



USING DIGITAL TOOLS TO BRING TRANSPARENCY TO GLOBAL SUPPLY CHAIN ACTIVITIES



EXECUTIVE SUMMARY



As economic activity linked to supply chains constitutes a growing percentage of global trade, more companies are seeking to extend the value of their own environmental, health and safety (EHS) and sustainability programs through the integration of supply chain activities. At the same time, however, the breadth and sheer complexity of supply chain systems make it increasingly difficult to effectively monitor performance metrics associated with EHS efforts. All too often, standard methods of measuring and tracking performance of these critical programs results in delayed, incomplete or inaccurate data that hampers efforts to ensure their effectiveness.

Fortunately, the availability of digital tools and platforms that have been expressly designed to monitor supply chain activities offers promise in improving the transparency and accuracy of data on performance by supply chain partners. And new digital tools that focus exclusively on EHS and sustainability programs are helping companies to bring greater leverage to their commitments to safe and sustainable business practices throughout their supply chains. Equally important, EHS and sustainability-focused digital tools and platforms can effectively support a company's overall product stewardship agenda, addressing the needs and interests of all stakeholders.

This UL white paper discusses the challenges of monitoring and managing EHS and sustainability practices of supply chain partners, and the benefits of adopting digital tools and platforms to increase performance transparency and to improve their overall effectiveness. The paper also provides an overview of UL's PURE™ Supply Chain platform.



SUPPLY CHAINS IN MODERN COMMERCE

Supply chain activities are an essential element of modern global commerce. Indeed, companies in most industries today leverage the strength and capabilities of diverse supply chain partners to perform a multitude of functions throughout the product cycle. This approach enables them to focus on their core competencies while taking advantage of market economies to deliver innovative, quality products to their customers.

Supply chains are also a key driver in the economic prosperity of countries around the world and their citizenry. In the United States alone, for example, supply chain activities represent a major segment of the economy, accounting for as much 37 percent of all private employment. And the supply chain economy also offers more lucrative employment opportunities for workers, with average wages as much 50 percent greater than employment in industries based on a business-to-consumer (B2C) model.¹

Finally, supply chains bring uncalculated benefits to international economic development efforts, especially in developing nations. Of course, supply chain partners foster economic activity at the local level by creating new employment opportunities. But the growth in local supply chain activities can also serve to stimulate national investments in essential infrastructure projects, such as roadways, railways and air and seaports. These infrastructure investments not only create additional jobs, but can provide societies with easier access to higher-quality goods and services, thereby creating additional market opportunities and added economic stimulus.²



SUPPLY CHAIN
ACCOUNTS FOR AS MUCH AS

37%

OF ALL PRIVATE EMPLOYMENT

EHS AND SUSTAINABILITY CONSIDERATIONS IN SUPPLY CHAIN ACTIVITIES

In recent decades, organizations large and small have made important progress in addressing EHS and sustainability considerations, often successfully applying an integrated approach to EHS and sustainability management efforts in every aspect of their operations. Most of these efforts typically focus on some or all of the following core areas:

- **LABOR PRACTICES**, including workplace environments and conditions, and worker health and safety considerations;
- **HUMAN RIGHTS PRINCIPLES**, such as banning the use of forced labor or child labor practices, and preserving civil, political, economic, social and cultural rights;
- **MATERIAL AND COMPONENT SOURCING REQUIREMENTS**, such as giving preference to materials from renewable sources or produced through sustainable practices;
- **ENVIRONMENTAL SUSTAINABILITY**, including limiting or eliminating production activities that can result in environmental damage, and encouraging the development of products that minimize environmental impact throughout their entire life cycle;
- **CONSUMER PROTECTION**, including the safeguarding of consumers' health and safety, and implementing suitable dispute resolution mechanisms.

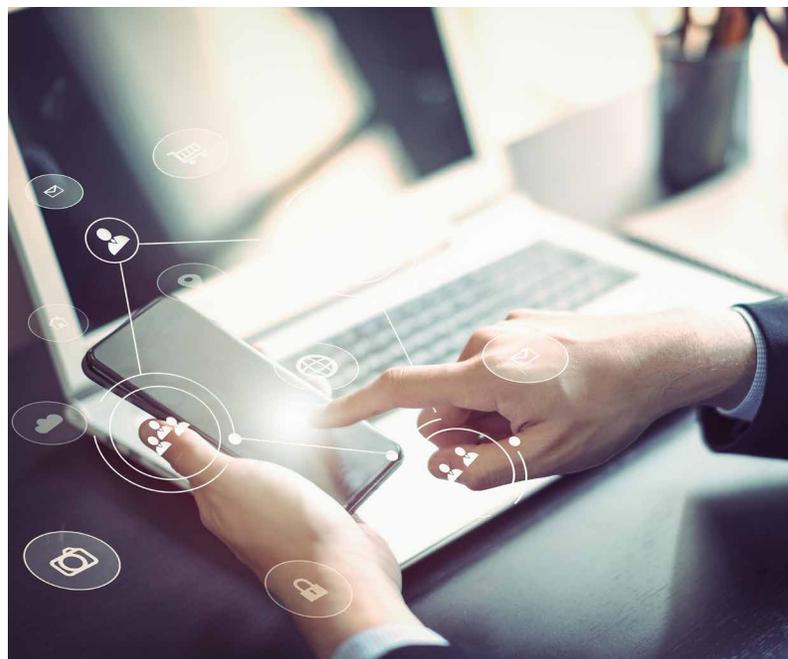
The task of addressing organizational policies and practices in each of these core areas is complex enough when dealing with operations that are centralized in a small number of locations. But modern supply chain activities can include direct relationships with dozens or even hundreds of supply chain partners throughout the world, each of whom may also have their own downstream supply chains. This vast network of suppliers and sub-suppliers makes the task of monitoring and managing EHS and sustainability issues significantly more complicated.

However, failing to consider the impact of EHS and sustainability practices of supply chain partners can have important consequences. To cite just one example, according to a 2017 study, supply chains produce total emissions that are four times greater than their parent organization alone. Yet, only 22 percent of study participants reported having any

direct engagement with their supplier on the issue of reducing carbon emissions, and only four percent had carbon emissions targets in place for their supply chain partners.³

Just as leveraging the supply chain model can significantly magnify the economic impact of an organization's activities, managing supply chain activities in accordance with robust EHS and sustainability principles can radically amplify the impact of those activities while also helping to meet key business metrics. For instance, the World Economic Forum reports that supply chain management efforts that incorporate environmental sustainability practices can produce not only important improvements in overall environmental performance but also significant and tangible business benefits, including increased revenues, reduced costs and greater brand value.⁴

The importance of brand value in extending an organization's EHS and sustainability framework to supply chain partners cannot be underestimated. According to one survey, 61 percent of millennial consumers switched their brands of choice within a 12-month period in 2016, with social and environmental welfare issues representing important factors behind their change.⁵ In a separate study, 94 percent of consumers surveyed said they were likely to remain loyal to a brand that offers complete transparency by providing access to information including how products are sourced and produced, and 73 percent indicated a willingness to pay more for products that offer complete transparency in all attributes.⁶



DISRUPTIVE INNOVATION IN SUPPLY CHAINS AND THE IMPORTANCE OF SUPPLY CHAIN STEWARDSHIP

As they have for centuries, advances in technology are continuing to play a central role in the modernization of industry and industrial processes. For many, the introduction of highly disruptive digital technologies in industrial engineering and manufacturing disciplines signals the beginning of a Fourth Industrial Revolution (also referred to as Industry 4.0), a period characterized by the widespread application of advanced technology systems and devices that bring state-of-the-art operational and decision-making capacity to every aspect of business.⁷

Industry 4.0 technologies are also disrupting traditional conceptions of supply chains. Instead of relying on classic, top-down approaches to

managing sourcing, production and distribution activities, organizations can now explore the potential benefits of new models of supply chain collaboration designed to take greater advantage of partner expertise and capabilities. Leveraging the various strengths inherent in supply chains can result in more decentralized production and distribution of products and lower costs, and even stimulate innovation in products and processes.

At the same time, new models of supply chain collaboration are leading to a greater recognition of the potential impact that diligent oversight of supply chain activities can have on an organization's overall EHS and sustainability performance. This recognition comes in part from reporting requirements in the United States, the EU and other jurisdictions regarding the use of conflict minerals, as well as the mandated monitoring of human trafficking and slavery practices among supply chain operations. But voluntary supply chain stewardship efforts are also taking hold as companies seek to set environmental performance

benchmarks for supply chain partners, and even using environmental and sustainability performance factors as criteria in the selection and retention of suppliers.⁸

Companies that adopt a stewardship approach in the oversight and management of supply chain activities benefit in several ways. First, an effective supply chain stewardship program can provide an effective mechanism to address the growing number of EHS and sustainability regulations worldwide. A supply chain stewardship program can also serve as evidence of a company's commitment to voluntary EHS and sustainability principles, thereby addressing buyer expectations of transparency regarding a company's products. Finally, as previously noted, active supply chain stewardship can result in significant improvements in a company's overall performance, including key financial metrics but also worker health and safety, as well as the promotion of sustainable products and practices that can reduce environmental harm.



USING DIGITAL TOOLS TO MANAGE EHS AND SUSTAINABILITY PERFORMANCE ACROSS SUPPLY CHAINS

The effectiveness of a supply chain stewardship program ultimately rests on the quality and timeliness of data from suppliers. For companies with potentially thousands of suppliers around the globe, the effort to collect accurate and timely data is a monumental task, one that is further complicated by language and cultural differences. In addition, continuously changing EHS and sustainability regulations and requirements requires a flexible approach that can be easily modified or adapted to address such changes.

Over the past decade, the same innovative disruption that has helped to transform the supply chain landscape has also influenced the development of advanced digital tools and platforms used to monitor and manage EHS and sustainability performance. Many offerings available provide companies with a unified approach to supply chain stewardship of EHS and sustainability issues, tracking a broad range of social, environmental and governance factors through a single, integrated platform. This approach reflects the complexity of today's EHS and sustainability landscape, and greatly facilitates efforts to address the requirements and expectations of regulators, procurement specialists and consumers.

SOME OF THE KEY FEATURES OF A EHS AND SUSTAINABILITY SOFTWARE PLATFORM FOR SUPPLY CHAIN STEWARDSHIPS WOULD INCLUDE:

- **A SINGLE PLATFORM FOR THE COLLECTION OF DATA FROM SUPPLIERS**—The availability of a single platform for the collection of data on a wide variety of EHS and sustainability metrics eases the data entry process for suppliers, and helps to ensure compliance with data collection requirements;
- **A UNIFIED SCORECARD FOR ASSESSING SUPPLIER PERFORMANCE**—A unified set of EHS and sustainability metrics applicable to all suppliers simplifies the process of assessing the performance of individual suppliers and brings objectivity to the evaluation process;
- **EASY INTEGRATION WITH EXISTING SYSTEMS**—Software platforms should support a simplified approach to importing and exporting data to and from other commonly-available software platforms. This feature makes it easier for suppliers to submit required information without the need to rekey large amounts of data;
- **SUPPORTS FREQUENT UPDATES TO REFLECT REGULATORY CHANGES**—New or updated regulations often necessitate software modifications to reflect changes in data collection points or assessment metrics. The availability of easy-to-use tools to effect these modifications in the software platform is essential;
- **ACCOUNTS FOR LANGUAGE AND CULTURE ISSUES**—Differences in language or culture may complicate the ability of suppliers to comply with data submission requirements. Capabilities that accurately translate platform interfaces into relevant languages is a critical feature, especially for companies with global supply chains;
- **PROVIDES BOTH STANDARDIZED AND CUSTOMIZED REPORTING CAPABILITIES**—Reports generated by EHS and sustainability software platforms should support the efficient analysis of collected data. The platform should offer both standardized reports, as well as the ability to easily develop customizable reports to address unique reporting requirements.

UL'S PURE™ SUPPLY CHAIN PLATFORM

UL's PURE™ Supply Chain platform enables companies to assess, audit and manage the EHS and sustainability performance of supply chain partners, regardless of their location. The proprietary software platform provides a unified repository for all EHS and sustainability data, including supplier codes of conduct, audit reports, performance data and corrective action efforts, helping to ensure full transparency of all compliance and regulatory information.

Specific modules in the PURE Supply Chain platform include:

- **Audits**—Enables the scheduling and conducting of site audits, as well as recording and managing comments. Corrective actions, along with targeted completion dates, can be assigned to individuals. A mobile application is available to log onsite audit activities;
- **Supplier relations**—Provides a centralized, online space or “team room” where companies can communicate efficiently with suppliers. Supports the sharing of information and updates, facilitates the organization of meetings and workshops, and encourages suppliers to share ideas;
- **BSCI integration**—The Business Social Compliance Initiative (BSCI) supports retailers, importers and brands in their efforts to improve working conditions throughout their supply chains. The BSCI module enables supplier information entered into the PURE platform to be imported or exported in and out of the BSCI database, and also tracks countries that are marked as “high risk” by the Foreign Trade Association, the organization behind the BSCI;
- **Higg Index integration**—Developed by the Sustainable Apparel Coalition (SAC), the Higg Index includes self-assessment tools that support brand companies and retailers in their sustainability efforts. Higg Index data can be integrated into the PURE platform to create a single, centralized set of supplier information.

These and other modules under development for inclusion in the PURE Supply Chain platform can significantly reduce the cost and complexity of collecting information from large and dynamic supply chains. PURE Supply Chain can also identify EHS and sustainability risks in supply chain activities, document the required corrective actions and track progress. Finally, PURE Supply Chain can provide supply chain partners with accurate and relevant performance data that can help drive further improvements and innovations.

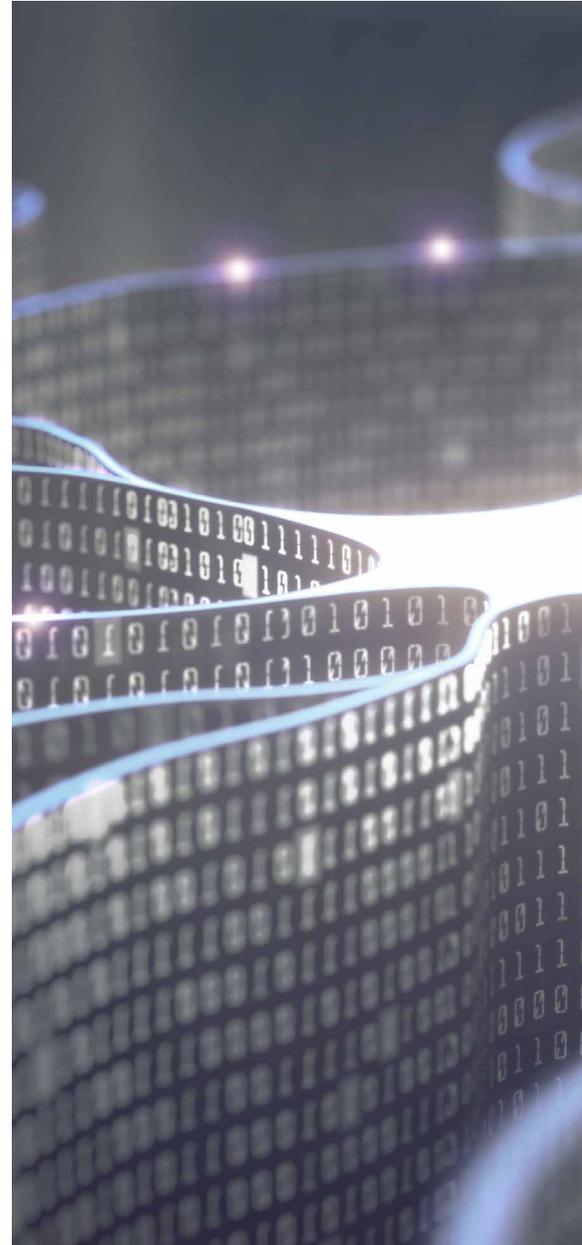
Developed by UL's EHS Sustainability group, the PURE Supply Chain platform is an integral part of UL's PURE Solution suite of software applications, including PURE Sustainability, PURE Health, PURE Safety, PURE Environment and PURE Learning.



SUMMARY + CONCLUSION



The global supply chain economy has clearly benefited from the integration of advanced technologies, and has provided companies and their supply chain partners with greater flexibility in meeting buyer expectations and controlling costs. However, these changes have also introduced new challenges in achieving corporate EHS and sustainability goals, including the effective monitoring and managing EHS and sustainability performance of supply chain partners. The availability of innovative digital tools and platforms specifically addressing EHS and sustainability issues enables companies to more fully embrace the promises and responsibilities of supply chain stewardship, and will help to generate important improvements in corporate EHS and sustainability performance around the world.



For more information on UL's PURE Supply Chain platform, or to learn more about UL's EHS and sustainability services, email ULEHSS@UL.COM. Or go to ULEHSSUSTAINABILITY.COM.

END NOTES



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