

Supply Chains

A finance professional's perspective



Think Ahead



The Association of
Accountants and
Financial Professionals
in Business



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Introduction

The pandemic has seen an increased focus on supply chains and procurement. The increasingly integrated nature of business models means that supply chain teams and their finance counterparts need to work ever more collaboratively in addressing the forthcoming challenges.

This report looks at this essential relationship. It offers a [Charter for Collaboration](#) and then explores the background to the current developments and the areas of common interest. At each step it offers suggested areas to think about for the finance professional.

As the [environmental, social and governance](#) agenda increasingly becomes a focus for all organisations, so the impact of this in their supply chains is as relevant as the steps that they themselves are taking. This requires [collaboration and data transparency](#), not least to address the reporting requirements of stakeholders and regulators.

This report has been developed from interviews with finance and supply chain professionals across the globe and reflects their insights. This document is a summary. The full report can be downloaded from the ACCA and IMA websites.

'if [finance and supply chain teams] use different lenses to really understand what's going on it will be challenging'



Charter for collaboration



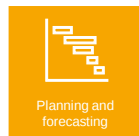
Vision

Establish shared challenges and future vision that support the purpose of the entity and align to the strategic objectives in delivering products and services to the customer in an effective and efficient manner.



Trusted finance business partner

Provide relevant, accurate and informed advice to support decision making, including understanding the cost base and Cost-to-Serve, thereby strengthening the relationship between supply chains and finance.



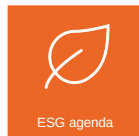
Planning and forecasting

Change planning, budgeting and forecasting horizons in response to the evolving nature of the entity and the environment in which it operates, accepting that traditional cycles may no longer apply.



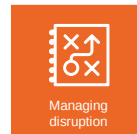
Data and technology

Work together to ensure that technology and data developments address collective requirements. Appreciating the importance of predictive analytics and ensuring that the relevant data is available; understand how digital supply chains are making business models evolve.



ESG agenda

Recognise the importance of the environment, social and governance (ESG) agenda, ethical supply chains and non-financial reporting, especially as regards suppliers across the supply chain network relationships and how these can be understood.



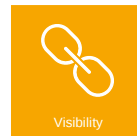
Managing disruption

Prepare the entity to weather the next round of disruption and ensure that the modelling capabilities are available to allow understanding of the opportunities that appear.



Collaborative mindset

Recognise that collaboration is key – respecting the differences, maximising the commonality; approaching with a project-centric and collaborative mindset.



Visibility

End-to-end visibility is key across supply chains as entities look to enact strategies that will drive sustainability goals. Understanding the full nature of supply chains is essential in this.



Ethical lens

Use the ethical lens in common to assess the challenges in supply chains and the behaviours of entities, especially as these lead to regulatory challenges.



Risk and due diligence

Jointly engage in risk management and supplier due diligence activities as the challenges continue to evolve.

Procurement and Supply Chain Cycle



What is procurement and supply?

The CIPS Procurement and Supply Cycle outlines the complexity and breadth of activities carried out by **procurement** teams. The procurement team are responsible for overseeing the steps of the procurement cycle, covering core department activities such as market analysis, sourcing, negotiation, contracting and supplier relationship management for goods, works and services, covering both acquisitions from third parties and in-house providers. The process spans the whole **procurement cycle** from the identification of needs, through to the end of a services contract or the end of the useful life of an asset. It involves options appraisal and the critical 'make or buy' decisions.

Procurement teams analyse and management **risk** throughout the **supply chain** from availability of supply, price fluctuations and the continuous monitoring of the micro and macro-economic environment for potential impact.

Sustainability sits at the heart of procurement with approximately 80% of an organisation's sustainability impact sitting in the supply chain. Procurement supports the sustainability goals of the organisation and optimises the environmental, social and economic impacts over the life cycle of products and services.

Supply Chain Management

Supply Chain Management is the management of the flow of goods, services and suppliers from raw materials to the consumption by the consumer, requiring a network of suppliers that link the supply chain together.

Industry 4.0 and Supply Chains

Industry 4.0 is impacting supply chains in ways that are like the finance function. The ability to simulate potential outcomes of strategies using modelling techniques is becoming a key management tool. The concept of a digital twin to model the entity in virtual reality is an important. Visualise the introduction of a new product, or the commissioning of a new factory or piece of equipment. What is the potential impact? This can be modelled in a simulated environment without looking to committing to capital investments and waiting to see what the outcome might be.

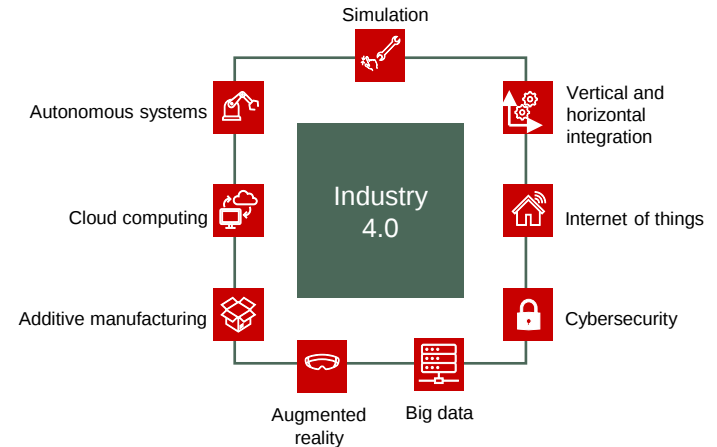
Entities are also taking positions on vertical and horizontal integration. This may be the acquisition of entities, but also through more collaborative arrangements.

Industry 4.0 is about data, initiated by the **Internet of Things** allowing tracking of goods and the prediction of maintenance, as examples. All this data has a value and needs to be kept secure and is generally stored in the Cloud. Augmented reality let us visualise the use of products whilst additive manufacturing (such as 3D printing) can impact how entities construct components or finished products and may well shorten or change component supply chains.

Autonomous systems, such as robot warehouse technologies, are changing the way that entities serve customers by running warehouses with far greater efficiency and thereby enabling some of the e-commerce transactions of consumers.

All of this is becoming a reality and whilst not all entities will use all components, it is easy to see both how supply chains are being changed and also how the financial transactions that are embedded within them are evolving.

Whilst typically we talk of supply chains in terms of manufactured goods, we should not forget the increasing importance of service supply chains in many economies. These are essentially **human capital focused**, but are facing many changes as a result of the technology trends highlighted by Industry 4.0. Services make up a substantial proportion of many developed economies and are suffering from resource constraints.



Things to think about:

- How is your organisation's business model changing?
- What is the impact on the supply chains?
- What are the implications for working capital management and forecasting?

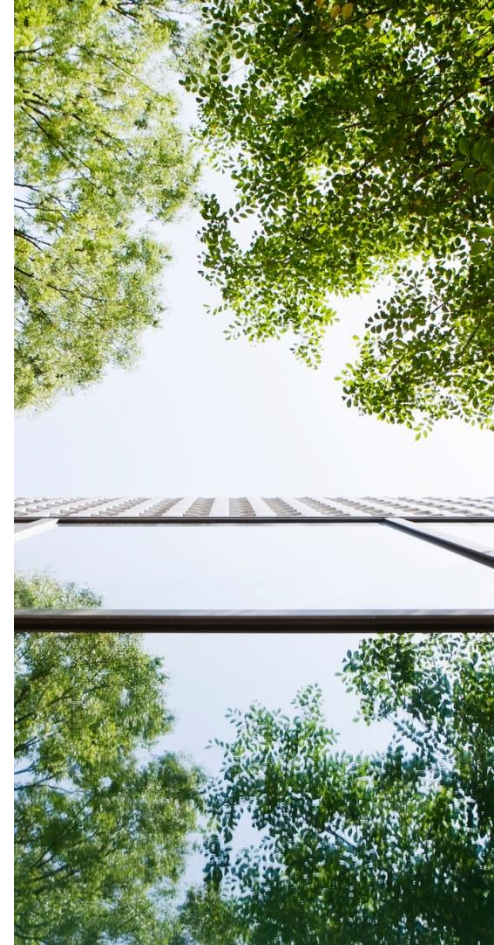
Sustainable Supply Chains

Sustainability is a significant issue in supply chains. The UN Global Compact comments that ‘when supply chains are done wrong – by not taking into consideration the environmental, social and governance performance of suppliers – companies leave themselves open to significant operational and reputational risks. Impacts on people and the environment can be substantial and severe’.

Whilst we may focus on achieving **net zero** and similar targets, it is worthwhile commenting that the scope of a sustainable supply chain is not just about the E. Many are also focused on **workforce issues**, such as conditions and child exploitation. These are relevant in supply chains, indeed, there are ethical issues over the extraction of cobalt which is a key raw material in the development of batteries for electric vehicles. The issues are complex and often finely balanced.

The ESG agenda is becoming significant in the discussion around supply chains. As entities look to move towards addressing the necessary changes in their business models to achieve the global targets by 2030, including the relevant **UN Sustainable Development Goals**, so there will inevitably be transformative steps that they need to take. Often these may not have a direct financial return and finance teams need to be attuned to this.

It is important to recognise the need to improve processes in these areas. Shipping and air freight represent significant sources of emissions in supply chains, although in cost terms the ‘last mile’ of delivery to a consumer is often the costliest, both financially and in terms of emissions.



Sustainable Supply Chains

ISO 20400:2017 provides guidance on how to create sustainable procurement in three areas:

- Integrating sustainability into the organisation's procurement policy and strategy
- Organising the procurement function toward sustainability
- Integrating sustainability into the procurement process

All of this leads to the consideration of emissions which the Greenhouse Gas Protocol categorises into three scopes. Direct emissions, **Scope 1**, are those that the entity can directly control from its own activities. Indirect emissions are the subject of **Scopes 2 and 3**. Scope 2 is those indirect emissions such as those from the use of electricity and heating or cooling. Perhaps most challenging are Scope 3 emissions which occur in the value chain of the company, both upstream and downstream.

Like any aspect of an entity, supply chains have a way to go in terms of managing emissions and creating sustainability. For finance professionals this changing business model requires a deep understanding of the issues and strategies. As will be discussed later in the presentation, the level of knowledge at present can be small.

Things to think about:

- What strategies is your organisation adopting in this area?
- What are your current and future reporting requirements? Can these be addressed from current information flows?
- What risk management and due diligence strategies do you have in place?





Why Supply Chains Matter to Finance

We have seen some of the macro trends in supply chains. The reality is that entities are constantly looking to adapt their business models. That rate of adaptation is accelerating. Many of the drivers are becoming more pressing. Finance teams need to demonstrate a deep understanding of the business model. Planning and forecasting, amongst other aspects of their work, are predicated upon this. As supply chain teams react to their influences, so finance needs to react too.

Most critically in this ability to react is the skills of the **finance business partner**. Many of the supply chain professionals interviewed for this report stressed the importance and the benefits of a good finance business partner in delivering insights and supporting decision making. They are often integral parts of supply chain leadership teams. Being a trusted advisor requires credibility, reliability and intimacy but all of this can be undermined by a promotion of self-interest.

Things to think about:

- How would you categorise the relationship with your Supply Chain and Procurement colleagues?
- Develop an action plan of current issues?
- What actions can you take to work more collaboratively?

'based on my observation generally there is a lot of room for improvement between the communication of the two groups'

Adding Value

How does finance add value? The answer is that there are range of ways but the quote on the slide emphasises that it is important to speak a common language, and this spans many of the dimensions of collaboration.

Firstly, what does a **product cost** and what does return does the entity achieve from any particular customer. It is possible, indeed likely, that the traditional views of cost and profitability are not the whole story. Applying concepts such as 'cost-to-serve' may assist in understanding which customers are the most profitable – and it may not be those who are thought of as the best. The 'last-mile' accounts for 53% of all costs in a supply chain, according to one estimate.

In the pandemic we have seen an emphasis on **liquidity of entities**, and indeed, that is likely to continue as inflationary pressures continue to impact supply chains. The key relationship in the supply chain is a payment one. When will I receive the monies owed in the relation to the goods or services provided. Helping suppliers, especially those smaller ones in supply chains remain solvent, has been key factor in the pandemic world. The balance of risk (those critical suppliers) and reward (the continuation of supply) is a challenging one, but one that finance needs to be working closely with relevant supply chain team members on.

Due diligence is another area of collaboration. As we have seen in Industry 4.0 earlier, vertical and horizontal integration are becoming key drivers for entities. Yet, as one supply chain lead commented, their team members are often left out of such processes, however, they may have a detrimental impact on other key supply relationships. Adding value is about thinking broader.

Treasury traditionally had little involvement in supply chain issues. Cash positions were static, yet as data has become more available, so it has become easier to manage these more dynamically. And in turn this opens up the concept of supply chain finance.





SME lens

The SME lens in supply chains is very important. In any network, as in reality supply chains are networks, you will find many SMEs. These may be component manufacturers or other suppliers. However, as McKinsey noted in the second quarter of 2021 only 2% of those surveyed, typically larger organisations, had **visibility of their supply chain** beyond the second tier, and only 21% had visibility of their second tier. Few actually understand the network and the vital role that each level plays.

The drive towards non-financial disclosures across supply chains is cascading some of the requirements through these networks. Not least in helping larger entities to understand their **Scope 3 emission targets**. SMEs often lack the infrastructure to respond either from a compliance perspective or in enacting the necessary changes to their operating models.

In turn, if the numbers that McKinsey noted in relation to the awareness of the players in an entity's supply chain were repeated for SMEs it is likely that the numbers would not look any better. One practitioner noted that one of their struggles was to help their clients **understand their supply chains** beyond the first tier. As 2021 has brought disruption, so the criticality of supply chains has become important.

Things to think about:

- As large organisations are you working with your tier 2 and tier 3 suppliers effectively enough?
- Do you understand full extent of the network of suppliers both before and after your organisation in the chain?
- Are you able to report effectively on the data in the chain; do you have the processes and systems to do so?

‘A perfect storm’? Disruption is the norm

Several of the research contributors referred to the disruption of 2021 as a ‘perfect storm’. The pandemic alone was one factor but what it did do was exacerbate the fault lines.

Before the pandemic struck much of the conversation was on **trade and tariffs**. There were several examples of these actions. What it underlines is the trade and supply chains can be a **political tool**. That said, the actions taken were mainly around more consumer focus goods.

The **pandemic** has also seen politicians controlling the spread using border controls. Air routes have been disrupted and the number of flights significantly reduced as demand contracted. Whilst airlines have adapted planes to ship cargo (and there have been innovations there).

Much of the conversation has been around **port congestion**, which in part has been due to pandemic restrictions restricting operations. This in turn has caused a shortage of containers and an in balance of trade which the shipping companies have struggled with.

Things to think about:

- What risk management strategies do you have in place to anticipate potential impacts of disruptions?
- How flexible are your planning, budgeting and forecasting processes? Are you able to model a world of constant disruption?
- What longer term strategies are you evaluating?





An end in sight?

The reality is that **disruption** is a natural cycle of events.

There are several implications in **the medium to longer term of the pandemic on supply chains** and hence the interaction with the finance community. The first is around the **planning** cycle. The nature of the disruption is such that the traditional planning and budgeting cycles of are being replaced by more flexible scenario modelling and predictive analytics techniques. For these to be fully effective they need data drawn from sources across the supply chain as well as a closer collaboration to understand they dynamics of how customers and demand changes will impact sourcing and the availability of raw materials.

Entities have focused on the **management of inventories** through just-in-time processes that are often hard to stop and restart at regular intervals, as an example think about car assembly and the number of components that need to arrive at one place within a short timescale and the challenges of the pandemic and delays in production become understandable. Whilst some entities can think about a transition from just-in-time to just-in-case, for many this may not be possible. As finance professionals, understanding these drivers is essential as it models future performance.

There have also been shifts in **global economics** – not all of these arise directly from the pandemic but may well have arrived at a similar time. During the 1990s and 2000s the global economy operated on low-cost manufacturing, typically in Southeast Asia and China. Some of those cost advantages are beginning to lessen. As the world looks across the **ESG agenda** towards the sustainable development goals in 2030, so some manufacturers are bringing production closer to the consumer – near shoring. Again, for finance teams this changes the business model and involves **understanding and evaluating certain investments**.

All these trends stress the importance of the close relationship between supply chain and finance professionals, but the importance of the finance business partner as a true trusted advisor who can interlink between the dimensions and be involved in the strategic and operational decisions that this changed world dictates.

Data is key, technology enables

Having a common understanding is important to an effective relationship. Being able to look through the same lens reduces misunderstandings and improves decision making. In the world of Industry 4.0, as we have seen, **data is key**. Data is the means by which we can analyse and interpret the present and look towards the future using techniques such as predictive analytics. Having a universal data model is essential to this.

Achieving this requires **visibility across the supply chain**. Studies suggest that organisations have progress to make in improving visibility and data sharing across their networks. Many are aware of their first tier suppliers and may be their second tier but only a small number are aware of tier three and beyond. Whilst in any trading relationship there are always issues of confidentiality and commercial sensitivity, as supply chains become more complex, so there is a need to open up. This places a burden on smaller entities in supply chains to have the systems and processes in place to manage such connectivity.

In part this visibility can be addressed by the use of **smart contracts and blockchain** technology. A smart contract is a self-executing contract with the terms of the agreement between buyer and seller being directly written into lines of code. The code and the agreements contained therein exist across a distributed, decentralized blockchain network. The code controls the execution, and transactions are trackable and irreversible.

'if [finance and supply chain teams] use different lenses to really understand what's going on it will be challenging'



Data is key, technology enables

Having the data allows organisations to utilise **analytics** to understand trends and improve forecasting. Finance and supply chain teams are on a similar path from the use of **descriptive analytics**, what has happened in the past, to more predictive analytics, what might happen in the future. In part this may use artificial intelligence and machine learning to facilitate the understanding of trends, however, moving from a reactive to a proactive mindset is important for organisations going forward.

The data flows also allow **end-to-end visibility of the supply chain**, and this can be represented in a Supply Chain Control Tower. This is technology that provides a visual representation of the flow of goods across a supply chain linking to ERP solutions and drawing data from partners and from RFID and other sensors. It can assist in identifying disruptions and potential blockages on networks and facilitate forward actions.

Things to think about:

- How does the data strategy of the organisation address the needs of the Supply Chain and Finance teams, especially in regard to non-financial disclosures?
- What procedures do you have in place to monitor emerging regulations and the impact on the data requirements?
- How are organisational strategies embracing technological shifts that will impact finance and supply chains?





Ethical supply chains

None of this discussion can be too far from the **ethical** agenda. As professions Supply Chain and Finance have strong ethical bases.

There is an increasing regulatory focus on understanding the **impact of supply chains**. As an example, Germany introduced legislation in June 2021 that provided for fines of up to 2% of global turnover for entities that did not meet the necessary disclosure requirements around the ethical nature of their supply chains, not only from an ecological perspective but also from a workforce lens. Other countries are looking to introduce similar legislation. The impact is to put the **ethical nature of supply chains at the heart of disclosures**, whilst also potentially creating a burden on smaller entities who face differing forms of compliance from many larger entities.

A **Supply Chain Code of Conduct** can be one way to assist entities to help instil financial and social transparency in the supply chain, with the intention of creating accountability and full disclosure around issues such as human rights, health and safety and environmental impacts.

All of this leads to **Supply Chain Risk Management**, not just from a disruption perspective, but also from an ethical perspective. What are the values of the entity and what other entities is it willing to trade with?

Things to think about:

- How to evolving ethical strategies impact business models?
- How do enterprise wide risk management strategies embrace supply chain risks?
- How do finance and supply chain teams collaborate in supplier due diligence?

'It is about understanding to what extent that impacts your business'

How to stay in touch

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