SOURCING SUSTAINABILITY

A guide to third party evaluation services

Priyanka Radjou, M.S. '19 & Ben Tran, B.S. '19

UCLA IoES

Table of Contents

INTRODUCTION 3

Thriving in today's business world requires consumer-facing sustainability practices

The brands you know as market leaders in sustainability

The economy and sustainability is not all mega-corporations: strategies for medium-sized companies

RESEARCH METHODS 6

THIRD PARTY SERVICES 7

I. Registrars & Certifications

II. Building Corporate Social Responsibility Systems

III. Audits

IV. Supply Chain Management Software

CONCLUSION 21

APPENDICES 22

Appendix A: Third party providers & their services

Appendix B: Other supply chain services offered by the 13 companies studied

REFERENCES 25

The Corporate Partners Program (CPP) is a part of UCLA Institute of the Environment and Sustainability. Its mission is to connect business leaders' expertise with the research excellence of UCLA students and faculty to develop, discuss and disseminate best practices that enhance sustainability.

The Green Paper Series is sustainability research produced annually by CPP students. Companies provide the research question and teams of graduate and undergraduate researchers conduct the analysis. The results are shared with CPP members and the UCLA community. For more information please visit www.ioes.ucla.edu/cpp.

INTRODUCTION

Thriving in today's business world requires consumer-facing sustainability practices

90% of CEOs say engaging in sustainability is essential for success

85% of Fortune 500 companies produced a sustainability report

There is a proliferation in companies addressing environmental, social and governance (ESG) criteria. 90 percent of CEOs express that engaging in sustainability is essential for success (1) and 85 percent of Fortune 500 companies produced a sustainability report in 2017 (2). As global warming emerges as a topic of conversation on a systemic level, businesses must address the risks associated with climate change in order to uphold public trust and protect shareholder value. It is of no surprise that this has materialized the emergence of the Chief Sustainability Officer role (3). If that's not enough of a market signal, Nielson reports that 73 percent of global consumers are willing to change their consumption habits and even pay on top of current retail prices to reduce their environmental impact (4, 5). A vocal push for sustainability from consumers, lead by Millennials, is accelerating innovation and driving corporations to practice corporate responsibility (6). And as the Millennial generation surpass the Baby Boomers in population size, this group of financially solvent individuals is reaching an age of crucial economic activity (7). These "lazy" avocado-loving people are becoming the largest global consumer generation as well as the largest portion of the workforce for the U.S (8). Combined with the knowledge that customers would rather be loyal to a brand with a social and environmental cause, companies will soon realize—if not already—that sustainability issues will only continue to become an increasing concern (9).

When it comes to sustainability practices, arguably the most important aspect in terms of social and environmental consequences, yet overlooked by many, is the supply chain. As reported by McKinsey & Company, the supply chain of a company encompasses a business's entire hierarchical structure, ranging from the raw materials extracted to the energy procured for the manufacturing facilities; more than 80 percent of greenhouse gas emissions and over 90 percent of impact on environmental resources arise from the typical consumer company's supply chain (10). It goes without saying that targeting the supply chain can lead to momentous environmental change, but the principal driver for almost all establishments is the bottom line—decisions must make business sense (11). On the flip side, if a

80% of GHG emissions
&
90% of environmental impact
comes from a company's supply chain

business can become more socially responsible and at the same time increase productivity and efficiency through a sustainable supply chain, what executive wouldn't want that? Creating mutual benefits between company and supplier through increased engagement with suppliers and furthering buyer-supplier relationships can be achieved via targeting resource consumption, tracking environmental key performance indicators (KPIs), optimizing transportation, and improving workplace conditions (12). However, of the companies that voluntarily report their emissions to CDP, a not-for-profit organization dedicated to advancing transparency of environmental impacts, just 23 percent of them claim to be engaging their suppliers (13). This leaves a sizable portion of the global supply chain available for substantial development with overlooked emission reductions and untapped financial savings.

However, short-term financial benefits provided by a well-managed supply chain should not be the sole driving force for supply chain improvements. Shared environmental risks common to many industries include greenhouse gas emissions, natural disasters, resource consumption, packaging waste, and environmental damages during transportation (14). On top of environmental risks, social related risks such as labor malpractices, bribery allegations, and frauds also circle back to impacting the bottom line especially in the amplified media landscape today (14). Companies should be building a mindful relationship with the vision of long-term value with the entire supply chain in sight.

As reported by the United Nations Global Compact, supply chain management (SCM) can provide an array of long-term benefits ranging from risk management, brand protection, reduced costs, and potential increase in shareholder value on top of many others (15). For those reasons, companies have begin to tackle sustainability issues by examining their business operations with an emphasis on supply chain management (16).

The brands you know as market leaders in sustainability

Some of the leaders in supply chain sustainability include Walmart, Nike, and L'Oreal. Walmart in conjunction with The Sustainability Consortium developed what they call the "Sustainability Index" as a tool for gathering sustainability KPIs specific to a certain product supply chain as a means for providing visibility for decision making (17).

Walmart		L'ORÉAL PARIS
Walmart has applied the Index with their 1,800 suppliers across over 125 product categories to analyze a product's life cycle from resource extraction all the way to end of life. Global athletic giant, Nike, also established their own "Sustainable Manufacturing and Sourcing Index" as an approach for increasing transparency and compliance among their suppliers (18).	Nike has a focus of bringing all their factories utilized to a Bronze rating or compliant with Nike's Code of Conduct which includes unannounced audits by both internal and external parties on resource management, health, safety, and the environment practices.	L'Oreal is integrating supply chain management through the implementation of an "Ethical Commitment Letter" which requires suppliers to be audited along with their subcontractors based on the Social Accountability Standard SA8000 (19). The costs of the the audits are incurred by L'Oreal itself and consist of onsite visits to factories, workshops, and offices of suppliers.
"Working with suppliers, customers, nonprofit organizations and others, we're drawing on our strengths—such as our store and logistics infrastructure, our philanthropy and our connection to customers—to pursue practical initiatives that we hope will start to build a stronger value chain and a more circular economy."	**"We believe world-class manufacturing is grounded in standards that respect the environment, the people who work in factories and the principles of a healthy and safe workplace."**	**"We are committed to building strong and lasting relationships with our customers and our suppliers, founded on trust and mutual benefit. We do business with integrity: we respect the laws of the countries in which we operate and adhere to good corporate governance practices....We are mindful of our impact on the natural environment... We are committed to the respect of human rights...We actively seek out and favour business partners who share our values and our ethical commitments."**

The economy and sustainability is not all mega-corporations: strategies for medium-sized companies

These giants have led the field, but it can be more difficult for companies of a smaller size to follow suit. With our research, we set out to elucidate the general services that medium size companies can obtain from third party suppliers to help them with their supply chain sustainability.

RESEARCH METHODS

A list of 30+ companies that provide supply chain verification services was formed using Google (see Appendix A for full list). We examined the website of each company to identify defining characteristics including: services offered, size of clients, geography of company, and sustainability aspects.

Then we narrowed the list to the subset we wanted to interview. We selected companies that have a sustainability focus within their supply chain services, serve mid-size companies, and predominantly have U.S. clients. Thirteen companies match these criteria. We reached out via phone and email to marketing or business development managers at each of these and conducted 30 minute phone interviews with six (Avetta, BSI, ComplyWorks, DQS, Smithers and SRI) to learn more about their services.

We utilized a standardized questionnaire that addressed general characteristics of the company, process of work for services, and sustainability within the services offered. The companies that were interviewed offer a wide range of services related to supply chain services--- too many to cover in our short report. Therefore in our description of typical services for mid-sized companies, we only focused on the services with an environmental aspect. These include ISO certification, corporate social responsibility system building (such as GRI), audits, and supply chain management software. The other supply chain services we identified, but have not described in detail, have a focus on the two other components of sustainability which are economy and society (see Appendix B for full list).

In the next section we go into detail about what each of these services entails, along with case studies of companies from our interview list that offer that service. Appendix A contains a table which identifies from our full list of companies which provide each of the four services. Our objective with this element of the report is provide mid-sized companies with list of providers that might help them meet their service needs, as well as demonstrate to the reader the relative availability of various services.

THIRD PARTY SERVICES

I. Registrars & Certifications

The International Organization for Standardization (ISO) is an independent non governmental organization. It is represented throughout the world by its member bodies. Today, ISO has members from 164 countries and 785 technical committees and subcommittees. The American National Standards Institute (ANSI) is the ISO member body representing the U.S.

ISO's mission is to to promote the development of standardization "to facilitate the international exchange of goods and services and to develop on the spheres of intellectual, scientific technological and economic activity". To this end, ISO has published 22,612 International Standards and related documents covering almost all industry. Among these, 600 standards are directly applicable to the UN Sustainable Development Goals (SDGs). For each standard, ISO has developed a document that contains practical information and best practice as a solution to a global problem. The standards benefit industry, regulators and society as a whole (see Table 1). Companies complete a review process, often under the guidance of a registrar, to obtain a certification for a given ISO standard.

Table 1. Benefits from the ISO Standards from the industry, the regulators and the society (20)

Party	**Benefits**
Industry	• Gain market access over the world • Raise profits by offering products with increased quality, compatibility and safety • Reduce costs by using available resources instead of reinventing standards • Benefit from the knowledge and best practice of leading experts around the world • Build customer confidence that your products are safe and reliable
Regulators	• Harmonize regulations across countries to boost global trade • Increase credibility and trust throughout the supply chain • Make it easier for countries to outsource and specialize
Society	• Wider choice of safe and reliable products and services at competitive prices • Best practice and concerted action at the organizational level to practically address global challenges like climate change and sustainability

The ISO standards that most directly tie to sustainability are ISO 9001 and ISO 14001. Both standards are related to a company's management system and have the same structure. A company can only get its own management system certified. However, a company can require its suppliers to get ISO Certifications. Companies can thus assure that their suppliers are consistently providing products that meet your needs and expectations and comply with applicable regulations (21).

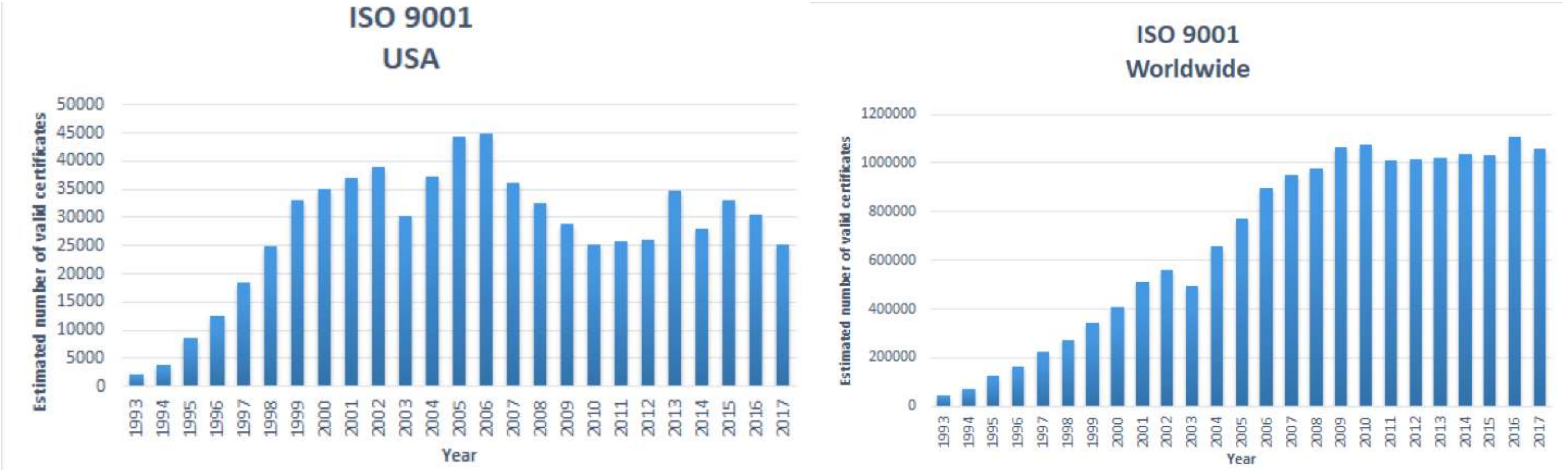
The ISO 9000 family of standards provides guidelines for companies who want to ensure that their products and services consistently meet customer's requirements and that quality is consistently improved. ISO 9001 is a standard part of this family that sets out the requirements for a quality management system. A quality management system helps companies improving their business sustainability by making sure that their products and services comply with applicable regulations and other expectations and needs from customers or client companies. The 9001 standard is suitable for companies of all types, sizes and sectors.

Implementing a quality management system will help companies (22):

- Asses the overall context of their companies to define who is affected by their work and what they expect from them by clearly stating their objectives and identifying new business opportunities
- Make sure that the customers' needs are met leading to new clients and increased business
- Work in a more efficient way as all the processes will be aligned and understood by everyone in the business leading to increases in productivity and efficiency and decreases in internal costs
- Expand into new markets as some sectors and clients require ISO 9001
- Identify and address the risks associated with your organization

ISO 9001 is the most popular ISO standard. The number of ISO 9001 certificates issued worldwide and in the US has been growing since its launch in 1987. In 2017, over one million companies had valid certificates in 171 countries around the world including 25,087 in the U.S. (see Figure 1).

Figure 1: Estimated number of valid certificates worldwide between 1999 and 2017. Data from ISO Survey 2017 (23)



The decrease in the number of valid certificates for some years can be explained by the required transition from a version of the standard to the latest one. The overall decrease in 2017 compared to 2016 is due to a reduction in the number of certificates reported by some data providers that changed their way of reporting their data.

The ISO 14000 family of standards provides guidelines for companies to manage their environmental responsibilities. ISO 14001 is a standard part of this family that focuses on environmental management systems. An environmental management system helps companies identify, manage and monitor their environmental issues in a "holistic manner" (24) in order to improve their environmental performance. The metrics of this standard include those relating to air pollution, water and sewage issues, waste management, soil contamination, climate change mitigation and adaptation, and resource use and efficiency. The 14001 standard is suitable for companies of all types, sizes and sectors.

According to the users of the standard, ISO 14001 helps (24):

- Demonstrate compliance with current and future statutory and regulatory requirements
- Increase leadership involvement and engagement of employees
- Improve company reputation and the confidence of stakeholders through strategic communication
- Achieve strategic business aims by incorporating environmental issues into business management
- Provide a competitive and financial advantage through improved efficiencies and reduced costs
- Encourage better environmental performance of suppliers by integrating them into the organization's business systems

Since ISO 9001 is the most popular ISO Standards, companies that are already certified to ISO 9001 can easily integrate the requirements for ISO 14001 into their management systems.

Figure 2: Estimated number of valid certificates worldwide between 1999 and 2017. Data from ISO Survey 2017 (23)

The number of ISO 14001 certificates issued worldwide and in the U.S. has been growing since its launch in 1996. In 2017, 358,953 companies had valid certificates in 171 countries around the world including 5,251 in the U.S. (see Figure 2).

In order to be certified, a company must hire an impartial third party certification body or "registrar". Registrars are third party entities that review a company's system to certify them as complying with the ISO standards. They deliver ISO certification for the client company only, however, client companies can require their suppliers to get an ISO certification. All ISO Standards are reviewed and revised every 5 years. After a revised version of a standard is published, companies certified to the standard have three years from the date of publication to transition to the new version.

Among the companies we have interviewed, Avetta, BSI, DQS and Smithers provide this ISO Certification service. DQS and Smithers have their processes described in detail in the following case studies.

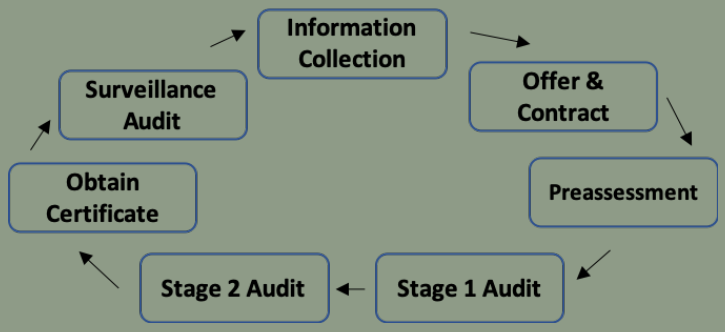
CASE STUDY: CERTIFICATIONS

SMITHERS

Smithers Quality Assessment (SQA) is a general, environmental, and safety quality management systems auditor and certification body that is part of the Smithers Group. SQA serves approximately 1300 clients which are predominantly located in the U.S. Its clients range from small companies to big corporations. Most of its clients are typically situated in the middle of the supply chain that creates manufacturing components and some of them are raw material distributors.

The most popular services offered by SQA are the third party certification services and unaccredited services such as first or second party audits (for definitions of each, see Appendix B). In order to maintain impartiality, SQA does not provide these two categories of services to the same clients. As a third party registrar company, SQA drives sustainability in their clients supply chain by following the standards set by the ISO norms. The most requested certification is ISO 9001, comprising 70-80% of its business.

The steps that SQA follows to perform an ISO Certification are (25):



CASE STUDY: CERTIFICATIONS

DQS is a company that is headquartered in Germany servicing clients of small and large size worldwide. These clients occupy the entire range of the supply chain as raw material distributors to the final product that reaches the consumer. DQS Inc. is the U.S. Division of the company. It has 250 contract auditors working for them, 62 of which work on sustainability certifications. In 2018, they worked on 791 certifications. Sustainability certifications account for a large aspect of these with: 161 Health & Safety, 91 Environmental, 67 Responsible Care, and 24 Energy certifications.

The most popular service that DQS offers as a 3rd party registrar is certification standards such as ISO 14000 and 9000. Its certifications are valid for 3 years (as is the case with all ISO certificates). **A typical process for certification is**:

1. Initial Information Collection
The process starts with the client's needs and expectations. DQS Inc. wants to learn about the client's organization, its management system objectives, size and types of operations. Together both parties will define objectives for the assessment and/or certification, including applicable standards and specifications

2. Offer and Contract
DQS Inc. will provide a detailed offer for assessment and certification services, tailored to individual client needs, based on the information provided initially. Upon acceptance of the offer, a written contract will specify all relevant deliverables as well as applicable assessment and certification criteria.

3. Gap Assessment/ Project Planning (Optional)
A Gap Assessment can serve as initial service, identifying strengths and areas for improvement. For larger projects a project planning meeting provides a valuable opportunity for the client to meet the lead assessor and develop a customized assessment plan for all functions and locations involved.

4. Stage 1- System Assessment
The certification process begins with review and evaluation of system documentation, goals, results of management review and internal audits. This is to determine whether the client's management system is sufficiently developed and ready for certification. The assessor will explain areas of concern and coordinate any required activities to prepare for the on-site assessment.

5. Stage 2- Registration Assessment

Applying defined management system standards and specifications, the audit team will evaluate the effectiveness of all functional areas as well as all management system processes, based upon observations, interviews, review of pertinent documents and records, and other assessment techniques.

6. Certification Evaluation

The independent certification function of DQS Inc. will evaluate the audit process and its results, and make an independent certification decision about issuance of the certificate. The client receives an assessment report, documenting the assessment results. When all applicable requirements are fulfilled the client also receives the certificate.

7. Annual Review

Either semi-annually or annually, there will be an on-site audit of the critical components of the management system. Strengths, opportunities for improvement and findings if applicable will be identified, with a focus on continual improvement and sustained effectiveness. A certificate is valid for a limited period of time (3 years).

8. Reassessment

At the end of this cycle, a reassessment will be carried out to ensure the ongoing fulfillment of all applicable requirements. Subject to this fulfillment, a new certificate will be issued.

Since registrars legally cannot make recommendations, the way that DQS drives sustainability in its client's work is by identifying **opportunities for improvement and performance as opposed to prescribing recommendations** (26).

DQS offers other services (see table in Appendix A). Among them is a supplier audit service. This comprises less than 5% of the company's business and is generally a custom-designed program that is specific to the client's needs. It is very rare for a company to ask DQS to audit one of their suppliers, but the supplier is generally international and not in the U.S. Auditing reports are delivered electronically.

II. Building Corporate Social Responsibility Systems

Companies can also seek third-party help to build a Corporate Social Responsibility (CSR) strategy. Consultants such as SRI can help other companies find the most suitable framework to their needs. Generally consultants use existing principles or standards as the foundation for a specific company's CSR framework. A principles-based framework "only" provides guidelines whereas a standards-based framework provides requirements for a certification. However, the requirements of a standard can also be used as guidelines by companies that do not seek certification.

Some of the globally recognized, principles-based frameworks include:

ISO 26000	**UN Global Compact**	**UN Sustainable Development Goals**
Helps clarify what social responsibility is, helps business and and organizations translate principles into effective actions and share best practices relating to social responsibility. This document was released in 2010 and is suitable for all types of companies regardless of their activity, size or location (27).	Provides 10 principles set by the United Nations General Assembly in 2004 that companies can follow to operate in ways that, at minimum, meet fundamental responsibilities in the areas of human rights, labour, environment and anti-corruption. These principles are also suitable for all types of companies (28).	A set of 17 goals set by the United Nations General Assembly in 2015 for the year 2030. The SDGs cover social, economic and environmental development issues and are an urgent call for action for all companies (29).

Some of the globally recognized and proven standards-based frameworks include:

Sustainability Accounting Standard Board (SASB) standards	**AccountAbility (AA) 1000 Standards**	**Global Reporting Initiative (GRI) Standards**
A set of 77 industry-specific standards published in November 2018 which identify the minimal set of financially material sustainability topics and their associated metrics for the typical company in an industry (30).	A series of standards used by companies of all types to demonstrate leadership and performance in accountability, responsibility and sustainability. They first appeared in 1999 and are regularly reviewed and revised (31).	Established in 1997 as the first set of sustainability standards. They address economic, environmental and social pillars. They have become the most widely used reporting standards (32).

The result of a CSR framework building endeavor is a prescriptive set of

sustainability goals that the company is striving for over a defined time period. Progress is documented annually against these goals and often shared with the public in an annual report with numeric quantification.

GRI reporting guidelines are the most popular framework used for CSR reporting. **Fifty-nine percent of the companies that published a sustainability report in 2016-2017 used the GRI reporting guideline** (33). Therefore it will be the example we use in this report to describe CSR framework building services.

GRI is an independent international organization that helps businesses and governments worldwide to understand and communicate their impact on sustainability issues such as climate change, human rights, governance and social well-being. It has general disclosures and also specific standards for Economic, Environmental, and Social topics. Companies can choose the core option by only reporting on their material topics or the comprehensive option by reporting on all topics.

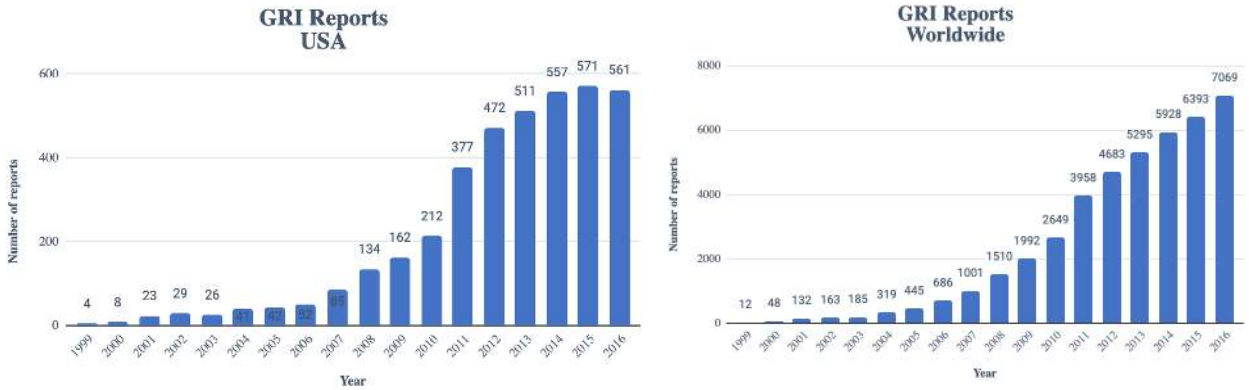
Reporting using GRI guidelines help companies (35):

- Identify and manage risks while seizing new opportunities
- Build trust among stakeholders and consumers and enhance their reputation
- Protect the environment and improve society

The focus of the reporting is on a company's impacts, not only those caused by their direct operations but also those they are contributing to or are directly linked to, for example through relationships with suppliers or customers. Companies' stakeholders are expecting them to report on their entire value chain (36). The result is a report that is shared publicly on the GRI website. The public, and other companies, can view the results and use it to guide their decisions on who to buy from or partner with.

Among the companies we have interviewed, SRI and BSI provide this service. The way that SRI engages in the GRI process is described in greater detail below. Whereas the BSI case study outlines a different framework for establishing a CSR system at a company.

Figure 3: Number of GRI Reports between 1999 and 2016. Data from GRI database (34)



CASE STUDY: CSR STRATEGY

SRI Quality Systems Registrar is a third-party certification body. SRI has about 50 employees that are working with 150+ auditors around the world. SRI offers Certification and CSR services. Concerning CSR services, SRI handles the audit, assessment and assurance side and 3R Sustainability handles the strategy and planning side. 3R Sustainability is a wholly-owned consulting division of SRI that focuses on CSR strategy and built-environment consulting services. 3R has around 12 employees. SRI has over 1000 clients which are typically in the manufacturing sector and a majority are mid-sized companies.

The most popular services of SRI are ISO 9001 certification, GRI reporting for CSR and built-environment services (for definitions, please see Appendix B). **The process of SRI's CSR services is** (37):

1. Establish Goals

A well-rounded CSR program will provide business value and brand equity to the company. So, the company should decide on what specific areas they want to progress and report on. 3R can also train the client to understand the meaning of sustainability related to their business through their CSR's Training Division, and thus help the client establish its goals.

2. Evaluate the gaps and opportunities

3R uses a materiality matrix to track how the company is moving into more sustainable initiatives through the metrics. The metrics that are tracked can include energy usage, Scope 1-3 emissions, water usage, waste managements, and are ultimately determined by the needs of the client. The analysis is delivered to the client through a report.

3. Create a plan to capture the opportunities

After establishing current use, 3R set the targets for reduction for the client and maps the initiatives to achieve them by choosing the most appropriate framework to the company's needs. GRI Standards are the most popular framework for CSR Strategy in SRI.

4. Re-evaluate until the CSR report accurately reflects its CSR performance

SRI performs external performance assessments of achievement against goals and helps the company on their CSR report. SRI also sets incremental plans for continual improvements.

CASE STUDY: CSR STRATEGY

BSI has multiple divisions with professional services in environmental, health, cyber security and software consulting. The company has between 4,000-5,000 employees internationally and serves around 1,500 clients within the United States, many of which are large global companies within the Fortune 500 list. However, BSI serves all sizes of companies within the technology, food, medical devices, and industrial sectors.

Depending on the needs of the client, BSI will work to provide a deliverable such as a strategy, program, workshop, or training to the company. If a client is in the market for producing a CSR Report, BSI will help with the process of setting up tracking systems for the collection of metrics for KPIs. For sustainability within a client's supply chain, BSI conducts life cycle assessments, analyzes governance, social and environmental responses from suppliers of clients for risk ranking. Most often, if a client requests a life cycle assessment, the manageable scope will be cradle-to-gate, meaning from raw material extraction to the product leaving a warehouse or store. BSI internally collects best management practices and shares them with their clients as forms of recommendations to the companies.

CREATE STRATEGY

- Define Priorities: What areas matter to the company from an environmental, social, and economic standpoint
- External Assessment: What others doing and what do customers and regulators expect
- Internal Assessment: What is the company's estimated baseline impact and risk (GHG, water, chemicals, hazardous waste, safety, community impact)
- Define Targets and Gaps: What are key targets to strive for and are there gaps between current state and targets? What initiatives need to be put in place to close the gaps and achieve the targets?
- Execution Roadmap: Identifying the governance structure, resources, and investments that will allow the company to succ

CAPTURE LOW HANGING FRUIT

- Infrastructure: Put in place governance and measurement structure, including information system solution.
- Establish Baseline and Report: Perform detailed environmental inventory and put reporting structure in place. Draft first sustainability report.
- Capture Efficiencies: Implement behavioral and technology changes to maximize, energy efficiencies and reductions, waste reduction or reuse potential. May include travel restrictions, IT efficiencies, and establishing local green teams at each facility.
- Measure Results: Capture savings and resulting avoided environmental impacts.

CREATE MARKET OPPORTUNITY

- Market Opportunity Assessment: Identify what 'green,' sustainability, environmental, or social responsibility services or products customers want that the company may not be delivering already. What global, social, and environmental problems are emerging that the company is in a unique position to address?
- Product and Service Reformulation: How can the company deliver its products and services in a more environmentally and socially responsible way?
- Service Development: What services do customers or target markets buy that could be replaced with a more sustainable service that we could deliver?
- New Markets: Is the company capturing market opportunity with developing market customers at differing price points?

ADDRESS STAKEHOLDER IMPACTS

- Supplier Responsibility: Assess supplier labor, economic, and environmental status and requirements. Perform supplier audits and manage corrective actions. Determine future sourcing requirements. Address supplier community impacts and development.
- Public Advocacy: Identify if public policy and advocacy position is consistent with our CSR goals
- Partnership Strategy: Engage in industry and other partnerships to standardize and drive more efficient change. Expand NGO and government partnerships to create market, political, and customer opportunity.
- Customer Influence: Enhance brand loyalty and sustainability impact through engagement with customer or customers' behavior.

III. Audits

Some companies also provide third-party supply chain verification services that do not involve standards or reporting. Compliance is a hot topic for global consumer companies, as a single slip-up within the supply chain can cause dramatic losses to both revenue and reputation. Household brand Nestlé has made its cocoa associated with child labor amongst consumers as multiple lawsuits have been raised in the past against the company (38). Supply chain compliance via third-party audits have become the standard approach to mitigating risk and protecting brand reputation (39). Audits provide assistance in qualifying suppliers for companies and can aid in the overall process of discerning potential nonconformities before it travels into the supply chain. Portraying compliance to the public is key for businesses to obtain transparency and more importantly the trust of consumers and stakeholders.

Third party auditors are helpful bodies that can assess other companies for labor malpractices, environmental impacts, and policy adherence. Auditors can look for any non-compliance along a company's supply chain that can lead back to the company and damage its reputation. Most commonly, non-compliance around management systems and documentation are the main occurring form of defiance followed by environmental health and safety regulations for workers among the supply chain (40). These audits can be advantageous for business in examining supply chain threats before they actually arise or become a threat to business operations. Auditing can be done on a company's management system where issues are identified within the company itself or on the suppliers of the company under contract.

Among the companies we have interviewed, Avetta, BSI, and ComplyWorks provide this service. The way that ComplyWorks engages in the process is described in greater detail below.

CASE STUDY: AUDITS

COMPLYWORKS

ComplyWorks is headquartered in Calgary with branched offices in Toronto and Pretoria. It has over 100 employees which serve 280 clients with an estimated network of 35,000 contractors. Most of its clients are within the Canadian gas sector and of a small to midsize business, however it has the capability to work with the full range of sizes all the way up to multinational.

The most popular service that ComplyWorks offers is its compliance management package which encompasses contractors and employer compliance. Employer compliance is broken down into workforce and worksite compliance with a corporate compliance prequalification step. Interestingly, it does not seem as if the company goes on the client's site and instead provides 21 standard reports. ComplyWorks offers a range of compliance management and auditing services listed below.

Compliance Management Services & Audits

1. Contractor/Supplier Management
   - Full life-cycle contractor/supplier data management
   - Contractor/supplier prequalification, verification & audits
   - Online onboarding, orientations & job specific training
   - Interactive dashboards to send alerts, notifications & reports

2. Workforce Management
   - Tracking of certifications, permits & compliance documentation
   - Tracking of asset, equipment & fleet
   - Records management for insurance, health & security clearances

3. Worksite Management
   - Management of contractors assigned to various projects, plants or locations
   - Management of contractor mobilization requirements

ComplyWorks offers other services in addition to audits. They have witnessed a growing concern among their clients for environmental related issues. In particular, they are interested in establishing relationships with more sustainable contractors as the ComplyWorks has seen an increase in its clients requesting contractors in the network to be targeting environmental issues. ComplyWorks provides its analysis of services requested by clients in the manner of daily or weekly reports, though there is also an online platform. ComplyWorks itself does not provide suggestions to its clients that use the network. Instead clients must communicate and choose amongst contractors they believe will help them in their business needs, based on the reports that ComplyWorks produces on each of the contractors. ComplyWorks is in the early stages of developing a program for its clients to track progress towards their sustainability metrics such as water and energy usage but is only in the early stages that is not rolled out.

IV. Supply Chain Management Software

Supply chain management software (SCMS) is a tool that can be utilized by companies to increase efficiency and sustainability in the supply chain by executing transactions, managing supplier relationships, and providing metrics all within the same platform.

It is common for a company to simply purchase a SCMS and use the software internally rather then having a third party firm help them manage it. This is important because companies are utilizing SCMS to increase efficiency without the help of other consultants. Software providers provide technical assistance and advice to those who purchase their software, resulting in the obsolescence of outside aid. Furthermore, there are dedicated teams from the software provider that can often help companies strategize or perform analysis. For example, CSR focused software supplier, EcoVadis, provides buyers with a tool consisting of a buyer platform, CSR scorecard, benchmarking, and assessments, helping global companies like Johnson & Johnson and Verizon make decisions about sustainable procurement. EcoVadis also provides suppliers with a platform that helps assess their suppliers and discover new suppliers (41).

SCMS has evolved over time to be more complex and all-inclusive, providing databases of suppliers to choose from that meet qualifying criteria (e.g., sustainable materials, ethical labor) specific to a company's needs. The top ten supply chain management companies according to Supply Chain Digital, together total over $6 billion in SCM revenue with over 830,000 customers internationally (42).

Among the companies we have interviewed, Avetta, BSI, and ComplyWorks, provide this service. Avetta is profiled below as a case study.

CASE STUDY: SOFTWARE

Avetta is a provider of supply chain management (SCM) software assisting clients with compliance and sustainability reporting. As one of the larger supplier verification companies, Avetta serves over 450 clients, 100 of which are international, and has a network of over 85,000 contacted suppliers. The company primarily focuses on mid-market to Fortune 500 companies. Avetta's portfolio of companies is very broad, with clients ranging from oil and gas to telecommunication to pharmaceuticals. Boasting a high customer satisfaction rating, clients are often referred to them by current clients on top of the marketing done for new clients. In order to do business with the company, generally around over 50 contractors is the threshold required to start a relationship.

Their services are broken down into supplier prequalification, insurance monitoring and supplier audits. Supplier prequalification is determining the requirements of a supplier and checking for criteria such as certifications. Insurance monitoring makes sure that the suppliers are compliant by providing proof of security and policies. The supplier audit is a review of policies and procedures of suppliers on sustainability. All of these services are encompassed within their SCMS where analytics are provided via the Avetta platform. On top of software, Avetta has an auditing team that can help with improving policies, performing gap analysis, and having on-site evaluations. Depending on the number of contractors, Avetta will charge a price based on the number of connections.

The sustainability aspect is incorporated in the audit team where they validate that suppliers have proper sustainability policies and are not breaking international rules such as slavery and bribery. The team references global standards, like the United Nations Global Compact, and tailors the sustainability practices to the needs of clients. Avetta proactively drives sustainable action in the supply chain by building out questionnaires related to sustainability for the client and customizing a program. Avetta treats all its clients as long-term partners so it has account managers review analysis with them weekly and quarterly for the duration of their relationship. As a software provider, Avetta is itself sustainable by eliminating paper waste by having all documents be digital.

CONCLUSION

There is a shifting business landscape away from the negligence of environmental and social impacts that companies must acknowledge in order to stay competitive in the market. A paradigm shift due to the countless impacts of large-scale climate change that have made their way into the global spotlight. Companies started their sustainability engagement internally, looking at the operations of their own facilities. Now they are shifting their eye towards their suppliers. Leading the charge with supplier verification, larger global institutions are reducing the risk of a tainted reputation while taking into account sustainability considerations in their supply chains, and smaller, medium-sized companies should follow suit if they are to make themselves stand out. Third party suppliers can help them through this process providing services such as ISO certification, GRI reporting, and audits, and offering software which can help them keep all of the resulting data organized. Climate change requires business change, and with the help of third-party supply chain management, businesses can build a more sustainable supply chain.

APPENDICES

Appendix A: Third party providers & their services

Company	Services			
	Audit	CSR Strategy	ISO Standards	SCM Software
Alderney Advisors	●	●	●	●
Avetta	●	●	●	●
BSI	●	●	●	●
Camelot	●	●	●	●
CMX	●	●	●	●
Complyworks	●	●	●	●
Deloitte	●	●	●	●
DHL Consulting	●	●	●	●
DQS	●	●	●	●
Ecovadis	●	●	●	●
Elevate	●	●	●	●
FM Global	●	●	●	●
GEP	●	●	●	●
Intertek	●	●	●	●
ISNetworld	●	●	●	●
NTS unitek	●	●	●	●
Pinnacle	●	●	●	●
Protiviti	●	●	●	●
RINA	●	●	●	●
Sai Global	●	●	●	●
SAP Ariba	●	●	●	●
Serrala	●	●	●	●
SGS Group	●	●	●	●
Smithers	●	●	●	●
SourceOne	●	●	●	●
SQA Services, Inc	●	●	●	●
SRI	●	●	●	●
The Hackett Group	●	●	●	●
TUV Nord	●	●	●	●
Verify	●	●	●	●
Verisk 3E	●	●	●	●

Appendix B: Other supply chain services offered by the 13 companies studied

Services	Description	Companies providing the services
1st party audits	Unaccredited service in order to provide an independent review of a company's management system. First party audits help a company identify and correct issues that may lead to non-compliance penalties or high environmental impact.	Smithers
2nd party audits	Unaccredited service in order to provide an independent review of a company's suppliers management system. Second party audits help a company ensure that its suppliers are meeting the contractual requirements.	Smithers RINA
Audit Services	Unaccredited service tailored to a company's needs in order to implement best practices in supply chain management.	SourceOne TUV Nord DQS Avetta
Built-environment consulting services	Assessment to help companies get LEED Certification by reviewing their documentation, providing guidance and assistance in identifying and resolving issues delaying a LEED Certification. If LEED is not the certification for your project, the consultants can help the company determine and get another green building certification such as WELL Building Standard, Living Building Challenge, Parksmart and Green Globes.	3R Sustainability (SRI)
Coordinator	Unaccredited tailored service for a company without the necessary internal resources and/or expertise to roll out, monitor and follow up a supplier compliance program.	RINA
Cyber security	Assessments to embed a robust framework to build information resilience and proactively identify, anticipate and respond to cyber threats and information security risks.	BSI
Environmental Audits	Unaccredited audits to assess a company's environmental credentials and help minimize its environmental impact.	SGS Group Elevate

ISO 37001 Certification	ISO 37001 is a standard that sets out the requirements for an anti-bribery management system. ISO 37001 can be easily implemented in other management systems such as those involving Quality, Environment or Security.	RINA
Risk Management	Unaccredited audit to identify, analyze and manage supply chain threats. Risk management audits can evaluate a company's entire value chain and can be customized to address specific needs.	Alderney Advisors BSI FM Global
Security	Supply chain security assessments for importers to adhere to countries' custom standards of the US, Canada and European Union.	Elevate
Supply Chain Management Software	SCMS is a software tool that can manage suppliers, track compliance, and provide metrics and reports.	Avetta BSI ComplyWorks
Worksite Management	Unaccredited service to manage the compliance of an operation by monitoring the unique requirements of a project, worksite, location, division or safety file.	ComplyWorks FM Global
Workforce Management	Unaccredited service to manage the compliance of a company's employees, vehicle fleets and equipments.	ComplyWorks Elevate

REFERENCES

1 https://ssir.org/pdf/Spring_2018_the_next_phase_of_business_sustainability.pdf

2. https://www.ga-institute.com/press-releases/article/flash-report-85-of-sp-500-indexR-companies-publish-sustainability-reports-in-2017.html

3 https://www.heidrick.com/~/media/Publications%20and%20Reports/The-emergence-of-Chief-Sustainability-Officer.pdf

4 https://www.nielsen.com/us/en/insights/news/2019/a-natural-rise-in-sustainability-around-the-world.html

5 https://www.nielsen.com/us/en/press-room/2015/consumer-goods-brands-that-demonstrate-commitment-to-sustainability-outperform.html

6 https://www.forbes.com/sites/sarahlandrum/2017/03/17/millennials-driving-brands-to-practice-socially-responsible-marketing/#6e89e88c4990

7 https://www.ft.com/content/194cd1c8-6583-11e8-a39d-4df188287fff

8 https://www.pewresearch.org/fact-tank/2018/04/11/millennials-largest-generation-us-labor-force/

9 https://ecosphere.plus/blog/millennial-consumer-driving-force-corporate-sustainability/

10 https://www.mckinsey.com/business-functions/sustainability/our-insights/starting-at-the-source-sustainability-in-supply-chains

11 https://www.greenbiz.com/article/does-sustainability-lead-better-companies

12 https://www.bsr.org/reports/BSR_Maximizing_Benefits_From_A_Sustainable_Supply_Chain.pdf

13 https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/003/014/original/CDP_Supply_Chain_Report_2018.pdf?1518084325

14 https://reader.elsevier.com/reader/sd/pii/S0925527315002704?token=FDA1115CD285E915169E96C3BA2A77AEDBC9D97325B1E89E6A55F52B3561F00DC6ABA8BE8968F1BC020F1FDA323965DE

15 https://www.unglobalcompact.org/what-is-gc/our-work/supply-chain/business-case

16 http://sustainability.com/wp-content/uploads/2018/06/the-2018-globescan-sustainability-leaders.pdf

17 https://corporate.walmart.com/2018grr/supporting-measurement-and-transparency?chapter=driving-change-with-the-sustainability-index

18 https://purpose.nike.com/sourcing-manufacturing-standards

19 https://www.bsr.org/reports/BSR_UNGC_SupplyChainReport.pdf

20 ISO in brief
https://www.iso.org/publication/PUB100007.html

21 ISO 9001: What does it mean in the supply chain?
https://www.iso.org/publication/PUB100304.html

22 https://www.iso.org/iso-9001-quality-management.html

23 ISO Survey Data 2017 about an estimation of the number of certificates issued by accredited certification bodies: https://isotc.iso.org/livelink/livelink?func=ll&objId=18808772&objAction=browse&viewType=1

24 https://www.iso.org/files/live/sites/isoorg/files/standards/docs/en/iso_14001_key_benefits.pdf

25 Smithers Certification process
https://smithersregistrar.com/resources/stepstocertification

26 DQS Certification process
https://dqsus.com/certification-process/

27 ISO 26000
https://www.iso.org/iso-26000-social-responsibility.html

28 UN Global Compact
https://www.unglobalcompact.org/what-is-gc/mission/principles

29 UN SDGs
https://sustainabledevelopment.un.org/?menu=1300

30 SASB Standards
https://www.sasb.org/standards-overview/

31 AA 1000 Standards
https://www.accountability.org/standards/

32 https://www.globalreporting.org/standards

33 Sustainability (ESG) Reporting Trends. North America 2018. Centre for Sustainability and Excellence
https://cse-net.org/sustainability-esg-reporting-trends-in-n-america/

34 GRI Reports Database
https://database.globalreporting.org/search/

35 Benefits of Reporting
https://www.globalreporting.org/information/sustainability-reporting/Pages/reporting-benefits.aspx

36 GRI: Supply chain transparency: A change tool for successful global businesses
https://www.globalreporting.org/information/news-and-press-center/Pages/Supply-chain-transparency-A-change-tool-for-successful-global-businesses.aspx

37 https://www.3rsustainability.com/what-we-do/corporate-responsibility/

38 https://www.confectionerynews.com/Article/2018/02/13/Nestle-sued-again-over-child-labor-in-cocoa-supply-chain

39 https://www2.deloitte.com/content/dam/Deloitte/us/Documents/consumer-business/us-cp-supply-chain-risk-compliance.pdf

40 https://www.cips.org/en/supply-management/news/2015/august/half-of-global-firms-have-faced-supplier-non-compliance-challenges/

41 https://www.ecovadis.com/what-we-do/

42 https://www.supplychaindigital.com/technology/top-10-supply-chain-management-software-companies