Customs and Border Protection](#) has turned away shipments originating or related to North Korea, given recent federal regulation that stipulates all North Korean labor should be considered to be forced labor.

## Why Isn't Everyone Doing It?

If transparency is a growing business imperative, why aren't more companies doing it and why is the transition to transparent supply chains so slow?

One reason is supply chains were not designed to be transparent. Companies and suppliers have feared that divulging too much information would undermine their competitive advantage or expose them to criticism. Another reason is relevant information, such as details of upstream supply chain practices, may not be collected or if it does exist, may be erroneous. Finally, the ROI for investing in transparency does not always satisfy near-term requirements.

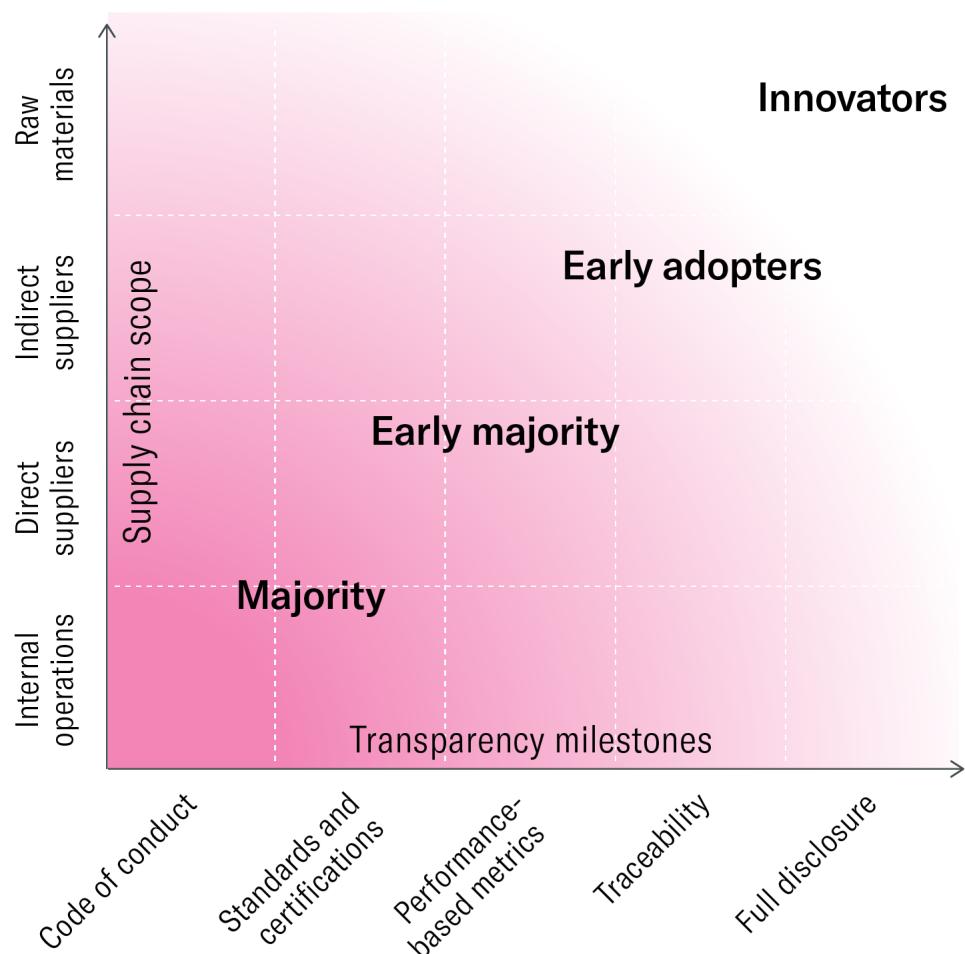
Despite these issues, there are ways to evaluate the worth of transparency and get a sense of how your enterprise is performing.

Transparency can be measured along two dimensions: supply chain scope (the depth of interaction in the supply chain) and milestones on the path to complete transparency (see the exhibit "How Transparent Is Your Supply Chain?"). Based on our learnings over the last decade, we have applied part of the [innovation diffusion theory](#), a concept originally posed by Everett Rogers that outlines how an innovation spreads and is adopted, to map the progress of firms moving towards supply chain transparency.

Most companies are either at the Majority stage, where they have proper oversight over their facilities, or occupy the Early Majority stage, where they audit and monitor direct suppliers for compliance. Fewer companies can be considered Early Adopters that engage with indirect suppliers (suppliers beyond their direct suppliers) and trace individual transactions. Only Innovators are ready to share information about raw materials suppliers.

# How Transparent Is Your Supply Chain?

Transparency can be measured along two dimensions: supply chain scope (the depth of your interaction in the supply chain) and milestones on the path to complete transparency. Most companies are at the majority or early majority stages.



Source: Alexis Bateman and Leonardo Bonanni

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A well-known Innovator is the apparel company Patagonia. Its [Footprint Chronicles](#) map a subset of raw materials, mills, and factories that make Patagonia products and drills down into details about vendors' operations and staff. [VF Corporation](#) (a client of Sourcemap, the company that one of us – Leonardo – founded and heads) and some of its brands also disclose supply chain information down

to suppliers of raw materials. Food companies are also emerging as leading-edge Innovators. For example, [One Degree Organic Foods](#) cereal products are fully traceable from farm to spoon, and [Red's Best](#) seafood products are traceable to the fishing vessel through QR codes on the company's packaging.

Early adopters such as [Nike](#) maps their manufacturing plants and offer insights into individual factories, while UK retail chain [Marks & Spencer](#) provides an interactive mapping of its food and apparel manufacturers.

### Steps to Take

Having ascertained where your organization falls on the transparency continuum, a next step is to decide whether you need to invest in efforts to move the organization up the scale.

If the answer is yes, the strategy you lay out for improving transparency will depend, to a large extent, on your risk profile and what questions you want to answer with the information you seek. For instance, do you want to ensure no child labor at your contract manufacturers or identify the source of origin of your materials? However, there are five general steps that companies can take to initiate the journey.

*1. Gauge risks and set goals.* There are multiple tools available to complete this first step. A company might first take a look at impending risks from regulation, past disruptions, and supplier-related issues. Often, this first step includes a plot of internal and external stakeholder interests called a materiality assessment. [Here](#) you can see a materiality assessment disclosed by Danone that charts transparent product labeling and sustainable sourcing of raw materials as high interest goals that fall at the intersection of important stakeholder interests and factors that have an impact on the company's business success. Once the risks are better understood, a company can identify its goals.

*2. Visualize the supply chain.* Having identified and prioritized the primary risks, companies can visualize the target supply chain. It will gain a deeper understanding of goods flows, map suppliers and processes, and expose existing information gaps. A basic example is VF's map of the supply chain of the [Vans Checkerboard Slip-on](#) shoe to understand the flows, the suppliers involved, and embedded processes. The cadence of this data collection should align with stipulated goals.

*3. Collect actionable information.* Having mapped the supply chain, collect information on practices and performance that provides insights about potential risks, opportunities for improvement, and information gaps. A company may need to [track and profile](#) units, batches, or lots of finished goods moving through the supply chain to ensure source of origin and chain of custody.

As the chain of custody is identified, practices need to be verified. Almost every company has a code of conduct in place — this includes requirements about supplier practices ranging from the labor practices they have in place to respect for the environment. An example is [IKEA's IWAY](#) code of

conduct that every IKEA supplier must comply with. Companies generally ask for this information from their direct suppliers, but as transparency becomes more important, companies are increasingly requiring suppliers deeper in their supply chain to comply with codes of conduct and are vetting the information in some cases.

*4. Engage.* Armed with actionable information, the company can now choose how to engage in the supply chain. This typically involves a program designed with critical KPI's in mind. The aim is to address specific issues such as labor-related risks, environmental impacts at supplier sites, or unclear sources of origin. The engagement includes supplier contact and collaboration, monitoring, and support. It may also necessitate third-party partnerships to gain expertise that is not available internally. For instance, [Starbucks](#) has long partnered with Conservation International to build its ethical-sourcing program for its coffee that covers a wide spectrum of social and environmental issues. The program began with a [code of conduct entitled C.A.F.E.](#) to ensure adoption of the code down to the farmer level.

*5. Disclose.* Finally, companies set the level of disclosure they want to establish. This involves deciding how they will meet relevant regulatory requirements and stakeholder demands, and how they will verify the information disclosed. The level of disclosure can range from sharing a code of conduct to disclosing traceability from the raw materials stage of the supply chain as seen with Patagonia's Footprint Chronicles.

These steps are continuous: supply chains are dynamic, and progress should be ongoing to ensure a better functioning and more sustainable and transparent supply chain.

While blockchain and other technologies have been hailed as the solution to supply chain transparency, any viable solution must include the right mix of people, information, and technology to support outlined objectives — a technology cannot solve this issue in isolation. For instance, internal and external stakeholders should be involved, and the technology deployed should include solutions that capture, translate, and disseminate useful data, as well as support appropriate decision making.

### **The Benefits**

The return on efforts to improve supply chain transparency varies with each business model and industry, but there are benefits that most companies can capture.

Perhaps the most obvious benefit is compliance with increasingly stringent regulation. Transparent supply chains also reduce reputational risk and enhance the company's standing as a trustworthy enterprise. A third benefit is attracting and retaining employees who are keen to work for responsible companies. Patagonia and Nike have very high rates of applications for their jobs as well as very low employee turnover, partly a result of their reputation as responsible companies. Patagonia cites its

employee turnover of [less than 4% annually](#). A fourth benefit is increased consumer trust and satisfaction — a topic explored by Ryan Buell in his [recent HBR article on operational transparency](#).

Finally, there are important operational benefits too. Gathering more detailed information on supply chain performance helps companies identify opportunities for improvement such as unnecessary middlemen and to plan more effectively over the long term.

### **The Future**

Supply chain transparency relies on creating a culture of continuous improvement within the organization and across value chains. The demand for transparency is unlikely to abate. Today, it may not fall under anyone's job description, but it soon will.

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