



POSITION PAPER

Automation and Ethical Sourcing

INTRODUCTION

Ethical sourcing is the practice of procuring goods and services in a manner that ensures that they are produced and delivered in a way that minimizes negative impacts on people, communities and the environment while promoting positive social and economic outcomes. Ethical sourcing involves transparency, accountability and adherence to ethical principles throughout the supply chain. It has become an integral part of corporate social responsibility (CSR) and sustainability initiatives for many organizations. It is key to organizations that follow the *triple bottom line* framework of people, planet and profit, for whom business outcomes are not measured only by the financial bottom line. Instead, they also consider the well-being of people and the planet. As an organization dedicated to developing industrial automation standards and education, the International Society of Automation (ISA) recognizes how implementing automation technology and techniques can contribute to ethical sourcing initiatives. Those technologies and techniques will be addressed in this paper.

THE DRIVE FOR ETHICAL SOURCING

The demand for ethical sourcing is driven by various stakeholders, including consumers, investors, employees and regulatory bodies. The United Nations Global Compact is a voluntary initiative based on CEO commitments to implement universal sustainability principles and to take steps to support UN goals. It also provides a set of principles for ethical sourcing.¹

Consumer awareness of the environmental and social impact of their purchases has significantly increased. Social media and increased access to information empower consumers to learn more about the production processes and ethical practices of the companies they buy from. Negative information about unethical sourcing practices can spread rapidly and significantly impact a company's reputation. In a 2023 food and health survey by the International Food Information Council, one-third of respondents said that climate-friendliness has an impact on their choices, and younger generations, parents and those with higher education are more likely to say it has an impact. Of the 1,022 Americans surveyed, 40% of respondents said that knowing that a food or beverage is produced in a way that minimizes its carbon footprint/climate impact is an important factor in their purchasing decision.² While there have been some changes in attitudes,³ institutional investors and socially

responsible investment (SRI) funds are, on the whole, continuing to base investment decisions on environmental, social and governance (ESG) factors. They see companies with strong ethical sourcing practices as less risky and more attractive to investors seeking sustainable and responsible investments.

Employees are now more vocal about their expectations for their employers to demonstrate ethical practices throughout the supply chain. Companies that prioritize ethical sourcing may find it easier to attract and retain top talent, especially among socially conscious workers. A 2020 survey of 2,000 UK office workers commissioned by Reuters reported that 72% of multigenerational respondents "were concerned about environmental ethics. However, with an astounding 83% of workers reporting their workplaces were not doing enough to address climate change, it has become clear that there is a massive gap between rhetoric and action."⁴

Governments globally are strengthening regulations related to ethical sourcing, including laws addressing forced labor, human rights violations and environmental sustainability. Industry standards and certifications, such as those created by Fair Trade and the Rainforest Alliance, enable companies to demonstrate their commitment to ethical sourcing and provide assurance (through certification programs) that certain criteria are met. For example, in 2022, the US Federal Government issued a framework for independently verifying ethical sourcing, a "voluntary independent verification system for coffee companies willing to leverage transparency and accountability as an integral part of their ethical sourcing practices and systems."⁵

CONCERNs ADDRESSED BY ETHICAL SOURCING PRINCIPLES

Businesses striving to adhere to ethical sourcing principles must consider a range of factors, such as those listed here:

- Upholding human rights principles and ensuring fair and safe working conditions. This includes preventing child labor, forced labor and discrimination and ensuring freedom of association, fair wages, reasonable working hours and adherence to labor laws.
- Minimizing the environmental impact of sourcing by reducing resource consumption, managing waste responsibly, reducing carbon footprints and supporting environmentally friendly and sustainable production methods.
- Promoting and reporting on transparency throughout the supply chain to provide visibility into the origins of raw materials, fair trade practices, production processes and the conditions under which products are made. This includes holding suppliers accountable for ethical practices by establishing and enforcing codes of conduct.
- Ensuring that sourced products meet high-quality standards and are safe for consumers. This includes adhering to all relevant local and international laws and regulations.
- Committing to continuous improvement by regularly reviewing and enhancing ethical sourcing practices.

USING AUTOMATION TO SUPPORT ETHICAL SOURCING PRINCIPLES

Knowledgeable and skilled automation professionals can improve ethical sourcing by implementing automation technology and techniques such as these:

- Artificial intelligence (AI), data analytics and digital twins to minimize disruption to the ecosystem by carefully analyzing and identifying narrow focus areas for operations, monitoring compliance and assessing and managing sourcing risks more effectively.
- Blockchain's inherent immutability capabilities to support traceability and transparency in the supply chain, including verifying fair trade certifications. The data relating to these processes comes from conventional sources as well as new ones, including internet-of-things (IoT) devices and digital twins.⁶
- Advanced controls and robotics to implement remote autonomous operations, minimizing human intervention in harsh working conditions and protecting workers from harm.
- Safety systems and cybersecurity controls to reduce the likelihood and consequence of any loss of containment that could harm the environment.
- Demand-response programs to adjust electricity consumption based on supply conditions, which helps manage peak demand and reduces strain on power grids.
- Automation in the process of reuse, refurbish and recycle, as described in ISA's position paper on Achieving Sustainability Goals with Automation.⁷

Businesses seeking to comply with ethical sourcing requirements should also recognize and follow industry standards that facilitate interoperability and environmental regulatory compliance and enhance safety throughout supply chains.

WHAT DECISION MAKERS CAN DO

Decision makers — including those in industry, government and academia — can help deliver the many benefits of automation to ethical sourcing, including these:

- Supporting the ongoing development and adoption of industry standards that address key aspects of people, processes and technology in automation systems.
- Encouraging educational institutions to increase the availability of degree programs, courses and training aligned to prepare future automation professionals.
- Supporting the adoption of certification and certificate programs to strengthen the skills and knowledge of the automation professionals we depend on.

ISA further recommends that organizations looking to secure their ethically sourced supply chains should:

- Reduce their impact on the environment and reduce risk to workers by increasing the use of conventional and novel automation technologies.
- Support their front-line engineers by fostering a cybersecurity culture within their organizations, which prioritizes cybersecurity alongside other fundamental workplace tenets like efficiency and safety.
- Provide ample opportunities for engineers to be trained and certified on the many requirements of industrial automation and control systems.

WHERE TO START

As a nonprofit, international professional association, ISA develops widely used safety, security and performance standards for automation. ISA is the primary

developer of a series of international consensus standards addressing the security of industrial automation and control systems. The ISA/IEC 62443⁸ standards provide a flexible and comprehensive framework to address and mitigate current and future security vulnerabilities in those systems. These are among numerous ISA standards and guidelines that support manufacturing and supply chain efficiency and safety.⁹

As part of its commitment to educate and certify automation professionals, ISA actively supports global efforts to establish training and competency programs. An example is the Automation Competency Model developed by the US Department of Labor. This model defines the key skills, knowledge and abilities that automation professionals need at every career level, from entry-level to advanced. Recognizing that the automation profession is constantly evolving, the model is updated regularly to ensure that emerging technologies are included.

ABOUT ISA

The International Society of Automation (ISA) is a nonprofit professional association founded in 1945 to create a better world through automation. ISA empowers the global automation community through standards and knowledge sharing, driving the advancement of individual careers and the overall profession. ISA develops widely used global standards; certifies professionals; provides education and training; publishes books and technical articles; hosts conferences and exhibits; and provides networking and career development programs for its members and customers around the world.

RESOURCES

isa.org/standards	138+ standards for automation, cybersecurity and more
isa.org/training	Unbiased, real-world training courses, personnel certifications and certificates that help engineers and technicians take the next step in their automation career
isa.org/join	Membership in ISA offers unparalleled access to technical discussions and resources
isa.org/events	Network, hear best practices and be part of the automation community dialogue at ISA events

WORKS CITED

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