

Procurement — The Start of the Supply Chain

How Earthstream® Supports Responsible Strategic Sourcing

The supply chain is the link that allows goods and services to flow quickly and efficiently between suppliers, manufacturers, distributors, retailers, and customers. Industry relies on it for efficient and effective operations.

The coordination and optimization of a company's activities, beginning with the procurement of raw materials and finishing with the delivery of the final product to the client, is referred to as supply chain management. By coordinating the many phases of the supply chain properly, organizations can reduce costs, enhance customer service, and increase profitability.

Supply chains require purchasing an inventory of goods or services in order to process and produce the finished product. The organizational function in charge of procurement serves as the supply chain's starting point. In rare instances supply chains are vertically integrated to the point of owning

their sources of supply, but even then, vertical integration is only attempted for the most strategic commodities, so a procurement strategy is still required to manage relationships with suppliers to ensure uninterrupted business operations and sustained competitive advantage.

In a previous whitepaper¹ on the subject, it was argued that despite management and technological advancements, supply chain risk is rising rather than falling. The only way to reduce this risk and perhaps take advantage of market opportunities is for organizations to start analyzing data from outside sources, in addition to data from internal systems. When compared to internal risks from your operations, external risks to your supply chain are often more severe, the COVID-19 pandemic being a prominent example.

While supply chain disruptions continue to make headline news, it is important to recognize the contribution Peter Kraljic

¹ <https://mesur.io/white-papers-list/2022/10/4/earthstream-for-supply-chain-risk-intelligence>



made to supply chain management in his seminal 1983 Harvard Business Review article, “Purchasing Must Become Supply Management.”² It is widely credited with introducing the concept of supply chain management and is considered one of the most influential pieces of literature in the field. His Kraljic Matrix is a widely used decision framework for strategic purchasing, helping organizations to prioritize purchasing categories according to their importance and risk.

Many organizations have adopted his ideas, and he has had a long-lasting impact on the field of supply chain management, helping to shape how it is practiced today. Essentially, Kraljic argued that procurement is a strategic function, rather than a storeroom or clerical function, that contributes to the success of any complex organization.

Building on the success of this approach, supply chain management has advanced, and today a company’s procurement organization is responsible for much more than just selecting and managing suppliers, negotiating contracts, and monitoring supplier

performance at the lowest possible cost. Today, the emphasis is on developing long-term relationships and ensuring that the supply chain is environmentally and socially responsible, as well as ensuring that all suppliers comply with applicable international trade laws and regulations. This is referred to as responsible sourcing.

RESPONSIBLE SOURCING

“Responsible sourcing is not just about ensuring compliance with applicable laws and regulations, but also about engaging in ethical practices. Companies should strive to create a culture of ethical sourcing throughout their operations, including setting expectations for suppliers and regularly monitoring supplier performance.”

“Responsible Sourcing and Supply Chain Management” by J.A. Vande Woude and J.A. Van Der Wal

Screening suppliers to ensure they can meet contractual obligations is a prerequisite for managing the procurement process responsibly and strategically. To further reduce risk,

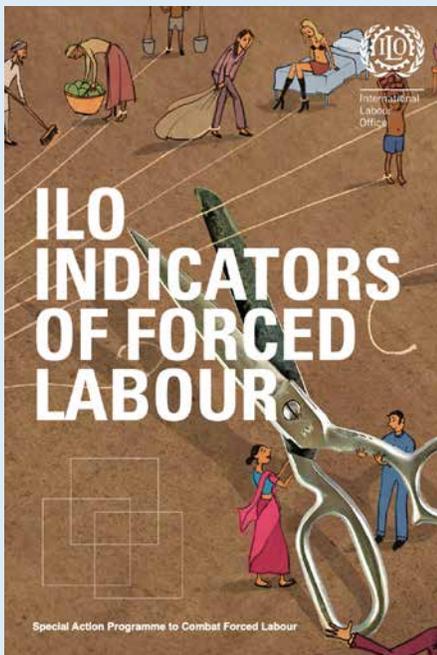
² <https://hbr.org/1983/09/purchasing-must-become-supply-management>

it is possible to expand supply chain observability beyond direct suppliers and screen the suppliers who supply them. This is an example of digital virtual vertical integration, also known as N-Tier supply chain mapping.

By understanding the entire supply chain and the various suppliers involved, companies can evaluate the

environmental, social, and economic impacts of their supply chain and identify any bottlenecks where despite a diversified supplier base at tier-1, there might be a vulnerability concentrated further upstream that can cause a larger supply chain impact. It is also possible to monitor the ability of suppliers to meet performance expectations and scan for potential unethical or illegal practices.

Eliminating Forced Labor in the Supply Chain



The International Labor Organization (ILO) provides indicators that represent the most common signs or “clues” that point to the possible existence of a forced labour case, and to help identify persons who are possibly trapped in a forced labour situation, and who may require urgent assistance.

Responsible Sourcing & Trade Compliance

The UFLPA (Uyghur Forced Labor Prevention Act) is an excellent example of how social responsibility and regulatory compliance intersect. The legislation is written in such a way that it creates a rebuttable presumption that any goods mined, produced, or manufactured, entirely or partially, in the Xinjiang Uyghur Autonomous Region (XUAR), were made with forced labor, and prohibits their importation into the United States. In other words, it is the importer’s responsibility to provide “clear and convincing” proof that the goods being imported from that region do not contain forced labor.

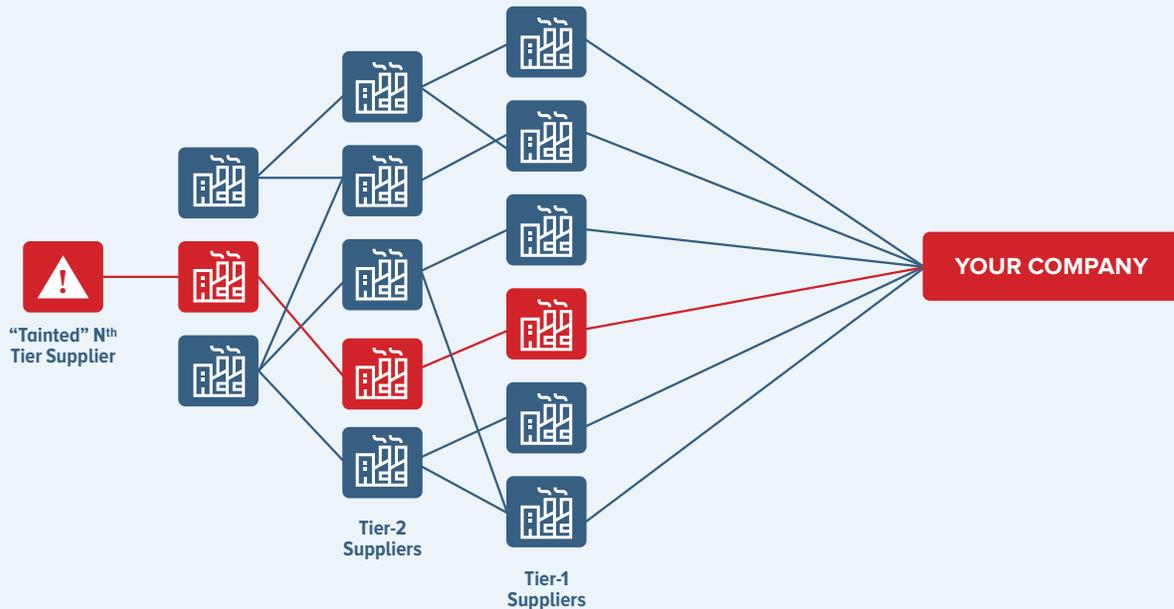
In order to establish this “clear and convincing” proof, its necessary to analyze the N-Tier supplier map to see if any of the suppliers are listed on the US Customs and Border Protection “UFLPA Entity List”³.

For more information on the problem of forced labor visit: <https://www.ilo.org/global/topics/forced-labour/lang--en/index.htm>

³ <https://www.dhs.gov/uflpa-entity-liist>

N-tier Supplier Mapping

The Challenge of Ensuring a “clean supply chain”



Deep N-tier supplier discovery, which involves using OSINT (open source intelligence) and proprietary data to identify all the suppliers in the value chain, is a requirement for delivering supply chain risk intelligence. The resulting N-Tier supplier network map ideally links all connected suppliers to the place where the commodity was first produced, whether that was a farm where the crop was harvested or a mine where the minerals were extracted. Once these suppliers have all been identified, screening for forced labor and other risk factors can be done.

Our Earthstream® machine learning platform automatically identifies, cleans, and links all data, extracting critical information from large natural language and image sets. It builds self-learning models that synthesize the data and predict possible future scenarios and suggests sourcing options. Our customers use this information to make responsible strategic sourcing decisions by increasing observability into their entire value chain, getting early warning alerts of emerging supply chain threats, and developing an overall situational awareness of global markets.