Sievo x Accenture Towards Sustainable Procurement:

Leveraging data and analytics

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Creating sustainable procurement strategies for a resilient business by expanding on spend data

The capacity of a business to deal with supply chain challenges, adapt to change and continue to develop requires resilience. And to be resilient, a business must have the ability to meet the needs of now without compromising the needs of tomorrow, and that requires sustainability. So, resilience and sustainability are intrinsically linked.

As concepts they complement each other, because the implementation of resilience continues to aid sustainability, and we need sustainable strategies to support resilience.

We know that change will occur — that's a given. But a combination of resilience and sustainability gives organizations a better chance of renewal and growth after a period of disruption, or indeed to face threats as they strike. That, alongside growing pressure from citizens, governments, stakeholders, financial institutions and even employees, means it has become imperative to embed sustainability into business strategies.

So where does procurement fit in? How can it embed sustainability into its processes and how can spend analytics help?

To understand more, we spoke with Heta Ruikka, VP of Product at spend analytics specialists, Sievo, about how combining analytics and processes, by use of intelligent technology, can give organizations not only the insight to 'see' supply chain challenges but the agility to overcome them.

How can embedding sustainability into our processes lead to supply chain resiliency?

"Just-in-time operations and supply chains have often been optimized solely for lowest cost and thus often are comprised of many dispersed suppliers," she explained. "Due to their highly optimized nature, these supply chains are not only fragile to disruptions but also non-optimal in terms of sustainability, especially as deliveries can be long and complex and thus climate-taxing. Furthermore, evaluating and auditing many far-off suppliers' other sustainability aspects, such as labor and human rights, can be difficult. This leads to even more fragile supply chains, which are not only vulnerable to geological and political disruptions but also human and brand risks – which all ultimately have big financial implications in addition to the obvious risks to keeping your factories running.

"The good news is that sustainable supply chains have proven to be more resilient as well. Sustainable supply chains are often simpler, and as suppliers are closer to you, it enables you to work with them better. As suppliers adhere to environmental regulatory systems, customer response monitoring systems, environmental uncertainty and so, they not only become more sustainable, but also more aware of their surroundings and thus more resilient to the risks they pose. Often, working with suppliers on sustainability topics increases the supply chain's collective capabilities to overcome the risks of our increasingly volatile environment, as well as to improve both economic and environmental sustainability. Of course, it does take a lot of work, and the most sustainable option rarely has the lowest unit price."

What data or spend practices can procurement start to address to support sustainability and resilience?

"To drive sustainable actions in procurement, you need to understand where you are today and where you need to go," she advises. "The starting point for gaining understanding on the sustainability of your supply chain is your purchasing data. Start with what you already have, and in the best case that is spend data well organized in an excellent spend analysis tool. This enhances the quality of the data, as some cleansing and consolidation has been applied to it, and it has been classified into categories. These actions form the important basis for connecting it with sustainability data, as clean suppliers, materials and categories are the glue you need to put the two pieces together. Once you have the data in place, you can start to understand where to make changes and then really act and follow up on it.

"Of course, the action is what counts – and there is a multitude of things procurement can do to drive sustainability: choose sustainably produced materials, work with suppliers on their sustainable practices, choose to work more with sustainability-focused suppliers, figure out with R&D which materials are most problematic and could be swapped for others, and moreover get involved in new product design early on to inform R&D which materials can or cannot be sourced sustainably. Offer this valuable information and insight to your colleagues and stakeholders, and you'll surely be invited to the table again."

Once you have the data, how do you make sense of it?

"First of all, you need to understand the problem you are trying to solve, because different data solves different problems, even within a single domain. For example, if you want to understand specifically how to reduce your supply chain's CO2 emissions, you should first look to get a high coverage by mapping your materials and categories to CO2 data. Once that is done, you can see where your emission hotspots are, and figure out where you could most easily achieve emission reductions – where to focus your efforts with suppliers, with R&D and other business stakeholders.

"However, after identifying the hotspots to focus on, you need to complement the view with supplier-based data: not only can you make choices between substituting apples with a lower-emission alternative, or swap apples produced in Chile to apples produced in France, but you might also need to optimize between two specific apple suppliers when a material change cannot be justified. To drive these efforts, you need supplier-specific sustainability data.

"Furthermore, sustainability is not only about carbon emissions but also water usage, waste, ethicality, labor practices and human rights – and how about supplier risk, supplier diversity and so on? To solve this, you must have all this data conveniently available in one place, enabling you to make informed – though tough – decisions efficiently. But even more importantly, you must scope your problem properly in order not to get confused along the way and remember that you don't have to solve all issues at once, it's more important to make a start and build on top of that."

How can procurement teams match internal spend data with external data (from suppliers or third-party risk or environmental firms) to address sustainability?

"As said, the most important thing is to start with what you already should have – good quality spend data, classified into categories with high enough quality. Having spend data in good order is key, as the glue that combines your internal data to external data happens to be the suppliers, materials and categories defined in your data. Data quality doesn't need to be perfect (you'll never get there), but it should be good enough to make a reasonable connection between the data sets.

"You should then look into your spend analytics provider, whether they can provide the needed data matching out-of-the-box, which third-party data providers they work with, and whether they suit your needs. Try also to understand whether your spend analytics provider has certified their sustainability solution, when there is a need for that – it might be needed for example for reporting CO2 emissions according to certain standards. Alternatively, you can also extract the spend data out of the system, purchase access to third-party data and try to manage the data matching yourself, but bear in mind that without specialist tools it is an extremely manual task, and difficult to manage on a continuous basis.

"As for data, you should start with third-party data providers to get a reasonable coverage and then identify areas where more in-depth data is needed. In other words, after reaching certain breadth in your analysis, you can identify the suppliers whose specific sustainability data would deepen your analysis, and figure out a way together to get, match and utilize that data.

"Also, keep in mind that sustainability data interests and benefits people outside of procurement – so make sure that you also give your sustainability, R&D and other teams access to the chosen tool."

If procurement teams are to lead this effort, how do they sell that message to the C-suite and other stakeholders?

"While I do believe in the importance of altruistic pledges of companies to become carbon neutral (65% of FTSE companies - EcoAct 2021), I'm glad there are also forcing factors for this, namely regulations and the looming threat (or opportunity!) of emission taxes. More and more countries, states and cities are setting requirements for companies to report and reduce their emissions, and we are not far from placing actual taxes on those very emissions, at least in the EU. Furthermore, public pressure on reducing emissions is growing faster than ever, creating a very real risk on continuing to do unsustainable business.

"Bringing all of these aspects to senior leadership should help you advance your agenda. You can focus on not only the threats, but also the upsides of being sustainable. As explained, sustainability and supply chain resilience go hand-in-hand, and sustainability can have a major positive impact on brand and thus the business. Furthermore, avoiding the threats of unsustainable business and reaping the benefits of doing it sustainably not only relate to direct monetary benefits, but also impact employee satisfaction, employer brand and many other things – and it is simply the right thing to do.

"Finally, as we know, the majority of a company's emissions most often come from the goods and services they buy and consume, and thus procurement plays a key part in all of this. In essence, procurement is sitting on top of the key piece of this puzzle – the purchasing data. Offering this up gives you your final leverage: not only are you showing the threats and opportunities related to sustainability, but you are already showing the way forward."

Using procurement analytics to analyze and reduce Scope 3 carbon emissions

With regulators, investors and customers demanding cleaner business processes, companies understand the need to improve, but can find it daunting to start measuring all the ways they emit carbon. Organizations must understand Scope 1, 2 & 3 emissions, address ESG issues (environmental, social, governance) and get to grips with terms like "carbon-neutral" or "net-zero" and how they apply to their business operations and strategic objectives.

But business leaders should take comfort from the fact that their procurement teams already collect a lot of the data that can spur them into action and help solve the complex options for curbing greenhouse gases (GHG).

"For some organizations, the terms 'carbon-neutral' or 'net-zero' mean reducing all scopes of emissions, but for many, becoming carbon-neutral by 2035 means simply looking into Scopes 1 and 2," explained Heta Pirttijärvi, Product Manager at spend analytics software provider **Sievo**, experts on spend analysis and CO2 analytics. "Therefore, when comparing your operations or targets to those of other companies, don't get too discouraged. Many promises are made but what really matters in the end is 'actions.' If technology, CO2 analytics and measuring Scope 3 emissions gets you there, great, but the key thing is that actions are taken!"

Businesses need to consider this as they digitally transform and move away from siloed spreadsheet ways of working (like MS Excel and other tools) toward systems that give stakeholders the spend visibility and real-time data analytics they need to drive strategy decisions across the company.

Understanding the scope of Scope 1, 2 & 3 emissions

The Greenhouse Gas Protocol sets the basic model for measuring emissions and managing mitigation efforts. And as businesses begin to measure their emissions, they must become familiar with the terms and standards for doing so.

Carbon-neutral and net-zero can mean different things as organizations and companies discuss goals for reducing CO2 emissions. But, in general, they are intended to mean that the carbon output is balanced by carbon-mitigation actions. That's the target. And each business or group will have a different formula for reaching their target.

The three emission types are:

- **Scope 1** — the business's own emissions from production and delivery. Think of the planes, trains and trucks that deliver materials to a company or to its customers.
- **Scope 2** — a company's use of purchased energy: electricity, steam, heating or cooling. For example, this could include considerations about whether a company still relies on coal-fired powerplants for electricity or whether it could save on heating or cooling costs with better processes or insulation.
- **Scope 3** — emissions attributed to suppliers and their suppliers, the n-tier supply chain. The whole supply chain's carbon output rolls up under this scope. Mitigating it relies on supplier management, which involves technology that keeps you in touch with suppliers.

Amid the ongoing threats and disruptions to supply chains, it's important to know how all your suppliers around the world affect your Scope 3 status. Gaining insights and actionable data on Scope 3 emissions can be a fragmented process, but it is possible to do.

In a recent **Sievo** post published on Spend Matters, Pirttijärvi, who as well as working in product development is pursuing a doctorate in sustainable business practices, wrote that **"Scope 3 emissions are something procurement is fit to tackle."** She observed that because procurement teams know a company's suppliers and know their spend data, they are in a great position to help businesses develop and grow sustainability programs.

With that in mind, we talked to Pirttijärvi to understand more about analyzing and reducing Scope 3 carbon emissions using procurement analytics.

How does spend data translate into actionable information about an emissions policy? How do you reduce emissions with this information?

"Understanding Scope 3 emissions is one of the main focus areas of sustainability functions across the globe right now, and this is exactly where spend data comes in," she explained.

"Ideally, we would obtain the exact emissions from every single supplier and each material we buy from them. As this is not feasible, spend data is relied on by the official GHG Protocol to understand emissions based on average emission factors per each material or category bought.

"By way of example: you buy 1kg of apples from Germany. An external database would tell you that the emissions for such a product are on average x kilograms, a bit more than for oranges and a bit less than your apples from the United States. When starting to reduce emissions, this analysis helps you identify which categories, regions, suppliers or business units you should be focusing on in the first place. Perhaps your minimal spend on apples isn't relevant in the big picture but rather business travel is your emission hot spot.

"This type of analysis puts the focus on the right places when starting emission-reduction projects together with the suppliers. To allow for even more accurate data to enable you to reach set targets and policies, ideally you would combine the CO2 analytics with supplier-specific information directly from the suppliers."

Given that large enterprises deal with a vast array of spend and a complicated, sprawling supply chain, they often have many business units and different computer systems, so we asked:

How can enterprises gain visibility across a complex landscape and use analytics to make sense of all of that data?

"Most large companies face a major challenge in combining data," she said. "It's not just procurement that's struggling, the whole ERP/enterprise data landscape brings complexity.

"Through spend analysis software, many enterprises are starting to get their own data in good shape. Specialist vendors like **Sievo** have mastered wrangling data in this landscape, so procurement professionals don't have to. Large enterprises get especially high value from combining their own data with external data and the infrastructure to make use of those data insights at a meaningful scale across business units.

"For instance, an enterprise business can enable Scope 3 emissions visibility across their entire procurement within several weeks with a tool like our CO2 analytics that links spend analytics with external emission-data providers like Ecoinvent or Exiobase."

How can larger businesses get started or leverage the information that they already have?

"While calculating emissions in SMEs and larger enterprises ultimately works in the same way, there is another challenge for larger corporations in that they often have this existing information spread across different stakeholders. It's great that the sustainability team has an Excel spreadsheet in which emissions are tracked, that the management team requests a consulting company to do the annual sustainability report, and that the procurement team calculates emissions for each key category they buy from, but the alignment also needs to be there for the actions to be lined up.

"Positive feedback we have heard from our CO2 analytics is that breaking down the silos between sustainability efforts, management and procurement teams to allow for one truth can save a lot of time and effort, and perhaps sweat and tears."

What technology do procurement professionals initially find most useful when starting a Scope 3 program?

"Utilizing spend data is a key method in starting an emission-reduction program from procurement's perspective but also from a wider Scope 3 angle. Therefore, the technology utilized by procurement is in the driving seat for getting started.

"Technologies that enable using spend data to understand emissions as well as platforms that allow for supplier collaboration are especially useful. Ideally, combining these two types of service give an accurate view. Going forward, tools like CO2 project tracking as well as predictive analytics will also come into play, but when discussing the initial first steps in the Scope 3 programs, these are not as relevant as getting a clear overall picture of the emissions.

"Overall, regardless of the specific technology used, factors such as accuracy, transparency and collaboration are crucial. After all, the Scope 3 emission reduction initiatives only make sense if the data behind them is reliable. Here factors like unlimited users to access the technology selected as well as audit trails to see the changes made are widely seen as important.

"An important ask we often come across is to have the analytics and technology verified so that the data can be used for different reporting purposes. After all, a lot of the pressure — especially in Europe — is driven by increasing regulations and expectations from stakeholders and investors to report the emissions."

Are these initial steps for CO2 mitigation helpful for when legislation is passed to also measure other emissions? And what other GHG will be a concern for businesses in the near future?

"Definitely, businesses across the globe are taking the first steps in CO2 mitigation, which is also taken into account in future legislation.

"For instance, when the new Corporate Sustainability Reporting Directive (CSRD) rolls out in Europe (initially in October 2022) and reporting of emissions becomes mandatory for a large share of organizations, our reporting capability is compliant with the GHG protocol, which is already widely in use. After the standards are aligned and established across industries and regions, it is also a lot easier to measure other emissions in the future, such as methane. We note that several companies are already looking into analyzing other areas in addition to CO2, like water security and waste."

Why it's time for Procurement to drive the enterprise sustainability agenda

Enterprises globally are witnessing significant pressure from their key stakeholders – customers, investors, regulators, communities, employees and their suppliers to push the sustainability agenda forward. GHG emissions is a key sustainability topic that has become an imperative for organizations to take action on. Given that for many organizations almost 70% of their emissions are in their supply chain and more than half of those emissions reside in upstream supply chain implies that procurement functions must play a key role in engaging with suppliers to move the needle.

This also necessitates procurement functions having the right kind of information for their suppliers which is beyond suppliers' credentials, financial status and capabilities to keep the goods and services flowing. They now need to know the ESG related supplier information as well which has resulted in the increasing focus on the SXM technology area. The SXM technology area has rapidly raised its profile of late, where the "X" variable stands for topics like supplier performance management (SPM), supplier information management (SIM), supplier relationship management (SRM) and supplier risk management.

Now, we turn our attention to how Procurement can leverage data and analytics to help it not just support but even drive an organization's sustainability and inclusion agenda.

We talked to Torsten Naue, Strategy Senior Principal and Sustainable Value Chain Capability Development Lead, and Shruti Goel, Senior Manager in Sustainability Strategy and Sustainable Value Chain Go-to-Market Lead in Growth Markets, from professional IT services specialist and consultancy, Accenture.

We asked them:

Why have suppliers become such a focal point for companies pursuing sustainability goals?

"The upstream supply chain has significant impact on both the environmental and social dimensions of sustainability. For most industries, Scope 3 emissions are at least 70% or higher (as a percentage of overall emissions); for the Automotive sector, this figure can be even as high as 99% of overall emissions. The Purchased Goods & Services and Use of Sold Products categories typically create the majority of emissions, and suppliers play a key role in both. It's most obvious for Purchased Goods & Services and we run decarbonization programs for our clients and their suppliers to tackle a large chunk of CO2e. But suppliers also play a key role in reducing carbon in the use phase of a product, as co-innovators in the product design process, enabling new innovative, less carbon-intense, recyclable/re-useable products."

"Procurement's influence, however, goes beyond the environmental dimensions of sustainability. One example is child protection: according to UNICEF and The International Labour Organization (ILO) as at the beginning of 2020 nearly 160 million (!) children worldwide were reported to have been subjected to child labor. Over the 4 years running up to that, the number of children in forced labor increased by 8.4 million. Procurement can reach into the multi-tiers of supply chain networks where these human rights risks and significant potential for social impact exist."

What type of analytics technology is available to help Procurement and the organization fulfill their ESG goals, how do they need to adopt it to make sustainability successful?

"We can group today's procurement technology providers that support ESG integration into five market segments. **S2P suites** typically offer quite basic supplier information management capabilities, with focus on tier-1 suppliers. **SXM providers** provide a stronger integration of ESG factors (e.g., EcoVadis, Kodiak Hub, TealBook) with a deeper, narrower focus than the suites. We find the strongest integration of ESG criteria by looking at **Risk Management** (e.g., IntegrityNext, Resilinc) and **End-to end Visibility** market segments (e.g., Transparency-One or SupplyShift), typically these players generate their own ESG data in addition to third-party data. And finally, there are **niche players** that are particularly good in one specific ESG dimension (e.g., &wider

to assess working conditions in the n-tier supply chain).

"To successfully measure and manage sustainability KPIs, organizations need an integrated ecosystem that combines external ESG data and internal company data with the existing procurement software landscape, including S2P suites, SRM, risk management, and ESG analytics capabilities."

Are there overlapping benefits of sustainability for both Procurement and the organization?

"Based on Accenture research, between 2013 and 2019, companies with consistently high ratings for ESG performance enjoyed **4.7x higher operating margins** than low ESG performers over the same period. High performers generated higher annual total returns to shareholders, outperforming peers by **2.3x**. And given the stakeholder pressure from investors, customers and regulators, sustainability is driving both corporate agenda and procurement agenda. Sustainable procurement is enabling more trusted, resource-efficient and less-carbon-intensive supply chains, leading to cost reduction and revenue uplift through increased company reputation."

Is improved resiliency one of those benefits?

"Being informed about environmental impact can strengthen resilience against future business risks, such as climate change and pandemics. Value chains need to become shorter, smarter and more circular to reduce these risks. However, there are also trade-offs to be taken into account, e.g., the impact on increasing labor costs, tariffs, regulatory burdens, supplier market constraints in certain markets, product quality, etc., hence there is no simple answer."

Can technology help handle other areas of sustainability, like diversity, equity and inclusion, when suppliers are being sourced?

"Yes – for instance, Accenture has supported clients to build a mobile platform which enables small, micro enterprises to gain access more easily to supply chain and development opportunities without having to follow the traditional and often complex admin processes of large organizations or having to submit lots of paper-based forms.

"Technology also makes it easier for the sourcing organization to keep data records, conduct analysis and report on supplier diversity, inclusion and equity targets without having to work through multiple disparate systems. The benefit for the SME is that they can access the platform from anywhere, and it reduces the cost of doing business as they can apply for opportunities online without having to print out documents and submit hard copies of compliance documentation each time. They can keep track of certain support initiatives provided to them and have real-time visibility of their progression/maturity, opportunities, and so on."

If it's really time for Procurement teams to lead this effort, how do they sell that message to the C-suite?

"The majority of CEOs have put sustainability at the top of their agenda, and Procurement has significant influence to drive sustainability impact across the value chain. The value can be measured in multiple ways: cost reduction or cost avoidance, considering carbon reductions in the value chain is only one aspect. The list of opportunities where Procurement can drive value is long, both with regards to environmental impact and social impact. An example is adherence to new regulatory requirements, in, for example plastic packaging: finding better solutions for recycling of inputs, shaping a circular supply chain, reducing waste or enabling upcycling of materials, or even becoming the buyer of your own waste. Procurement is THE engine to drive visibility on sustainability KPIs in the value chain and sustainability innovation across the value chain – enabling competitive advantage. It can also help to build brand through community building, i.e., developing small and medium-size enterprises in local communities."

Spend Analytics as key enabler to achieve sustainable procurement value through Closed-Loop Spend Management (CLSM)

- In part 1, we talked to Heta Ruikka, VP of Product at Sievo, experts in spend analytics, about how combining analytics with process, by use of intelligent technology, can give organizations not only the insight to 'see' supply chain challenges but the agility to overcome them. How the use of spend analytics can create sustainable procurement strategies.

- In part 2, we went deeper and looked at how the two terms 'carbon-neutral' and 'net-zero' mean different things as organizations look to reduce CO2 emissions. Speaking with Heta Pirttijärvi, Product Manager also at Sievo, an expert in spend and particularly CO2 analytics, we discover how intelligent use of spend data can translate into actionable information about emissions policy, and emissions reduction.

- In part 3, we took a step further and learnt how all of this applies to Procurement in real terms. Talking to Torsten Naue and Shruti Goel, Sustainable Value Chain experts from professional consultancy, Accenture, we discovered how Procurement is well placed to leverage this spend data to help it not only support the organization's sustainability and inclusion agenda, but actively drive it.

To conclude the series, we look at a novel approach to spend management that can "close the loop" between procurement and supply chain management and other key business functions to help organizations be more proactive in their quest for a more sustainable and responsible business.

To understand the principle of closed-loop spend management (CLSM) and how sustainability factors into the approach, we talked to Vivek Luthra, Shruti Goel and Torsten Naue, Sustainable Value Chain experts from professional consultancy, Accenture.

What is 'closed-loop spend management' and how does it relate to sustainability?

"Closed Loop Spend Management is an approach that is geared toward injecting agility and resilience into business operations by optimizing overhead costs and transforming the supply chain and procurement processes." "It aims to generate 4x more value than an average industry player through better cost management, digital accelerators and responsible sourcing capabilities.

"CLSM enables enterprises to unlock value and fuel transformation and growth in the business operations through:

- Spend transformation – extracting maximum value through differentiated and new value levers including digital.
- New ways of working becoming agile and resilient enterprises through automation, digital accelerators, living architecture, variable cost structures and talent of the future.
- Responsible sourcing — enabling trust and transparency in the value chain, reducing greenhouse gas emissions and eliminating wasted capacities by leveraging circular sourcing opportunities.

"The approach is anchored to 6 key steps: 1) Visibility 2) Value Targeting 3) Category Ownership 4) Lock Value in Budgets 5) Execute Initatives and 6) Control & Monitoring. Across each of these steps sustainability has been entrenched in the following manner to ensure that CLSM has Sustainabilty embedded by design and not as a bolt-on approach:

1. Create visibility of environmental and social impact of the spend baseline, consider e.g., carbon emissions, water, biodiversity impact, job impact, amongst others
2. Articulate value levers that not only address cost reduction and demand management, but also outline the environmental and societal impact (and potential trade-off). Identify innovative, sustainable value-levers that also can drive for cost-efficiency.
3. Define category ownership that turns Sustainability-enhanced category plans into reality in the day-to-day business.
4. Lock in defined budgets that reflect potential environmental impacts and levers.
5. Execute sourcing initiatives to optimize cost and reduce environmental impact.
6. Control and monitor cost savings and sustainability impact for each initiative.

A CLSM approach can boost a company's operational resilience, cost elasticity and value maximization, while addressing and optimizing the sustainability impact of the spend. The first step in taking this journey forward is to conduct a spend analytics with a sustainability lens."

So, how does spend analytics as part of the CLSM cycle work and contribute to the sustainability agenda?

"Spend analytics works through leveraging the innate relationship between every dollar spent and its associated environmental and societal impact, i.e., for every good or service you procure, there is a corresponding impact embodied in that purchase, such as the carbon or water involved in its creation. The process in turn relies on two fundamental inputs, spend data, and ESG impact factors. In short, ESG impact factors show the average impact (e.g., carbon emissions) per monetary value of a good or service. These are estimated via environmentally extended input-output tables (EEIOs), which use economic data on the flow of goods and services, across industries and economies, overlayered with environmental data, to provide the average environmental inputs into said good or service (e.g., 0.5 kg of CO2e emissions are embodied in every dollar spent on aluminum).

"Having mapped spend categories to equivalent (or close to) ESG impact factors, multiplying the two values together can provide an estimated footprint (e.g., upstream carbon footprint) of said purchased good or service. The insights this generates should be treated in a similar way to that provided through basic spend management, i.e., 1) how much do I spend and with whom? 2) how can I drive value from what I spend? and 3) how can I monitor and enable this at scale overtime?

"With sustainable spend analytics we now have an answer to all three, through 1) visibility of our impact across categories, suppliers, markets or however else the data is cut, 2) assigning corresponding accountability to those category managers and suppliers identified as the core drivers of impact, and 3) proactive supplier engagement, category-level targets and integration into enterprise resource planning software. The category managers and sustainability leads both can benefit from this analysis to understand how the category they are responsible for is contributing to the emissions footprint, which supplier should they focus on, and what percentage of Scope 3 emissions is attributed to purchased goods and services.

"The key mutually beneficial aspect of sustainable spend analytics is that it demonstrates how efficient procurement practices can provide both direct environmental and financial value to businesses, whilst simultaneously reducing the risk exposure to those suppliers who fail to do likewise."

What are the key challenges or limitations of this approach and how can they be solved?

"The sustainability spend analytics approach (also referred as spend-based approach as per GHG protocol) is based on environmentally extended input output (EEIO) factors, which are used to estimate cradle-to-gate ESG impact (i.e., upstream emissions, water use, etc.) for a given industry or product category.

"There are several constraints that may impact the accuracy of the estimations performed using a spend-based approach. EEIO databases usually comprise ESG factors at broader sector levels (e.g., production of aluminum in China), which makes finding an accurate impact factor for a corresponding spend category (e.g., aluminum racks for stores) the core challenge in the process. A variety of EEIO providers exist to address this challenge, who differ across broadly three aspects: procurement cost, breadth of data (i.e., number of activities covered) and depth of granularity (i.e., detail of activity).

"Frequent price fluctuations of the purchased products or services can also impact the estimation even though the ESG impact remains the same. Similarly, exchange rate fluctuations may also complicate the spend-based method.

"The spend based methodology or the EEIO model assumes a linear correlation between spend and environmental flows. It is not a highly accurate model because of these assumptions. However, it is simple to apply, quicker and cost-effective when compared to other approaches (e.g., process-based LCA), which are time- and cost-intensive.

"It's also difficult to measure the impact of decarbonization actions taken up by companies and their suppliers using a spend-based approach. An alternative method for such specific measurements is the supplier-specific method. It is recommended by GHG protocol for calculating upstream GHG emissions for Scope 3 category 1 (Purchased Goods & Services) and is based on collecting product-level cradle-to-gate carbon data directly from suppliers. The supplier-specific method is more relevant for a company if its suppliers and partners are ahead on the data maturity curve. Many organizations are asking their suppliers to report emissions through the CDP supply chain program. That allows them to get supplier-specific data which they can incorporate to calculate more accurate emissions for their top suppliers.

"Ultimately the choice of the calculation approach is a complex decision, mainly based on considerations such as data availability, data quality, suppliers' data maturity, time and resources at hand. The spend-based approach can be used as the first steppingstone to calculate ESG impact and identify ESG hotspots in the organization."

What advice would you offer to category managers pursuing sustainable practices?

"For the most part, sustainable spend analytics is focused on calculating Scope 3 emissions, while other ESG impacts are not prioritized by category managers. More mature organizations are also using ESG factor databases to understand the impact of spend on water consumed, forest area impacted, and so on, to have a more holistic impact of the spend in control and hence look at initiatives that have broader ESG impact. Organizations that are starting on their responsible sourcing journey are using sustainable spend analytics as a stepping stone with the ultimate objective to have transaction-based spend and emissions linkage through tools that enable a system of record along with ESG impact analysis of the spend. The tools that can provide an ESG risk view of the spend are key for category managers to decide upon their future actions based on data."

Sievo CONTRIBUTORS

Sievo is the procurement analytics solution for data-driven enterprises. We give procurement, finance and sustainability leadership teams a single source of truth and radical transparency to all sourcing decisions from choosing the right suppliers & delivering savings, to enabling a sustainable, diverse and resilient supply base. We master the art of extracting, classifying, enriching and visualizing procurement data into actionable insights!

To learn more, visit **sievo.com**

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accenture CONTRIBUTORS

Accenture is one of the world's leading professional services companies, with capabilities in consulting, strategy, digital, technology and operations. Accenture has clients in over 120 countries and 700,000 employees worldwide. Accenture's Supply Chains and Operations practice helps clients reimagine, build and operate supply chain networks that orchestrate change, simplify life and positively impact business, society and the planet. In the Procurement function, Accenture realises that Chief Procurement Officers need a holistic approach—one that enhances customer experience, improves immediate profitability, opens up new avenues of value, supports new ways of working, and creates a more sustainable and resilient organization.

Vivek Luthra: Vivek is a Managing Director in Accenture's global leadership team for Supply Chain & Operations. He has 25+ years of experience in strategy and execution, disrupting & transforming conventional businesses using digital and scaling new businesses across industries using a value led approach and data driven decision making. He has vast experience in Sustainable Value Chain strategy & execution, including Responsible Sourcing.

Shruti Goel: Shruti is a Business Strategy Senior Manager in Accenture's Sustainability practice based out of India. She has 15+ years of experience in the areas of sustainable valuations, responsible sourcing, supply chain and operations as well as business process management. Shruti has led multiple engagements including Sustainability enhanced spend analysis, responsible sourcing capability development, carbon abatement assessments, carbon strategy and sustainability market analysis.

Torsten Naue: Torsten is a Strategy Senior Principal in Accenture's Supply Chain & Operations practice in Germany. He has 15+ years of professional consulting experience, with focus on procurement operating model design and implementation, sustainability strategy and responsible sourcing. He leads the global capability development for Sustainable Value Chain at Accenture.

Charlie Holmes: Charlie is a Strategy Consultant in Accenture's Sustainability practice in the UK. He has deep experience in ESG data led supply chain transformation and sustainable spend analytics.

Manvi Arora: Manvi is a Strategy Consultant in Accenture's Sustainability practice in India. She has extensive experience spanning across sustainability strategy, responsible value chains and scope 3 emission measurement and management.

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