

NEXST INSIGHTS

**BUILDING A SUSTAINABLE,
RESILIENT SUPPLY CHAIN**

How Businesses Can Recover and
Prepare For A Transformed World



Reefknot Investments is a global Venture Capital Fund seeking to partner and actively support high growth technology businesses driving to transform the Supply Chain and Logistics industry.

Reefknot invests in founders and companies that solve meaningful problems and have the potential to make a transformational impact in the Supply Chain and Logistics sector. Additionally, Reefknot is focused on companies that develop and/or uniquely utilise Technology as a foundation or differentiating anchor for their respective business models.

Their solution areas include but are not limited to Artificial Intelligence(AI)/Deep Tech, Digital Logistics and Trade Finance.



GTR Ventures is the world's first venture-building and investment platform specialised in trade and supply chain. In exclusive partnership with Global Trade Review (GTR), the world's leader in global trade and trade finance intelligence, publishing, and events, GTR Ventures enjoys a presence in London and Singapore.

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The Next Supply Chain (NEXST) is a think-tank initiative aimed at driving new business models and transformational technology in the Supply Chain and Logistics industry.

NEXST aims to positively create value and impact for the Supply Chain and Logistics industry, to partner with and support high growth technology businesses seeking to transform the Supply Chain and Logistics industry, and to become a global centre of gravity for all technology start-ups in the Supply Chain and Logistics industry.



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As the pandemic forced economies to lock down in early 2020, major cities around the world noticed a surprising, temporary change in the sky – it was clear of smog from motor vehicles, factories and other economic activities.

The record-low pollution is a reminder that businesses can and should ensure their activities are sustainable, especially as the world slowly recovers from the long-drawn impact of the coronavirus. In this new normal is an opportunity for rebuilding in a new way.

Key to this will be a rethink of how the world's supply chain delivers the goods and services to consumers across the globe. More than eco-friendly marketing, businesses that will succeed in this new normal are the ones that focus on innovation and business transformation to radically reduce and eliminate carbon and waste from supply chains.

The challenge is to build a business that is sustainable in all senses of the word. It has to continuously add value to customers to succeed in the long run, in step with today's deepening concerns for the environment and social justice. This endeavour is not for an add-on, but more likely a re-engineering.

This supply chain sustainability, as defined by the United Nations Global Compact¹, is the management of environmental, social and economic impacts and the encouragement of good governance practices, throughout the lifecycles of goods and services.

INTRODUCTION



Environmentally sustainable, in the sense that the supply of these goods and services should not drastically impact the already fragile ecosystem that humans have damaged over the years. How a business handles waste and strives to be carbon neutral are two examples.

Socially sustainable, in the sense that a business should always consider the impact its supply chain has on the markets it operates in. Is it helping to alleviate poverty in an emerging market or deepening a society’s inequalities?

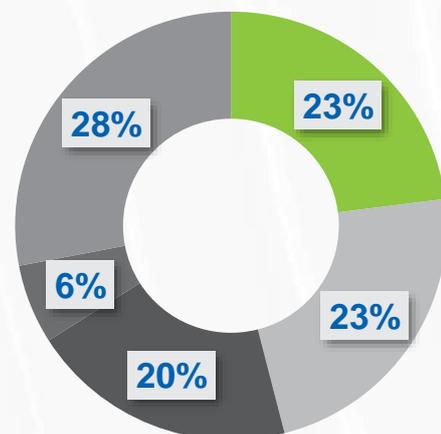
Finally, a business has to be economically sustainable as well. A supply chain has to still help make money for a business, which is not a non-profit organisation. How does it balance all these imperatives in this new normal?

In a previous Reefknot Investment insights paper, on Supply Chain Digital Transformation, we discussed how companies with comprehensive supply chain visibility have been able to stay ahead of disruptions from the COVID-19 pandemic that hit the worldwide economies in January this year.

In this report, we studied the supply chain solutions and business applications across three verticals – automotive/aircraft manufacturers, agriculture and food, and retailers/consumer goods companies – to explore how they can improve their sustainability efforts. We also seek to understand how trade finance can play a key role in them.

To put things in context, the world emitted 35 Trillion kg of CO2 in 2019, driven largely by building operations, industrial materials and transportation, as seen in Figure 1.

Figure 1 -
Global CO₂ emissions by sectors



- Transportation
- Concrete, Steel, Aluminium
- Industry
- Other
- Building Operations

¹ UN Global Compact, “Supply Chain Sustainability: A Practical Guide for Continuous Improvement, Second Edition”, June 2015.
https://d306pr3pise04h.cloudfront.net/docs/issues_doc%2Fsupply_chain%2FSupplyChainRep_spread.pdf

It is important to note that not all modes of freight transportation pollute the same. Besides considering the total amount of CO₂ emissions, it is important to study the CO₂ pollution on a per unit basis for a fair comparison.

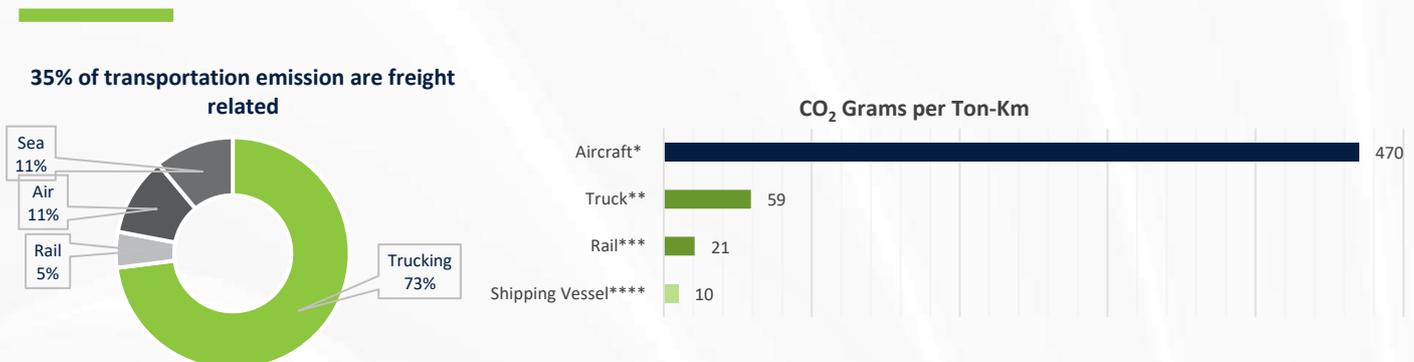


Figure 2: Breakdown of overall freight emissions and average “per-mode” emissions

With the focus on the impact that businesses have the environment, it is no surprise that sustainability was set to be the most important theme discussed in corporate boardrooms worldwide in 2020². The beginning of the year saw articles related to helping the environment through the promotion of sustainable practices nationwide.

Such intentions were the chronic result of public anger at the lack of action on climate change, corruption, and other social injustices that made it difficult for leaders to avoid the issue on sustainability any further.

In recent years, a rising number of multinational corporations have pledged to only work with suppliers that adhere to social and environmental standards. The overall goal: To create a sustainable society founded on sustainable practices that define a new supply chain network.

As societies recover, they can seize on an opportunity for a “green-reset”. This means economies can sustain themselves as envisioned in the UN’s Sustainable Development Goals (SDGs) and collectively prosper.

In the post-pandemic world, businesses need to be agile, nimble and be ready to tackle demand/ supply constraints and re-evaluate the resilience of their business models.

This usually involves structuring their supply chains, ramping up digital transformation efforts and investing in green technologies, which in turn can lead to a stronger commitment toward sustainability goals.

But what are various industries doing about sustainability and more importantly, what is the role in finance, in promoting supply chain sustainability as economies look to recover from the COVID-19 pandemic?

² GlobalData, “Sustainability is the top theme for 2020”, January 2020. <https://www.globaldata.com/sustainability-is-the-top-theme-for-2020/>

One of the biggest challenges to integrate sustainability into business operations is the cost involved in the additional effort to reduce carbon footprint and negative social impact.

In a highly competitive and volatile business environment, the balance between meeting quarterly business performance and implementing any non-financial value-added activities is a constant tug-of-war.

Inevitably, many businesses' think of this is as a costly exercise that brings in more indirect benefits such as fulfilling one's corporate social responsibility than actually making a business more resilient and sustainable in the long term.

However, the conversation has to go beyond emissions and the regulatory pressures that corporations have to face today. Instead, they have to expand the concept of sustainability to include not only the economic viability of the business, but also the social and environmental impact to the overall ecosystem.

Here, again, the three concepts of sustainability – environmental, social and economic – come into play. How can supply chains and supply chain capabilities support sustainability of the business over the long term?

SUPPLY CHAIN SUSTAINABILITY





For businesses big and small, a common question needs answering for their supply chain:

- Is it emitting carbon and generating waste on a scale that makes it impossible to continue the same way in future?
- Is it widening the inequality in a society, thus making business difficult to carry out years down the road?
- Is it economically viable in the long term?

Businesses will thus have to think of the broader and more holistic definition of sustainability as an imperative, instead of a nice-to-have or as part of corporate social responsibility. In other words, rethinking how the areas of environmental, social, and economic, be it individually or collectively, can drive new business capabilities and innovations to thus create a sustainable business with a sustainable return on investment over the long run.

Indeed, some businesses are already rethinking their assumptions on cost and benefit. More now seek to make their supply chain a truly sustainable one that is built for a future where it will be the only viable option.

The challenge, therefore, is moving from the current model to a more advanced one, through a transformation of their supply chain.

To improve one's supply chain sustainability, one first has to have visibility of it. This means an awareness of, and control over, specific information related to product orders and physical shipments, including transport and logistic activities, and the status of events and milestones that occur prior to and in-transit.

Today's technology in the form of cloud computing and Internet of Things (IoT) sensors have enabled goods and their shippers to be meticulously tracked to a granular level. Blockchain technology, an improved version of the 19th century ledger that is still in use today, will help build more trust and improve visibility in a supply chain.

These are crucial improvements in recent years, because without knowing enough about one's own supply chain, from the Tier 1 suppliers to the final delivery effort to a store or customer, a business cannot easily find a way make the effort more sustainable.

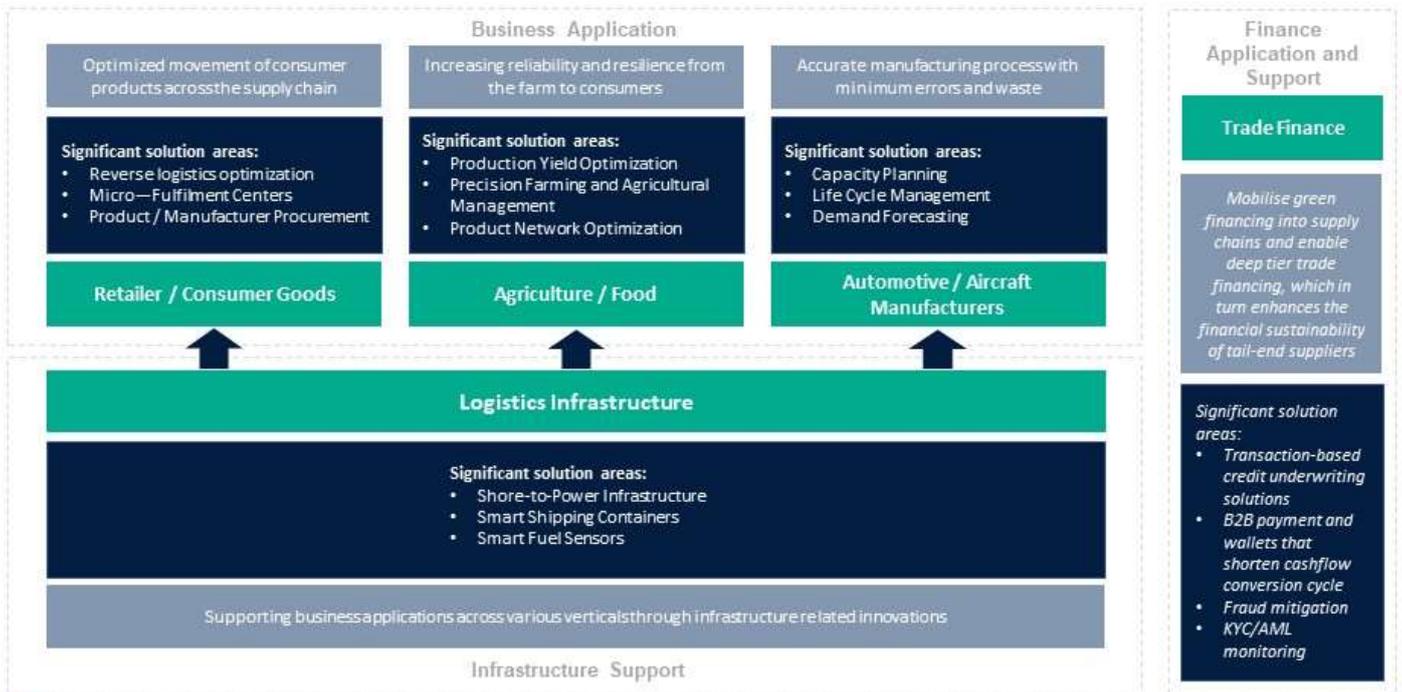
“Improving the economic, social and environmental performance of an organisation requires full and complete end-to-end data that makes the impact visible and allows driving social and environmental improvements in the same way as we produce financial results,”

says Wolfgang Lehmacher, Supply Chain and Technology Strategist.

In an internal *Reefknot Investments* study in 2020, we analysed supply chain solutions with business applications across three verticals - automotive/aircraft manufacturers, agriculture and food, and retailers/consumer goods companies - to understand their potential for improving their sustainability efforts.

These are three examples of industrial sectors that are noteworthy for a study of how the broader commercial world can build and adapt to a new sustainable supply chain.

In all three sectors we studied, businesses have come up with applications that are able to operate with the support of a layer of underlying logistics infrastructure, as seen in Figure 5.



In the retailer/consumer goods industry, significant solution areas with high impact to sustainability include areas such as reverse logistics optimisation, micro-fulfilment centres and product/manufacture sourcing & procurement. In parallel, these areas would also drive a more effective and optimized retail & consumer goods supply chain.

Manufacturer and ecommerce platform providers also have different supply chains and logistics chains. The question now is how to get to net or zero carbon and waste, which requires significant transformation. More than that, leadership to push the agenda.

For the agricultural/food sector, supply chain related areas with high impact to sustainability include product yield optimisation, precision farming and agricultural management and product network optimisation. Together, these will enable businesses to ensure increased reliability and resilience from farm to consumers.

For the automotive/aircraft manufacturers, significant solution areas with higher impact to sustainability include areas such as capacity panning, life cycle management and demand forecasting. These will help transform businesses to create more accurate manufacturing processes with minimum errors and waste.

In all these scenarios, there is at least one constant – businesses can take advantage of new thinking and technologies around solution areas in order to boost their sustainability efforts. The key is in transforming their operations with a strategic view of their long-term goals, taking into account environmental, social, and economic factors.

CASE STUDY: Kuehne+Nagel

In July 2020, Schleich GmbH, one of the largest toy manufacturers in Germany and the leading international provider of realistic animal figures, decided to CO2 neutralise its entire sea freight with the help of Kuehne+Nagel .

As part of its Net Zero Carbon programme, Kuehne+Nagel offers Schleich a complete solution for CO2 neutralisation. This is one example of a business seeking to achieve environmental sustainability.

By choosing particularly climate-friendly sea freight connections and compensating the remaining emissions with Gold Standard CO2 certificates, the sea freight of the German toy manufacturer is shipped in a climate-neutral way. Kuehne+Nagel will take care of the entire process and ensure smooth coordination with the rest of the supply chain.

With Net Zero Carbon, Kuehne+Nagel not only supports customers on their way to climate neutrality; the company has also set ambitious climate targets for itself. By the end of 2020, the company's own CO2 emissions (Scopes 1 and 2 of the greenhouse gas protocol) will be neutral; by 2030, this will be extended to all transport by suppliers such as airlines, shipping lines and haulage companies (Scope 3).



“The potential to address supply chain sustainability is almost limitless. To start with, we urgently need supply chains that are sustainable by design. Today sustainability is too often seen as a by-product and an afterthought. One way Kuehne + Nagel approaches this is by proactively addressing the CO2 footprint of the transportation services performed by our suppliers – airlines, shipping lines and haulage companies – by 2030.”

- Simon Fich, Head of Corporate Development, Kuehne+Nagel.

³ Kuehne+Nagel, “An easy play: Schleich relies on climate neutral logistics with Kuehne+Nagel”, July 7, 2020. <https://newsroom.kuehne-nagel.com/an-easy-play-schleich-relies-on-climate-neutral-logistics-with-kuehnenagels-net-zero-carbon-programme/>

As part of this study, Reefknot Investment zoomed in on retailers/consumer goods companies and examined how they could turn to various capability areas and solution areas to boost their sustainability efforts. It helps to consider the three important areas of sustainability.

- Environmental sustainability: Businesses in this sector can directly improve by better managing how their goods and services are physically delivered and consumed.
- Social sustainability: By sourcing from ethical suppliers, businesses here can reduce negative impacts while also uplift societies seeking to upskill and improve financially.
- Economic sustainability: Doing good is good business because when suppliers gain a more equitable, stable foundation, they are able to offer improvements to the supply chain, bringing economic benefits.

Focusing on all three areas gives businesses a better idea of how sustainability can be boosted. For this sector, two capability areas – **reverse logistics** and **SKU optimisation** – are worth a closer examination for their importance to the endeavour:

HOW RETAILERS / CONSUMER GOODS COMPANIES ARE IMPROVING SUSTAINABILITY

a. Reverse logistics

Unlike conventional analysis of carbon impact, the process of reverse logistics goes further back than the movement of goods, materials and products or the point of consumption, all the way to their point of origin. It also seeks to include the social and economic impact that one’s supply chain activities have in the environments in which they operate.

The concept of reverse logistics is closely tied to a circular economy, which is crucial in supporting global climate initiatives. Working towards a circular economy brings concurrently addresses the Sustainability Development Goals (SDGs) set out by the United Nations (UN), including but not limited to SDG 6 on energy, 11 on sustainable cities, 12 on sustainable consumption and production, and 13 on climate change.

As global retail consumption rises⁴, more than 5 per cent to exceed US\$24.7 trillion in 2019, the role that reverse logistics plays in the issue of sustainability is becoming increasingly crucial.

So, herein lies the challenge. The shift from a linear to circular economy requires a multilateral effort from various stakeholders such as the government, non-profit organisations, corporations and, most importantly, the support and adherence of individuals.

Where can reverse logistics create a deep impact? Figure 6 reveals multiple solution areas that operate within the scope of reverse logistics. These solution areas were derived based on existing practices across various sectors and plotted against their sustainability impact across three periods: current (1-2 years), near- to mid-term (3-5 years), and long-term (greater than 5 years).

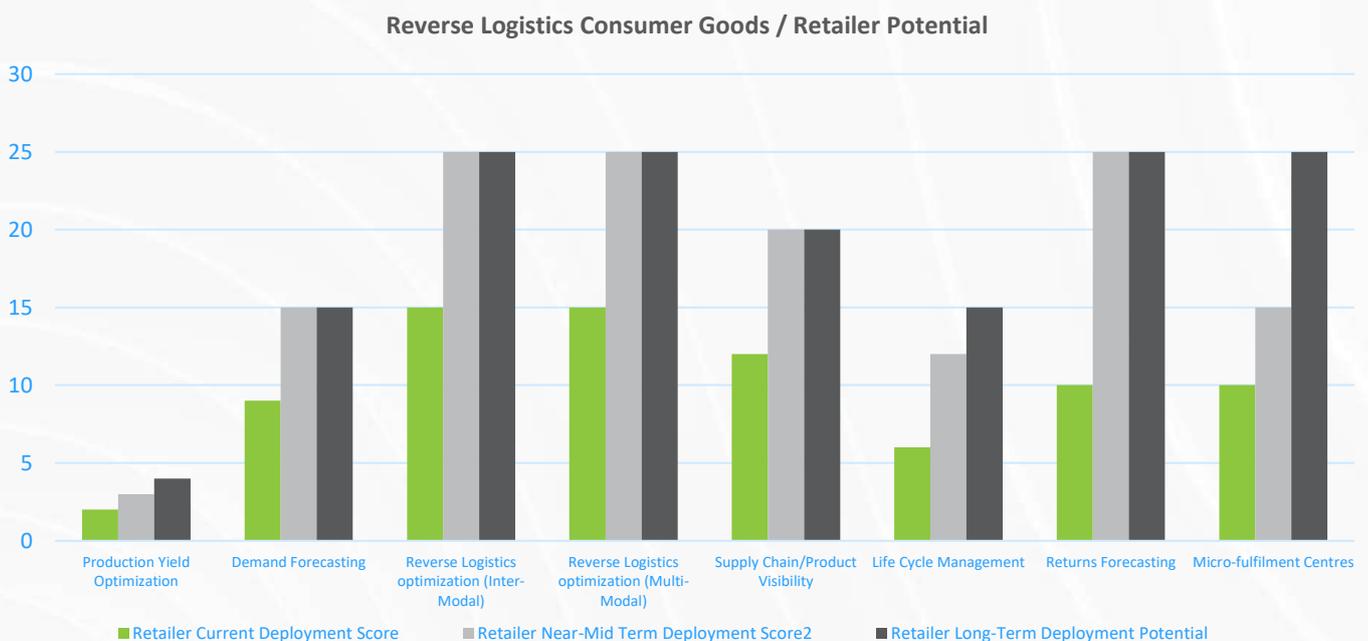


Figure 6: Solution areas around relevant to reverse logistics and their sustainability potential and impact

⁴ Statista, “Total retail sales worldwide from 2018 to 2022”, July 2020. <https://www.statista.com/statistics/443522/global-retail-sales>

Better life cycle management of a product, from introduction to growth, and through to maturity and decline, will help boost sustainability efforts from cradle to cradle. That is, to have the philosophy to enable design and production of products in such a way that they can be truly recycled/upcycled at the end of life. This can further be done by overlaying the respective environmental, social and economic impact onto product lifecycle management, and would include consideration of factors such as impact of logistics movements, waste generated at various stages of the lifecycle, as well as disposal of goods.

Returns forecasting is also another important area of consideration, which is the capability to forecast consumer returns in order to better allocate resources to cater to these returns. By better predicting returns, one would then be able to drive other downstream value-added areas such as refurbishment/resell or otherwise optimally deal with the disposal.

At the same time, businesses should consider the use of micro-fulfilment centres in urban neighbourhoods to boost fulfilment and returns efficiency. In reverse logistics, in particular, such infrastructure would be able to allow for more efficient and seamless returns, hence reducing waste and unnecessary additional logistical movements, while having the potential to generate additional revenue via refurbishment/resell.

CASE STUDY: IKEA

In 2019, Ikea said it was employing logistics startup Optoro's technology to better manage returns and reverse logistics processes. Using data analytics and machine-learning algorithms, the technology enables Ikea to cut reverse logistics waste by routing returned and excess inventory to optimal locations within its network.



The platform offers an end-to-end view of the reverse logistics process, improving the supply chain's long-term sustainability. This is part of the furniture maker's goal to be a circular business by 2030⁵.

⁵ Morgan Forde, "Ikea teams up with Optoro to reduce reverse logistics waste", <https://www.supplychaindive.com/news/ikea-optoro-returns-support-waste/568578/>

CASE STUDY: Starbucks

Starbucks is generally trying to instill industry standards and standardise its impact on water, waste and CO2. The company is also employing cradle-to-cradle processes across product designs, through product life cycle management. One focus area is product sourcing.

In Asia, Starbucks invested S\$130 million to build a roasting plant in Shanghai, to stay resilient. It no longer makes sense to have Starbucks beans exchange hands from Latin-America to United States and finally to China, which ultimately increases the carbon footprint in the supply chain.



CASE STUDY: Amazon

To improve the circular economy of the online shopping ecosystem, ecommerce leader Amazon has intervened upstream to address the supply of sustainable and recyclable products. In September 2020, Amazon launched Climate Pledge Friendly, a new programme to help make it easy for customers to discover and shop for more sustainable products.

Customers will now see the Climate Pledge Friendly label when searching for more than 25,000 products to signify that the products have one or more of 19 different sustainability certifications that help preserve the natural world, such as reducing the carbon footprint of shipments to customers.

As part of Amazon's Climate Pledge Friendly program, the retail giant is also launching Compact by Design, an externally-validated certification that identifies products without excess air and water and products that require less packaging and become more efficient to ship⁶.



⁶ Amazon, "Amazon launches "Climate Pledge Friendly" program", September 23, 2020. <https://blog.aboutamazon.com/sustainability/climate-pledge-friendly/>

b. SKU optimisation

A second capability area worth investigating is SKU (Stock Keeping Unit) optimisation. By reducing the number of products or SKUs, businesses can have better control of product portfolios and improve their bottom line, in addition to contributing to sustainability efforts.

An average major grocery retailer today carries about 40,000 SKUs. Most SKUs are often not optimised for each store and leads to both non-optimised financial opportunity and product wastage.

For example, Unilever performed an analysis of its SKUs in 2016-2017, which led the FMCG giant to discover that 60 per cent of product variance contributed to just 5 per cent of their sales, but that made up 20 per cent of inventory⁷.

As retailers aim to cater to the growing demands of consumers through increased variety, the complexity of their supply chain increases as well. This compounds the need for thorough yet consistent reviews of what new units should be listed or removed from an assortment, to minimise waste.

How are Supply Chain solution areas relevant to SKU rationalization and optimization? As shown in Figure 7, short, medium, and long-term impact for some shortlisted solution areas are analyzed with respect to SKU Optimization, in areas such as demand forecasting, network and production distribution and supply chain/product visibility.

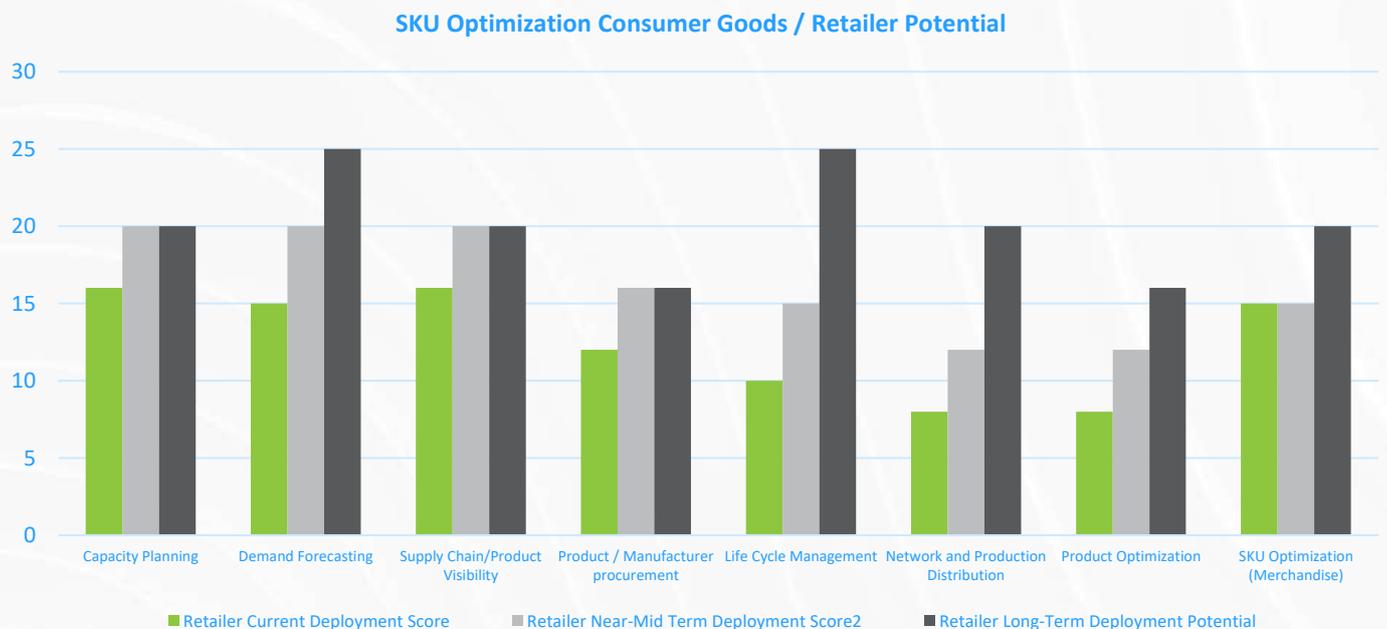


Figure 7: Solution areas relevant to SKU optimisation and their sustainability potential and impact

⁷ NASDAQ, "Findings at Unilever Illustrate Why SKU Rationalization Can Be So Essential", October 2016. <https://www.nasdaq.com/articles/findings-unilever-illustrate-why-sku-rationalization-can-be-so-essential-2016-10-27>

When it comes demand and capacity forecasting, the best retailers and consumer goods companies are already leveraging algorithms and Big Data to understand demand & capacity patterns, as well as automating inventory optimization levels and decisions. These methods would not only reduce waste and emissions for both inventory and logistical movements, in addition, such data driven retailers average a 10 per cent decrease in write-offs and up to 9 per cent higher gross margins.

Many others are optimising their production networks to balance cost and efficiency. An ancillary outcome would also include minimising logistics-related emissions. Businesses are beginning to understand that their cost-saving measures that were generally accepted years ago, are quickly hindering them from being the agile supply chain that their customers expect.

Businesses have to constantly weigh their operations between savings and efficiency, leveraging data to make informed decisions on their supply chain to not only adapt to market demands, but also minimise unnecessary waste.

Another key input and capability next to SKU optimisation is Supply Chain Visibility, which provides capabilities to reveal and take action against supply chain inefficiencies to meet market, corporate, and government regulatory requirements. Such a capability would typically include a combination of sensor and sensor-less technologies, which we have covered in more detail in our previous whitepaper, and such capabilities would also make it increasingly possible for a company to credibly make and verify its sustainability claims.



CASE STUDY: Mondelez

Multi-national confectionary and food company, Mondelez, credited an "unprecedented" gain in market share in their second quarter to their resilient supply chain executions, which added a staggering 85 per cent of the company's revenue base gained market share in that quarter⁹.

A key objective that the firm would adopt would be to further reduce their SKU count by 25 per cent, which is estimated to represent just 2 per cent of the company's sales. The initiative would be crucial to further reduce cost and complexity and improve inventory resilience during the pandemic and beyond.



CASE STUDY: Coca-Cola

In July 2020, Coca-Cola said it was expanding on a "ruthless" SKU rationalisation strategy, optimising not just products but brands, in an effort to better manage supply chain stresses. Part of the reason was the disruptions caused by the coronavirus pandemic.

Core brands and SKUs were prioritised to strengthen the resilience of its supply chain, the company said. For example, it discontinued its Odwalla juice brand by the end of July. Many of the discontinued SKUs will not return, as Coca-Cola prioritised fewer but bigger and stronger brands based on consumer needs, it said.



⁹ Emma Cosgrove, Supply Chain Drive, "Mondelez plans 25% SKU cut to sustain pandemic market share growth", July 2020. <https://www.supplychaindive.com/news/mondelez-supply-chain-pandemic-coronavirus-SKU/582578/>

¹⁰ Emma Cosgrove, Supply Chain Drive, "Coca-Cola expands 'ruthless' SKU rationalization strategy to cut entire product lines", July 22, 2020. <https://www.supplychaindive.com/news/Coca-cola-SKU-brands-operations-rationalization/582081/>

Just as optimising the supply chain to better sustain both businesses and the environment is important, there is a key role that the finance sector can play in creating a sustainable supply chain as well.

For one, “Green finance” as a segment of the financial sector has been growing steadily over the past few years. Funds specifically allocated to sustainable investments were worth US\$31 trillion in 2019¹¹. The large majority of this financing is done through green bonds, though green and sustainability-linked loans are on the rise as well.

Rise of sustainability-linked trade finance

Besides corporates, global traders have been tapping on such products. Since 2018, global agribusiness and food trader Olam, has clinched closed to US\$1,3bn of sustainability-linked loans. The KPIs for these loans are tracked and reported by an in-house sustainability team within Olam, and monitored independently by Ernst & Young.

New banking instruments specific to trade have emerged. For example, the sustainable shipment letter of credit (L/C), has been launched by the University of Cambridge Institute for Sustainability Leadership’s Banking Environment Initiative (BEI), led by a group of global banks such as Deutsche Bank, BNP Paribas, Standard Chartered, and HSBC.

ROLE OF SUPPLY CHAIN FINANCE

¹¹ Deloitte Tax & Consulting, 2020. Asset Management Survey: The good rush route for asset managers
<https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/financial-services/IM/lu-asset-management-survey.pdf>

The financial product is geared towards the transformation of soft commodity trade, with the aim of achieving zero net deforestation. An earlier BEI use-case, structured together with the International Finance Corporation (IFC), revolves around palm oil imports into emerging markets, where the financing costs are lowered, and L/C trade documentation incorporates terms that integrate standards set by the Roundtable for Sustainable Palm Oil (RSPO). Traders such as Unilever and Wilmar have since joined the BEI grouping to do more, in other soft commodities.

Delivering real impact: targeting the tail-end

Beyond “green” trade finance product innovation, this paper puts forth that a supply chain can be rendered more ‘sustainable’, or ‘impactful’, if the financial juice that drives trade, can be made available to all the complex layers in the supply chain, all the way to the so-called tail end of suppliers—the ‘unbankable’ small and medium-sized enterprises (SMEs) that need funding the most.

Conventionally, this segment of SME exporters/importers has been regarded by lenders as ‘unbankable’ and ‘high-risk’. This is because the credit assessment model that supply chain lenders have used for decades usually relies on rigid accounting information taken from annual financial statements; and/or the financial strength of a well-rated buyer in a supply chain vis-à-vis its suppliers. SMEs, especially the smaller ones, are subject to either pricier credit terms, or longer cash-flow conversion cycles, or both.

As much as financiers want to enable deep-tier financing within any supply chain, they are hindered by 3 key challenges:

- One, financial institutions’ heavy reliance on traditional credit assessment models to underwrite risk that in itself is transactional in nature;
- Two, the lack of timely and reliable data sources, which impede an underwriter’s ability to accurately price transactional risk;
- Three, the risk and prevalence of fraud in trade and supply chain finance, due to the voluminous, and small-ticket nature of transactions.

“With sustainability becoming a greater imperative in the world today, organisations need to take a harder look across their sustainability efforts – be it environmental, social and economic – and leverage Deep Tech innovations to effect positive change while building a resilient supply chain for tomorrow.”

- Heng Soon Pang, Chief Operating Officer & Executive Director of Venture Building, SGInnovate

Evolution of credit risk assessment for trade

Change, however, is happening across the board, as corporates, bankers, insurers, and regulators, rise to build resilient and sustainable supply chains, in the wake of Covid-19.

In particular, the array of business applications put forth by the different industry verticals in this paper, especially tools in and around demand forecasting and monitoring, all have the effect of digitising physical trade and logistics data, and making them readily available as new data sources, which in turn shall enable an alternative trade-based credit underwriting model.

According to Sabine Oudart, director for supply chain finance at BNP Paribas, the bank already has “a 360° approach” to risk assessment, looking not only at a company’s financials, but also payment patterns between buyer and supplier, length of the relationship, and other factors. But the coronavirus crisis has shed an even brighter light on the importance of qualitative data.

“The Covid-19 crisis stressed out other important points to be assessed, such as the ability of the company to respond and adapt to stress situations like the one we are experiencing, and to new environmental policies and regulations,” she says.

Twinco Capital, a supply chain fintech lender funding companies big and small throughout the garment production cycle, also leverages trade-based data to finance customers. In addition, Sandra Nolasco, the company’s co-founder, firmly believes that production linked to ESG outcomes improve a firm’s commercial performance.

“We are actively gathering sustainable practices-related data, incorporating that in our statistical analysis of companies’ performance, and are in the process of understanding the impact and how we can measure it, so that by incorporating those variable, a better performing customer will have a better rating therefore a better price, better conditions,” she adds.



Tackling the tail-end

As earlier mentioned, key obstacles often brought up by trade underwriters is the lack of reliable data, especially on SMEs.

Annabel Ross, senior programme manager for the BEI, cites an example from its Trado pilot, involving a tea supply chain in Malawi. Completed in 2019, the project proved that you could incentivise a small-scale producer to provide extra data in exchange for faster/cheaper funding. The model here to was a “data-for-benefits” swap between a buyer and a supplier in a supply chain, authenticated via a block-chain. The data was provided by the suppliers — small tea growers — in exchange for purchase order financing at the buyer’s interest rate.

Unburdened by legacy processes, digital non-bank natives already understand the value of trade transaction data to determine the credit risk of small companies. Firms like Alibaba and Amazon are now offering financing to their vendors based on the data available from their e-commerce activities.



Similarly, accounting software such as Quickbooks and Xero recently started offering credit based on an SME’s accounting data. As part of its foray into trade and the B-to-B space, Quickbooks’ parent company, Intuit, recently bought out TradeGecko, a Singapore-based inventory and order management software platform for small retailers and wholesalers in more than 100 countries.

Firms like Alibaba and Amazon are now offering financing to their vendors based on the data available from their e-commerce activities. Similarly, accounting software such as Quickbooks and Xero recently started offering credit based on SME’s accounting data.



C2FO, a dynamic supply chain finance technology firm which is the world's largest marketplace for working capital, hopes to be able to reach deeper layers of the supply chain through partnerships with ERP systems used by SME suppliers.

"It is very early days, but we are looking at having a partnership with accounting or invoicing modules available on the cloud as SaaS providers, whereby we could get our tier 1 suppliers to start subscribing to those so that all invoices would be on the system, and perhaps we can then start helping them with their set of suppliers," says Saket Sarda, C2FO's senior vice president for Asia-Pacific.

Artificial intelligence may allow for the financing of SME suppliers outside of traditional supply chain finance programmes, eliminating the issue of SME's bankability altogether.

UK-based startup Previsio assesses three years of ERP data and uses machine learning to predict the probability of an invoice being accepted or rejected by a large buyer, in order to pay all of its suppliers automatically and instantly.

Role of logistic firms and freight forwarders

Shipping lines, which move over 90 per cent of the world's goods, have a critical role to play in sustainable trade and sustainable trade finance. Most large shipping lines, including Maersk, CMA-CGM and MSC, are now leveraging the logistics information they possess to offer trade finance products to their customers.

Freight forwarding firms and inland logistic firms that work with these shipping lines, should keep a close eye on the business applications they develop when integrating data and information sharing with the liners – some of the data produced as a result of tighter supply chain integration, is critical for financing parties, and shall enable tail-end SME financing in a significant way.

Antoine Perraud, head of Shipfin Trade Finance at CMA-CGM, elaborates: "We share our data with the financing party, who then has a reduced operational risk since we control the cargo, the container and the bill of lading. Thus, access to trade finance is facilitated for SMEs and we reinforce our partnerships with our customers."

"The Covid-19 crisis stressed out other important points to be assessed, such as the ability of the company to respond and adapt to stress situations like the one we are experiencing, and to new environmental policies and regulations."

- Sabine Oudart, Director for Supply Chain Finance at BNP Paribas.

A new credit underwriting geared for sustainable trade

On the one hand, credit assessment models are slowly evolving to include richer and more dynamic trade-based data. On the other, financial sector initiatives to improve supply chain sustainability have mostly focused on increasing traceability. But to achieve true supply chain resilience in the years to come, these two areas need to merge, and ESG considerations need to be directly included in credit assessment.

Euler Hermes also made a step in that right direction in January this year, when it announced the incorporation of ESG risks into country risk ratings. Now, the insurer is looking at how to incorporate ESG elements into sector and company risk ratings.

“We are having an internal discussion about how to integrate these risk criteria into our business model and to what extent,” says Charles Ruelle, the insurer’s chief innovation officer. “Investors are currently changing their investment strategies, taking into consideration such ESG risks, which impacts the valuation of companies and access to liquidity, so for us there is a connection with the probability of default.”

Supply chain sustainability cannot become a reality unless the industry changes its risk modelling to include trade-based and ESG data. The examples in this paper prove that it can be done, through a convergence of players in the industry, including physical movers of goods.

Collectively, it is the supply chain and supply chain finance sector’s responsibility to accelerate commercial innovation, seek new partnerships and push harder for broad-scale adoption of such innovative structures by their clients, at scale.

“We believe that social responsibility and more sustainable production will reflect in better commercial performance.” - Sandra Nolasco, Twincó Capital.



There needs to be a rethink of how supply chain sustainability is being perceived and how strategies surrounding it are executed at corporations. More than a “good to have” project, sustainability will be core to a corporation’s operations in the future because its environmental, economic and social impact will have direct repercussions that either improve or threaten its well-being in future.

The arrival of the pandemic in early 2020 has forced many governments, businesses and consumers to reconsider what is “business as usual”. It has emphasised the interconnectivity of people across the world, while reminding them the fragility that exists in this globalised environment.

Indeed, the pandemic has showed how vulnerable the global supply chain is. While there are signs of slow recovery, in virus spread control and improvement to carbon emission reduction due to slowdown of economic activities, climate impact & disasters are still occurring.

California experienced the longest stretch of unhealthy air quality alerts on record in the Bay Area in September 2020, with 25 straight days of “Spare the Air” alerts. Earlier in the year, Korea experienced the country’s longest monsoon in seven years, leading to a national declaration of two disaster zones after 42 days of consecutive days of rain. The impact on supply chains cannot be underestimated.

CONCLUSION



“We have now the opportunity to embed Sustainability thinking into Resilience initiatives, so that as we emerge from this COVID-19 pandemic, we emerge with a much more solid sustainability foundation as part of our evolved corporate and business ecosystem DNA” – Marc Dragon, Reefknot Investments.

For businesses, the impetus to build up their sustainability efforts might begin with environmental concerns but increasingly, it is important to realise that the social and economic aspects are just as important for a more meaningful form of sustainability in the long term. If there's a lesson from the pandemic that's universal, it is the importance of building resilience for the future.

Potentially, companies that focus on sustainability may even be better performers, because they are able to better optimise their business to produce positive impacts instead of generating a negative environment that might prove unsustainable in the long term.

In the same vein, innovative companies with sustainability in their DNA could well outperform others that do not view sustainability as an important exercise in the long term. This is an organisational characteristic that may have a profound impact in the years ahead.

Businesses should therefore view sustainability from the angle of innovation and new value creation, and to make it a priority to include environmental and social impact on par with economic performance.

“Moving forward, businesses that commit to focusing on ‘Triple Bottom Line’, which is People, Profit, and Planet, will continue to lead in this era”
– Kong Wai Wei, Global Supply Chain Leader

Today, there is an opportunity for a more holistic effort at building sustainability in the supply chain. Here are three recommendations for industry leaders:

1. Develop a broader definition of sustainability: While reducing emissions is the focus for many businesses, it is important to find a definition that would include not just environmental but also social and economic factors as well. Make sustainability the core of all operations, not just an add-on activity.
2. Leverage data and technology to drive sustainable innovation: If data is the lifeblood of the new economy, then it should be the ingredient for any successful innovation & sustainability effort. Business innovation in turn should not only be enabled by data & technology, but also consist of at least 2 of the 3 pillars of sustainability : environmental, social, economic impact.
3. Bring finance into the equation: Small businesses are the lynchpin of most economies, especially the emerging economies, and for global sustainable development to happen, these small businesses would need to have access to capital to survive and grow. Financing for sustainability would thus have to take on a new meaning, and all ecosystem players would need to combine efforts to all grow sustainably together.

Find out more about a sustainable supply chain by speaking to a Reefknot representative at info@reefknotinvestments.com

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