TIMO ROSSI & JARL MATTI ANTTILA

SUPPLIER EXPERIENCE

The Fundamentals of
Modern Supplier Collaboration

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C O N T E N T

BY IMPROVING
SUPPLIER
EXPERIENCE
IN A RELATIONSHIP,
AN INDUSTRIAL
CUSTOMER STARTS
A POSITIVE CIRCLE.

FIGURES AND TABLES

FOREWORDS

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WE ARE DELIGHTED to publish this book, a carefully crafted guide that presents the concept of Supplier Experience through six practical lenses. We provide an overview of the concept and the opportunities that a good supplier experience offers for development-oriented, sustainability-driven, and growth-focused companies.

Complex supply chains, the global business environment, new requirements of sustainability, market uncertainty, and information asymmetry have created new demands for business relationship interactions between customers and suppliers. Supply chain leaders need different capabilities today than previously. Therefore, traditional internal management activities, such as product development, demand planning, supply chain planning, and manufacturing, are no longer sufficient to achieve a high-performing and sustainable supply chain.

We encourage all supply chain leaders to focus more on relational activities – how to encourage joint learning, transparency in information sharing, transaction automation, continuous interaction, symmetrical and real-time data exchange, and mutual trust in customer-supplier relationships. The future success of supply chain leaders is measured by these criteria and they are closely linked to SCM performance objectives.

In a world increasingly defined by digital interfaces and automated processes, the enduring importance of the human touch cannot be overstated. This book places a profound emphasis on the human approach to Supplier Experience

– a reminder that behind every transaction, process, and digital tool, there are individuals with unique perspectives, needs, and expectations. Building relationships, understanding the human element, and fostering a collaborative environment are important in achieving a Supplier Experience that exceeds mere transactions.

In the ever-evolving landscape, where change is the only constant, technologies must be more than tools. They must enable creating efficiency and innovation in the supply chain. This book discusses the transformative power of technologies that seamlessly adapt to evolving requirements.

Beyond environmental responsibilities, a holistic sustainability approach includes economic viability, social and environmental responsibility, and ethical governance. This book emphasizes the critical role of sustainability in Supplier Experience, exploring how organizations can align their strategies with a sustainable future, in the context of customer-supplier relationships.

Both of us primarily have a background in the manufacturing industry, which is reflected in our experiences and observations in the book. However, the fundamental principles discussed in the book can be applied to various other industries as well. Our aim is to avoid abstract treatment of any hype and describe Supplier Experience through the analysis of six different lenses.

We extend our gratitude to the hundreds of individuals who have participated in discussions and workshops, contributing to the ongoing development of our expertise in shaping the Supplier Experience Concept over the years. **Mark Wiltshear**, we appreciate your assistance with refining the English grammar and enhancing the clarity of our text. **Eveliina Ahinko**, your expertise in folding and design has made a significant impact on finalizing our book project, and we are very thankful. We give special thanks to our wonderful colleagues, as well as to **Jakamo**, the company publishing this book.

Furthermore, we express our special appreciation to our dear friend, Professor (Emeritus) **Jukka Vesalainen**, a pioneer in the research of dyadic business relationship management. The ideas presented in this book have strongly been built on his thought leadership and academic legacy. In this book, we are pleased to present a small piece of his legacy as the epilogue chapter written by himself.

This book aims to introduce and explain the concept of Supplier Experience while providing guidance for supply chain executives, lecturers, researchers, and university and executive education students on how to apply it in practice. We hope you enjoy it and feel inspired.

Tampere, 24 April 2024
Timo Rossi and Jarl Matti Anttila

ABOUT THE AUTHORS

TIMO ROSSI
M.Sc. (Econ. & BA), B.Sc. (Mech. Eng.)

Timo is a seasoned business leader and dedicated strategist in the field of supplier experience and supply chain sustainability. Currently serving as the Chief Business Design Officer and Co-founder of Jakamo, he also holds the position of Visiting Professor at IÉSEG School of Management in France. With his expertise, he has been as advisor to Nordic growth companies and served as a visiting lecturer at multiple universities.

Timo brings over 15 years of experience in both industrial and academic settings, with a strong focus on procurement, supply chain management, business design, and sustainability.

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Jarl Matti is an entrepreneur who has co-founded two growth companies, Jakamo and MDI. He currently serves as the Chief Creative Officer at Jakamo. With extensive experience, he has held board positions in multiple organizations including Ilkka Plc and Seinäjoki Live Music Association Selmu. Additionally, he has served as a visiting lecturer at University of Vaasa and Lappeenranta University of Technology LUT.

Jarl Matti possesses 20 years of expertise in empowering customer-supplier relationships, SaaS business development, and organizational design. He is a consumer and fan of football and arts.

1. INTRODUCTION

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MOST EXECUTIVES are already familiar with the concepts of *Customer Experience, Employee Experience,* and *User Experience*. There is no doubt that these aspects are crucial for a company's success. However, how many have considered or even heard of *Supplier Experience*? And why should every executive prioritize this topic? In this book, we dive deep into the concept of Supplier Experience, providing insights into its significance and implications for executives. We define Supplier Experience as follows.

Supplier Experience is established within the customer-supplier business relationship. It is subjective in nature and emerges when supplier compares the promises made by customer with their actual experiences.

In this book, supplier experience is presented holistically in the context of modern supplier collaboration, including operational, social, strategic, structural, sustainability, and technological approaches.

This chapter discusses the theoretical background of supplier experience from the point of views of business relations and customer, employee, and user experience.

EXPERIENCE-BASED APPROACH

The *experience-based approach* highlights the significance of considering and enhancing the experiences of various stakeholders, including users, employees, and customers, within the context of business operations. Behind this approach is a recognition of the interconnectedness between different types of experiences and their impact on organizational performance and success. By prioritizing and optimizing experiences of users, employees, and customers, businesses can create sustainable competitive advantages and drive long-term growth.

There are strong links between the experience approach and fact-based management, as both emphasize the importance of evidence, data, and objective analysis in decision-making processes. Fact-based management relies on empirical evidence and data analysis in **decision-making**. Similarly, the experience approach acknowledges the value of real-world experiences but also emphasizes the need to supplement those experiences with factual data and insights. By combining experiential knowledge with factual data, organizations can make more informed and strategic decisions that are grounded in both practical wisdom and objective analysis.

> BY PRIORITIZING AND OPTIMIZING EXPERIENCES OF USERS, EMPLOYEES, AND CUSTOMERS, **BUSINESSES CAN CREATE SUSTAINABLE COMPETITIVE ADVANTAGES AND DRIVE LONG-TERM GROWTH.**

Fact-based management relies on Key Performance Indicators (KPIs) and other metrics to assess performance and progress toward goals. Likewise, the experience approach involves evaluating the impact of initiatives on stakeholder experiences, such as user satisfaction, employee engagement, and customer loyalty. By collecting and analyzing relevant data, organizations can identify areas for improvement and make adjustments to enhance overall performance and experiences. In experience approach there is a strong emphasis on fact based **measuring and evaluating** outcomes.

Fact-based management encourages organizations to identify areas of inefficiency or underperformance through data analysis and implement changes to address them. Similarly, the experience approach promotes a culture of

continuous learning and adaptation, where organizations seek to continually refine and optimize experiences based on feedback from users, employees, and customers. This iterative process of improvement is driven by both factual insights and experiential knowledge.

Ultimately, the integration of the experience approach with fact-based management allows organizations to leverage the power of both subjective experiences and objective data to drive strategic decision-making, enhance performance, and create value for stakeholders. Next, we present a breakdown of the most well-known stakeholders in the experience thinking approach

CUSTOMER EXPERIENCE (CX)

Customer-centricity and design thinking have been important themes in companies and other organizations for years. These concepts have given rise to the idea of customer experience, a comprehensive model focused on delivering positive and meaningful experience to customers when interacting with a brand or business.

Customer experience refers to the overall perception and interactions that customers have with a company throughout their entire journey, including pre-purchase, purchase, and post-purchase stages. Customer Experience focuses on delivering exceptional service, meeting customer needs and expectations, building lasting relationships, and fostering loyalty. Organizations prioritize Customer Experience to differentiate themselves in competitive markets and drive customer satisfaction and advocacy.

There are multiple definitions for customer experience characteristics in the literature. However, we can summarize the three key elements of customer experience as follows:

1. ***Customer voice and empathy:*** This element emphasizes actively listening to and understanding customer values, preferences, feedback, concerns, and needs. It's about empathizing with customers and using their insights to improve business models, products, services, and processes. This empathetic approach fosters a deeper connection with customers, showing that their opinions and experiences matter.

2. *Customer touchpoints:* These are the various points of interaction between a customer and a brand, including physical meetings, digital platforms, websites, mobile apps, social media, customer service interactions, in-store experiences, and more. Ideally, each touchpoint is designed to provide a seamless and consistent experience for the customer.

3. *Customer journey:* The customer journey encompasses the end-to-end experience a customer has with a brand, from initial awareness and consideration through the purchase process and post-purchase support. Understanding and mapping the customer journey helps businesses identify pain points and opportunities for improvement in the overall experience.

These three elements are interconnected, forming the foundation of a customer-centric approach to business, aiming to consistently meet and exceed customer expectations at every stage of their interaction with the brand.

In essence, when discussing customer experience, it extends beyond the product or service itself. It includes the people who facilitate interactions and the overall impression created at each touchpoint along the customer journey. Creating a positive customer experience involves aligning commitments with actual experiences, ensuring that customers feel valued and supported throughout their interactions with the brand.

Similarly, suppliers can also have positive or negative experiences in their business relationships with customers. In the context of supplier experience, the principles of customer-centricity and design thinking extend beyond the end customers to relationships with suppliers. Just as with customers, a supplier-centric approach emphasizes actively listening to and understanding supplier values, preferences, feedback, concerns, and needs. It involves empathizing with suppliers and using their insights to improve the business relationship, procurement processes, and collaboration.

Much like in the customer experience context, a supplier friendly approach involves aligning commitments with actual experiences and ensuring that suppliers feel valued and supported throughout their engagement with the organization.

EMPLOYEE EXPERIENCE (EX)

Employee experience involves understanding and improving the experiences of employees within an organization throughout their journey, from recruitment to departure. It covers various aspects, including workplace culture, knowledge development opportunities, work-life balance, employment design, and the physical work environment. A positive employee experience leads to higher engagement, productivity, retention, and overall organizational success.

The literature on employee experience defines it through three elements: Organization culture, technology, and physical environment.

1. *Organizational culture* covers the values of the organization, establishing norms for expected conduct.

2. *Technology* relates to the tools, often digital, that employees use in their tasks.

3. *The physical environment* mainly concerns the facilities and spaces where individuals carry out their work. In order for a positive employee experience to take shape, these factors must all be present in a manner conducive to fostering positive outcomes.

A more in-depth insight into employee experience stems from the **psychological contract theory**. This theory approaches employee commitment by focusing on expectations. Essentially, employees assess how their employer organizations' commitments align with their actual day-to-day experiences. When these commitments aren't fulfilled, the result can be reduced work motivation, weaker commitment, and diminished loyalty to the employer.

Psychological contracts are built upon two primary types of elements. The transactional promises include economic and monetary aspects like salary and various forms of incentives. On the other hand, relational promises revolve around socio-emotional and relationship-related matters such as transparency in communication, mutual support, learning opportunities, professional growth, and prospects for the future.

Supplier's personnel can have positive or negative experiences in the business relationship with a certain customer in terms cultural, relational, transactional, and technological approaches. Traditionally, the supplier's contact persons are thought of as salespeople. However, in tighter and more integrated business relationships, employees from different parts of the company and different levels of the hierarchy get involved in interactions with the partner company. So, when talking about supplier experience it's not just about the supplier company itself. It's actually about the people who bridge the gap between the two companies, gaining insights from their day-to-day involvement in the customer's supplier collaboration context.

USER EXPERIENCE (UX)

User experience covers the overall experience individuals have when interacting with a product, service, system, or interface. It focuses on understanding and optimizing factors such as ease of use, efficiency, satisfaction, and overall enjoyment. User Experience design principles aim to create intuitive, accessible, and enjoyable experiences for users, ultimately enhancing product adoption and loyalty.

User experience design aims to create meaningful and positive experiences for users throughout their interaction with a particular product or service. Key aspects of user experience include:

1. *Usability* is at the core of user experience. It refers to how easy and efficient it is for users to accomplish their goals when using a product or system. A usable design ensures that users can navigate the interface, perform tasks, and access information without confusion or frustration. Key aspects of usability include learnability, efficiency, memorability, error prevention, and satisfaction.

2. *Usefulness* pertains to the value a product or system provides to users. It involves ensuring that the product meets the needs and goals of its target audience. A useful product addresses real user problems or fulfils specific user requirements effectively. Understanding user needs through research and feedback is essential for designing a product that is genuinely useful.

3. *Desirability* focuses on the emotional and aesthetic aspects of the user experience. It's about creating a product that users not only find easy to use and useful but also visually attractive and engaging. A desirable product often creates positive emotions, such as delight, trust, and satisfaction, which can lead to a stronger connection between the user and the product.

These three elements — usability, usefulness, and desirability — work together to create a positive and effective user experience. A successful user experience considers all three aspects to ensure that the product not only functions well but also meets user needs and engages users on an emotional level.

In the context of supplier experience, the principles of user experience can be applied to digital interactions and relationships between an organization and its suppliers. By prioritizing these aspects in their interactions with suppliers, organizations can build stronger, more productive relationships with their partners. These principles can be applied, for instance, to provide best-in-class digital user experiences in supplier collaboration tools, ultimately benefiting both parties.

THEORETICAL ROOTS OF SUPPLIER EXPERIENCE

Business relationships have been around since people first started doing business with each other. The concept of a business relationship emerged when one person sold something to another. While the idea of business relationships has been existing for a while, our understanding of it is still not fully comprehensive, despite some positive development in recent decades.

Back in the late 1930s, Ronald Coase introduced the concept of transaction costs to help us understand the nature and limitations of a single company. Oliver E. Williamson, a student of Coase, further solidified this transaction cost approach in 1975. Williamson's focus was particularly on the boundaries that separate different companies. Remarkably, both of these scholars were awarded the Nobel Memorial Prize in Economics – Coase in 1991 and Williamson in 2009.

Organisation researches could argue that is too hard to connect supplier experience to the studies Coase and Williamson did in their era. Instead, more relevant insights to understand the roots of supplier experience presented Paul S. Adler in his paper *Market, Hierarchy, and Trust: The Knowledge Economy and the Future of Capitalism*, published in Organization Science journal in 2001.

Adler's influential study introduces the market-hierarchy-trust framework, providing insights into the governance mechanisms within inter-organizational relationships. The framework explore how organizations navigate between market-driven exchanges (price) and hierarchical control (authority), while also considering the crucial role of trust (community) in shaping the dynamics of business relationships. By understanding the interaction between market, hierarchy, and trust, businesses can better strategize and manage their diverse partnerships to achieve optimal outcomes in an ever-evolving markets.
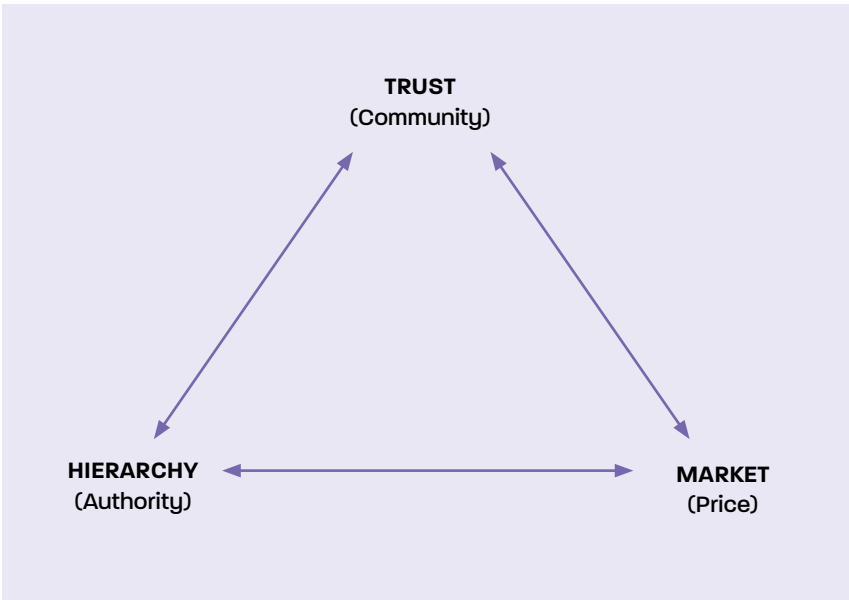

Figure 1. Three governance mechanisms within the business relationship (Adler 2001).

HIERARCHY. In hierarchical business relationships, governance mechanisms in practice are for example contractual agreements, supplier audits, and performance reviews. The buyer holds authority in monitoring compliance through contractual obligations. Supplier audits play a crucial role in hierarchy-based governance, ensuring adherence to quality standards and regulatory requirements. Performance reviews are utilized by buyers to evaluate supplier performance against pre-defined metrics.

MARKET. The market mechanism, as a governance model, promotes competition, productivity, and innovation at the suppliers. Price, as a pivotal factor, significantly influences decision-making processes, driving competitiveness and efficiency. Additionally, the threat of being changed to another vendor is a powerful incentive for suppliers to maintain high-quality standards and competitive pricing.

TRUST. Trust-based governance models, characterized by collaborative partnerships, joint development initiatives, and information sharing, promote cooperation, innovation, and mutual success. Collaborative partnerships are the cornerstone of trust-based governance, highlighting relationships built on mutual respect, transparency, and shared objectives. These partnerships involve open communication, joint problem-solving, and a commitment to long-term value creation.

Trust-based relationships prioritize information sharing, facilitating alignment of goals and priorities between buyer and supplier. Sensitive information, such as strategic plans, forecasts, or proprietary knowledge, is shared openly to build trust and strengthen collaboration. Trust-based governance models create an environment where cooperation flourishes, innovation thrives, and mutual success is achieved through shared goals and transparent communication.

During the last decades organizational theories have suggested that trust is more effective than price or authority when managing business relationships especially in growing knowledge-intensive markets. As knowledge becomes more crucial in our economy, we can expect to see a rise in high-trust organizational structures. The concept of supplier experience presented in this book strongly leans on these assumptions.

By improving supplier experience in a relationship, an industrial customer starts a positive circle. Better supplier experience increases supplier's commitment, which again results in positive actions towards the customer, which again, improve supplier's performance in the eyes of the customer. All this improves customer satisfaction and trust in the supplier making a future commitment in this particular relationship stronger. Furthermore, as the customer-supplier relationship atmosphere improves, the conduct of the supplier improves, making the positive circle of development occur. It is easy to understand how the opposite development leads to a vicious circle ending up with decreasing relationship-specific performance.

Understanding the nature of supplier experience involves two significant viewpoints. Firstly, it can be examined from the standpoint of transactional and relational commitments and expectations. The transactional elements refers to economic factors like price determination, exchange volumes, incentives, penalties, and particularly, the commitments and expectations associated with the win-win principle.

The relational elements can be categorized into two dimensions: technological and cultural. The technological dimension is rooted in the socio-material view of work, which perceives work as a blend of human and technological elements. New technology opens doors to fresh working methods, but unless there's a corresponding update in practices, the new technology doesn't bring much value to the table. Thus, new technology should always serve the mutual goal achievement, not only customer's needs.

The cultural dimension refers to the socio-psychological perspective that highlight the connection between human behaviour and the work environment. Within inter-organizational relationships, the promises linked to this are typically partnership-related. The importance of ensuring that suppliers' day-to-day experiences align with the promised partnership practices becomes crucial when the customer emphasizes the importance of partnership-oriented relationships. Usually the absence of transparency, commitment, loyalty, future orientation and relational atmosphere are the reasons why supplier experience on the customer's partnership promises are not met.
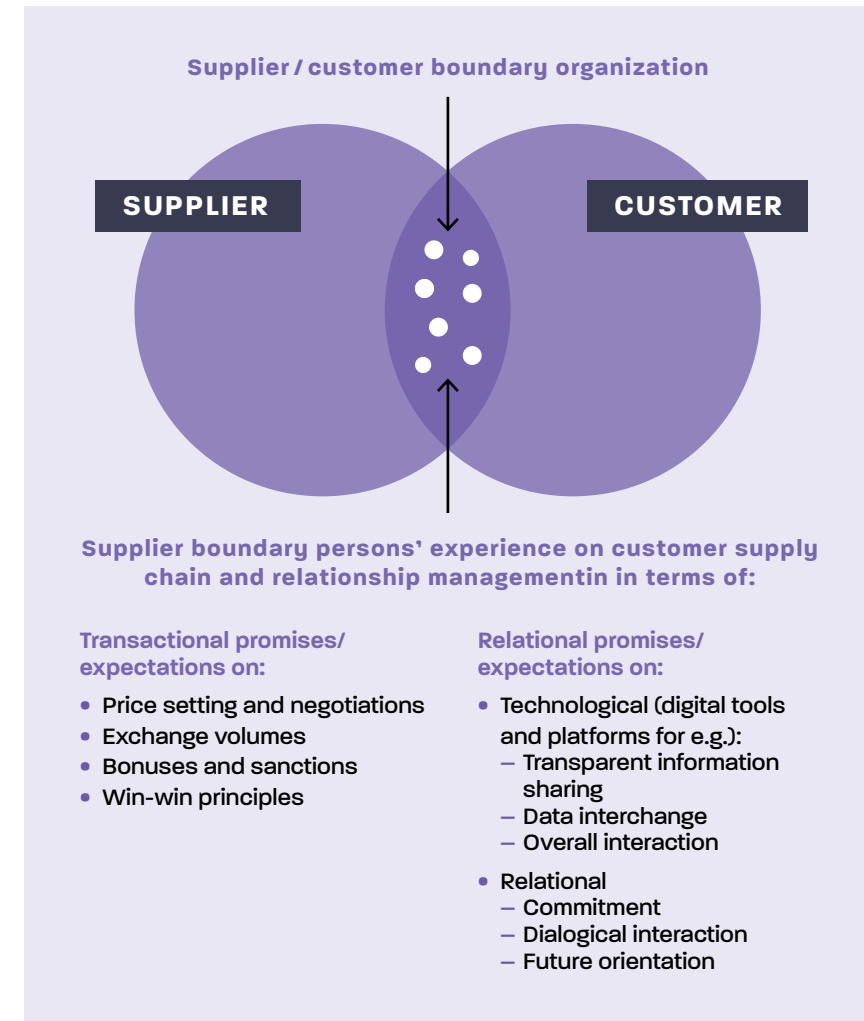

Figure 2. Inter-organisational business relationship (Vesalainen 2020).

This approach presented above and in the Figure 2 Vesalainen (2020) addresses one side of the actors' experiences in an inter-organizational context. The real situation is much more complex as well as interesting because in the boundary organization both supplier and customer experiences meet.

THE CHANGING ROLE OF PROCUREMENT: THE POWER OF SUPPLIER EXPERIENCE AND SUPPLY CHAIN SUSTAINABILITY

As the business landscape evolves, procurement is undergoing a transformation from an operational focus to a strategic and collaborative approach. Traditional assumptions that companies are automatically attractive customers to suppliers are being challenged, with a new emphasis on becoming the preferred customer for suppliers. This shift is driven by factors such as the COVID-19 pandemic, geopolitical events like the war in Ukraine, economic uncertainty, new technologies and the general recognition of supply chain dependencies.

Procurement's increasing importance for company's success highlights a focus on strategic development and holistic collaboration in supplier relationships. Organizations are realizing the vulnerability of their supply chains, as suppliers now often have the ability to choose which customers they serve. Nowadays, to mitigate risks and strengthen supplier relationships, procurement organizations must ask themselves:

How can we become the preferred customer for our suppliers?

Besides, Supply Chain Sustainability has emerged as a crucial topic due to political changes, new regulations, shifting investment and loaning environments, and evolving consumer values. What was once considered a nice-to-have aspect is now an existential must-have strategic target for company management.

Furthermore, technological advancements, such as digital platforms, machine learning, and AI are reshaping procurement. These advancements automate manual tasks and increase visibility, allowing procurement professionals to focus on strategic and proactive responsibilities rather than solely engaging in operational tasks.

All these factors contribute to a significant reconfiguration of the entire procurement function. Procurement must soon reinvent itself to remain relevant in this transition. In this new era, the approach of Supplier Experience takes centre stage, offering a comprehensive model that also encompasses supply chain sustainability. By prioritizing collaboration, innovation, and mutual success, organizations can build long-term relationships with their suppliers, while driving sustainability and resilience throughout the entire supply chain.

In the next chapter, we will introduce six lenses for approaching supplier experience and align them with the established SCM performance objectives.

2. SIX LENSES OF SUPPLIER EXPERIENCE

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TO FULFIL THE REQUIREMENTS of end-customers and drive significant progress at the company level, prioritizing Supplier Experience is essential. This requires not only the involvement of the procurement department but also the strong commitment and understanding of top management.

By adopting a holistic approach to managing Supplier Experience, both at the operational and strategic levels, the company can become the preferred customer for its suppliers. This, in turn, yields substantial advantages in delivery performance, quality, responsiveness, sustainability, costs, and technological advancement.

To address these requirements and enhance overall company performance, it is crucial to acknowledge the value of suppliers. In this regard, we introduce six lenses to analyse Supplier Experience, which takes a holistic approach to customer-supplier relations. It includes the viewpoints presented in the figure below, aiming to strengthen collaboration and mutual success.
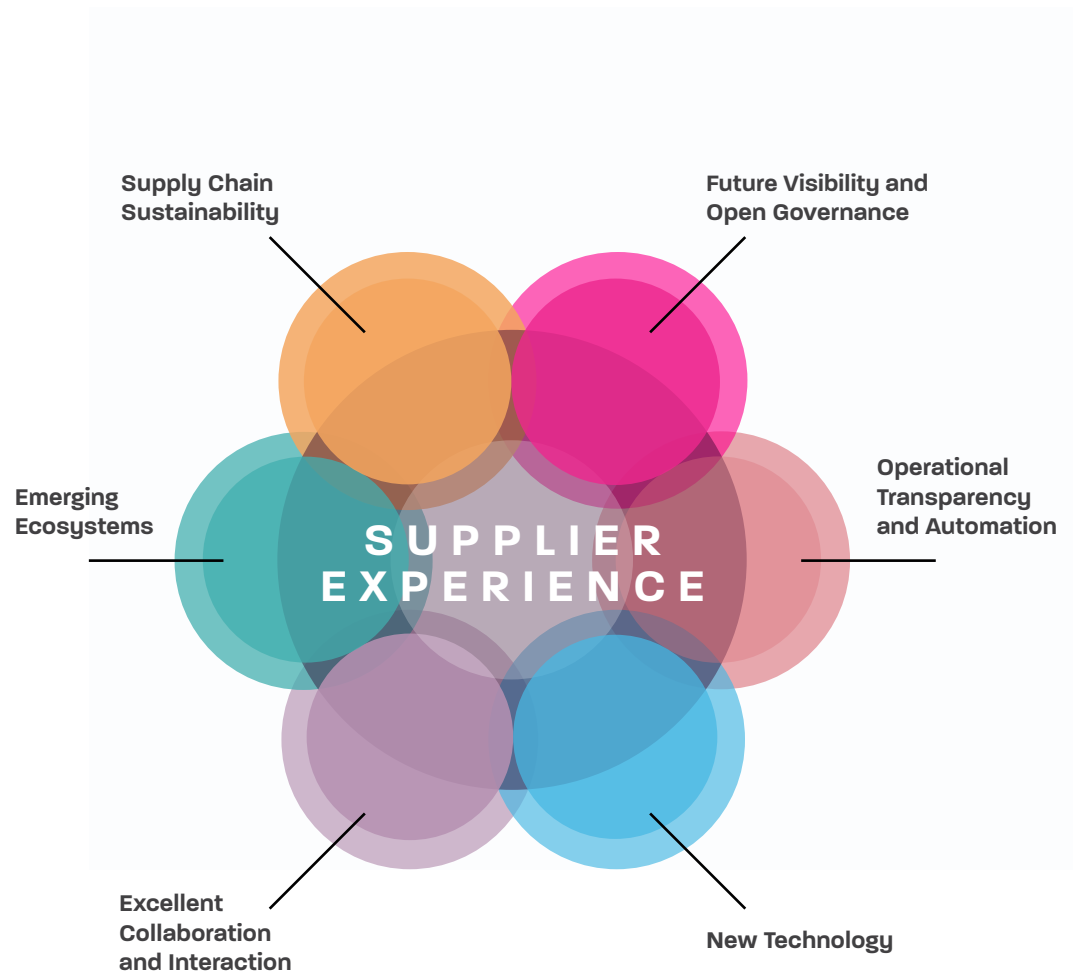
Figure 3: Six lenses of supplier experience.

1. **Future Visibility and Open Governance:** Commonly agreed targets and openly communicated compliance governance are vital components of a successful Supplier Experience. They foster trust between business parties, creating a fruitful foundation for healthy collaboration and value creation for the end-customer. Supply Chain Governance and Security was identified as one of the eight key topics in Gartner's Top Supply Chain Technology Trends in 2020.

2. **Operational Transparency and Automation:** Manual work and information search often waste valuable time in business relationships. Improving white-collar productivity in the value chain involves reducing manual tasks and ensuring easy access to critical information. Sharing and managing information effectively between companies can lead to improved delivery performance, enhanced effectiveness, productivity, and quality from the end customer's perspective.

3. **New Technology:** Modern software and platforms – facilitate increased transparency, improved communication, and standardized and structured management of supply chains in a sustainable manner. Technological advancements should enable new working practices and provide a delightful environment for suppliers. Transparent information sharing, seamless data transfer through automation, and context-based interaction between customer and supplier personnel are essential. Negative experiences with rigid and complex digital tools hinder the achievement of mutual goals in business relationships. Furthermore, digital platforms play a crucial role in supporting supply chain sustainability by providing visibility, use cases, and manageability for supply chain processes.

4. **Excellent Collaboration and Interaction:** Customer-supplier relationships require ongoing dialogue and interaction. Purchasers hold the responsibility of establishing and maintaining supplier relationships while meeting the needs of various internal stakeholders. Context-based interaction, including value creation, co-development, supplier involvement in R&D, joint problem-solving, and decision-making enhances speed, flexibility, responsiveness, sustainability, and productivity in the entire value chain.

5. **Emerging Ecosystems:** Being part of a growing enterprise ecosystem facilitates seamless, rapid, and secure connections between companies on

a global scale. Connecting with existing companies in the ecosystem instead of traditional hierarchical value chains improves connectivity and standardizes processes, IT systems, and ways of working in supplier-customer relations. This reduces complexity, enhances overall sustainability, and benefits the end customer. Enhancing connectivity capabilities at both personal and organizational levels is a key consideration for companies in the near future.

6. Supply Chain Sustainability: The sustainability of companies is closely tied to the sustainability of their supply chains. The environmental and social impacts of a company mainly come from its suppliers, and any sustainability issues within the supply chain can greatly affect a company's competitiveness. Simply managing sustainability within internal operations is insufficient; supply chain sustainability management must be fully integrated. Supply chain sustainability transformation should be a primary driver for the industries. Companies need to focus on supply chain sustainability holistically by improving visibility, implementing concrete use cases, and enhancing manageability for supplier compliance, operational processes, and innovation collaboration.

> THE ENVIRONMENTAL AND SOCIAL IMPACTS OF A COMPANY MAINLY COME FROM ITS SUPPLIERS, AND **ANY SUSTAINABILITY ISSUES WITHIN THE SUPPLY CHAIN CAN GREATLY AFFECT A COMPANY'S COMPETITIVENESS.**

THE END CUSTOMER WILL SEE THE OUTCOME OF A POOR SUPPLIER EXPERIENCE

The Covid-19 pandemic and the war in Ukraine have highlighted the vulnerability that companies face when suppliers fail to deliver essential components on time or at all. Therefore, as previously discussed, it is crucial to consider why suppliers would choose to serve your company over others, especially during emergencies.

Today, in the manufacturing industry, products are manufactured within global and complex supply chains. Companies rely heavily on the performance of their procurement and supplier in various ways, including:

1. **Costs:** Supplier purchases can constitute up to 80 % of a company's cost structure.
2. **Quality:** Suppliers play a crucial role in ensuring the quality of deliveries to end-customers.
3. **Shortages and delays:** Supplier delivery disruptions can cause significant problems.
4. **Sustainability:** Suppliers contribute to a significant portion of a company's environmental and social impact. Deviations in supply chain sustainability can harm a company's competitiveness.
5. **Technology:** Suppliers develop and provide essential technologies that are difficult to replace.

Customer companies, particularly purchasers, need to tackle the challenge of enhancing their relationship with suppliers and becoming their preferred customer. This is not only a responsibility of procurement, but should be prioritized by the entire company management, as poor supplier experience directly affects the end customer's experience.

However, the significance of suppliers for a company's overall performance is often overlooked or forgotten. Many supply chain-related problems could be mitigated by adopting a holistic approach to managing and developing supplier relations at both operational and strategic levels. Based on our research in the manufacturing industry, common issues affecting customer-supplier relationships include:

1. Lack of strategic cooperation, such as shared goals and transparent governance.
2. Time-consuming, manual processes with limited operational transparency.
3. Inadequate cross-organizational communication and collaboration.
4. Siloed thinking within value chains.
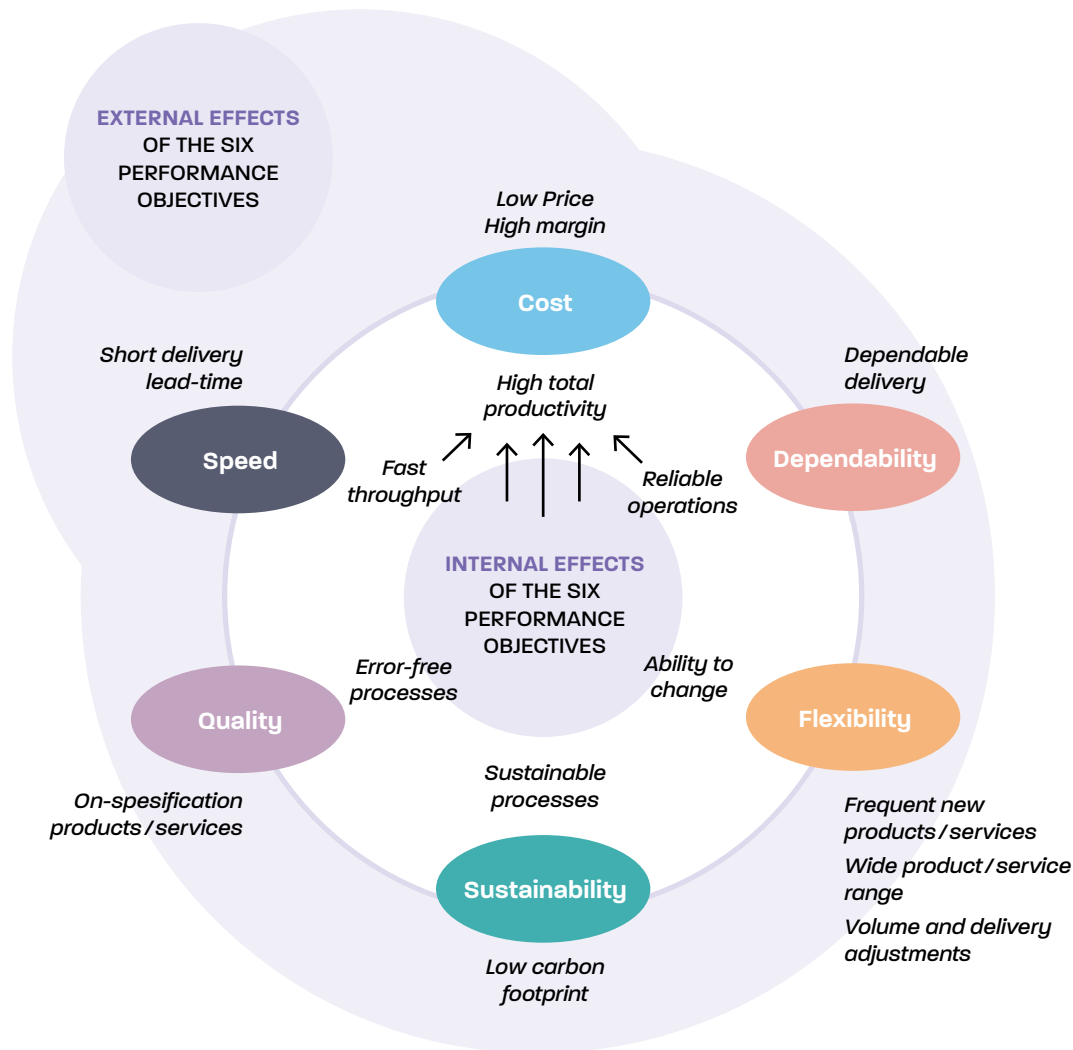5. Insufficient understanding and concrete actions regarding supply chain sustainability initiatives.

Figure 4: Performance objectives in SCM.

PERFORMANCE OBJECTIVES IN SUPPLY CHAIN MANAGEMENT

As stated, supply chain management is a critical aspect of modern business, influencing an organization's success and competitiveness. SCM performance objectives support in evaluating the efficiency and effectiveness of a supply chain and supplier collaboration. Furthermore, these objectives are commonly known as KPIs in procurement enabling development of excellent supplier experience.

The following outlines the six fundamental supply chain performance objectives: *Cost, Quality, Speed, Dependability, Flexibility,* and *Sustainability*.

Managing **COSTS** is vital for supply chain performance, as organizations aim to optimize expenses in procurement, production, transportation, and distribution to enhance profitability and stay competitive. Efficient cost management also enables businesses to invest in innovation and future growth. Positive supplier experience often leads to better pricing agreements and incentives. Effective communication and collaboration can also reduce costs associated with errors, delays, or disruptions in the supply chain.

QUALITY assurance is crucial in supply chain management, where consistently delivering products or services that meet or exceed customer expectations fosters loyalty; these quality considerations extend throughout the entire supply chain. Maintaining high-quality standards not only satisfies customers but also mitigates the risk of recalls or defects. By ensuring positive supplier experiences, businesses can maintain consistent quality standards, reduce defects or rework, and enhance customer satisfaction.

The **SPEED** at which goods move through the supply chain is crucial in today's fast-paced business environment. Quick response times and efficient order fulfilment not only contribute to customer satisfaction but also provide a significant competitive edge. Rapid supply chain processes also support agility in adapting to market trends and fluctuations. Strong supplier experience often leads to shorter lead times, faster response to changes in demand, and quicker resolution of issues or bottlenecks.

DEPENDABILITY focuses on the reliability of the supply chain in delivering products or services on time and in the expected condition. Consistent performance builds trust with customers and stakeholders. This trust, in turn, positively impacts brand reputation and can lead to long-term customer relationships, enhancing overall business resilience. Positive supplier experiences also contribute to dependable supply chains by ensuring resilience in case of challenges or fluctuations in demand.

FLEXIBILITY to changes in demand, market conditions, product mix, schedules, or disruptions is crucial. Flexible supply chains can adjust production, distribution, or suppliers quickly and efficiently, which is vital in a dynamic business landscape. Enhanced supplier experience ensures not only continued operations during unexpected events but also supports strategic adjustments in response to evolving market demands.

SUSTAINABILITY is a rising supply chain objective, with organizations focusing on reducing environmental impact, promoting ethical practices, and ensuring social responsibility throughout the supply chain, aligning with the growing importance of sustainability. Embracing sustainability not only meets regulatory requirements but also creates competitive advantage in the future markets. Increased supplier experience encourages all actors in the supply chain to be part of the sustainability transformation.

By prioritizing and enhancing the supplier experience across these performance objectives, businesses strengthen their supply chains, improve operational efficiency, and gain a competitive advantage in the markets. Effective supplier relationship management practices, such as strategic sourcing, supplier experience development programs, and performance monitoring, helps to align supplier experience with SCM objectives and drive overall supply chain performance. Following chapters will discuss the connection between each performance objectives in terms of the lenses of supplier experience.

BY PRIORITIZING AND ENHANCING THE SUPPLIER EXPERIENCE ACROSS THESE PERFORMANCE OBJECTIVES, BUSINESSES **STRENGTHEN THEIR SUPPLY CHAINS, IMPROVE OPERATIONAL EFFICIENCY, AND GAIN A COMPETITIVE ADVANTAGE IN THE MARKETS.**

3. SUPPLIER EXPERIENCE IN THE CONTEXT OF MODERN SUPPLIER COLLABORATION

3. SUPPLIER EXPERIENCE IN THE CONTEXT OF MODERN SUPPLIER COLLABORATION

NOWADAYS, ORGANIZATIONS FACE many new challenges and chances in supply chain. To navigate this situation well, they need a strategic approach that uses technology, builds resilience, and fits with changing market and regulatory expectations. Successful supply chains in the future will be the ones that keep adapting, innovating, and promoting collaboration across the whole network.

In this today's supply chain management, the Supplier Experience is a crucial factor affecting the end-customer value. As organizations work to improve their supply chains, how they interact with suppliers greatly influences their ability to meet performance objectives in Cost, Quality, Speed, Dependability, Flexibility, and Sustainability.

Understanding and actively managing the Supplier Experience are vital for organizations aiming to build strong, efficient, sustainable, and collaborative supply chains in the modern context. In this chapter we discuss in details the six lenses of supplier experience that were presented in previous chapter.
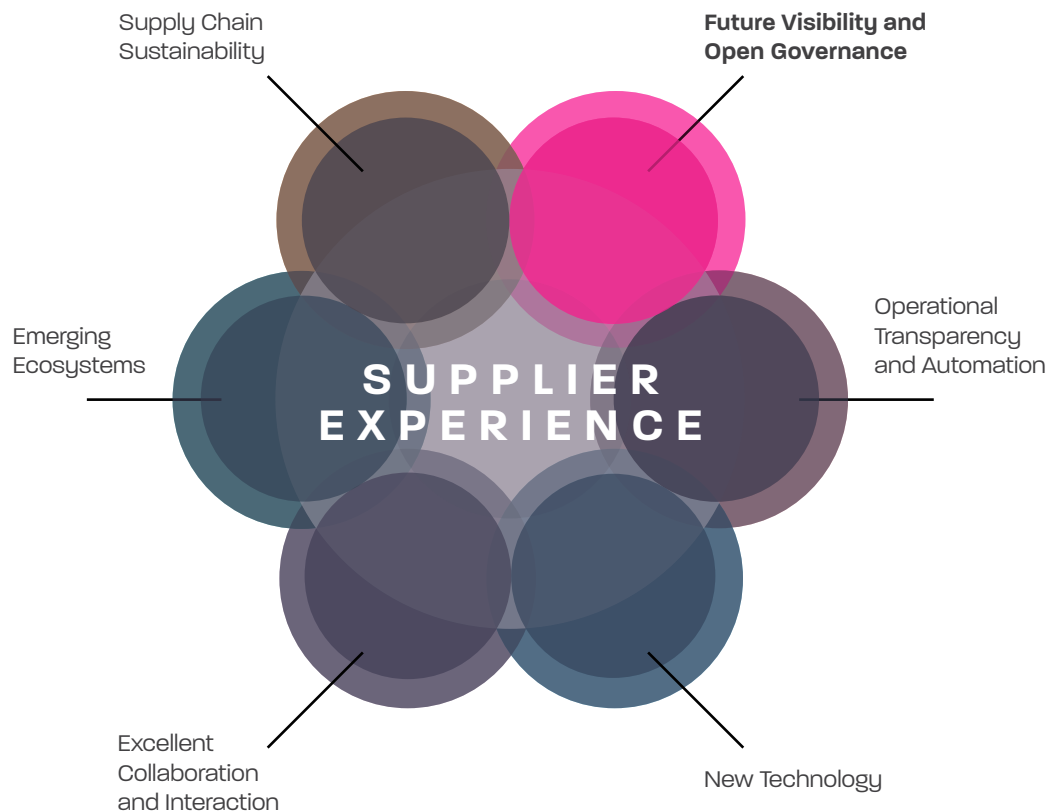
Supply Chain Sustainability

Future Visibility and Open Governance

Operational Transparency and Automation

Emerging Ecosystems

SUPPLIER EXPERIENCE

Excellent Collaboration and Interaction

New Technology

Figure 5. Six lenses of Supplier Experience – Future visibility and open governance.

3.1. FUTURE VISIBILITY AND OPEN GOVERNANCE

As the business landscape evolves, it's essential to understand that value chains are becoming increasingly complex and fragile. For instance, in manufacturing, companies heavily rely on their suppliers for critical factors like cost control, maintaining quality, sustainability, adopting the latest technology, ensuring product availability, and meeting delivery schedules. Interestingly, about 80% of a company's spending and its effects on the environment and society can be linked to its supply chain.

Ensuring future visibility through mutually agreed-upon objectives and transparently communicated compliance governance is integral to a successful Supplier Experience. These elements are the key drivers in building trust and enabling strong business collaboration, ultimately resulting in added value for the end customer. In addition, the importance of Supply Chain Governance and Security cannot be overstated, as emphasized by Gartner in their 2020 Top Supply Chain Technology Trends report.

At the core of this framework lies the concept of future visibility, where stakeholders in a partnership align their expectations precisely. This enhanced future visibility not only strengthens the emotional connection with the supplier but also influences the supplier's involvement in future developments, especially in challenging situations. This dynamic relationship significantly shapes the supplier's behaviour towards the customer.

Building trust within this business relationship unlocks proactive adoption of innovative operational models, sustainability initiatives, and digital solutions. These forward-looking actions not only improve the supplier's operational efficiency but also takes in to account the evolving needs of the end customer.

Pandemic, war, and...

The global pandemic and the war in Ukraine were unforeseen human crises that had significant effects on supply chains. Suddenly, businesses faced unexpected challenges like difficulties in sourcing components and materials, extended delivery lead times, and rising prices. Furthermore, several companies

decided to discontinue their operations in Russia, a logical response given the circumstances (only right thing to do), but this decision resulted in a substantial loss of market share.

It's highly improbable that anyone could have predicted the scale and impact of these crises accurately. Nonetheless, many companies could have potentially better prepared themselves for such surprises and other future supply chain risks.

This combines developing a shared market understanding and maintaining open communication with strategic suppliers across various levels of the organization.

Resource visibility

One of the most common topics in supplier-customer discussions centres around **demand forecasting**. Accurate information about expected sales volumes is crucial for optimizing resource utilization. We firmly believe that transparent and open governance within the supply chain is the key to addressing this challenge effectively.

Information transparency is essential. To success in today's interconnected business environment, accurate and real-time information must be readily accessible whenever it's needed. This shared information should be automatically available to all selected members of the supply chain, empowering them to make informed decisions. While there are numerous Business Intelligence (BI) tools in the market with various predictive analysis and planning features, they are primarily designed for intra-organizational use.

In addition to demand forecasting, **capacity planning** emerges as another critical task within open governance, carrying significant relational value. It complements demand forecasting, and in essence, a transparent supply chain requires access to both demand and supply-side information for key players in the network.

In the context of joint capacity planning, information becomes even more sensitive compared to demand and supply data. Establishing trust through open

governance is vital to achieve the required transparency. Moreover, increased interaction between parties is necessary to address development needs based on common goals. Therefore, the concept of an autonomous supply chain with minimal human intervention may not be as relevant in this context.

How to prepare for the next crisis and gain visibility?

The reality is that there's limited time to dive into strategic development work, which forms the foundation for gaining future visibility and effectively managing supply chain risks. Our findings indicates that approximately 50 % of an operational purchaser's time, in a typical manufacturing company, is consumed by manual tasks that provide minimal value.

The manual work associated with purchase orders can be easily automated using modern technology and platforms. By automating these tasks, purchasers can redirect their focus from repetitive manual work to more strategic, growth-oriented activities. Consider the potential if your team could use four hours more a day to developing supplier relationships, enhancing resilience, and collaborating with suppliers to analyse and mitigate risks. With this approach, you'd be better prepared to address future challenges effectively.

Secondly, a common challenge in manufacturing companies is a significant blind spot at the operational level. When unexpected issues arise, it's crucial to have visibility into the status of deliveries from your suppliers. Additionally, you need efficient channels for communication beyond email when handling complex situations with your suppliers.

A practical solution is to **increase visibility** and communication by embracing digital tools. Implementing a supplier experience platform can make a significant difference. It enables you to monitor developments and facilitates productive discussions with suppliers, particularly in challenging circumstances.

The third typical challenge in manufacturing companies is incomplete knowledge about their **supplier base**. Data related to compliance and supplier risks are often scattered across multiple Excel files and individual email inboxes.

UNDERSTANDING YOUR
SUPPLIERS' STRENGTHS
AND VULNERABILITIES IS
**ESSENTIAL FOR EFFECTIVE
COLLABORATION AND
IMPROVEMENT.**

When unexpected situations arise, it becomes a difficult task to identify affected suppliers and explore backup options within the company's supply network. Understanding your suppliers' strengths and vulnerabilities is essential for effective collaboration and improvement.

Fortunately, there's a solution at hand. Centralizing supplier information, including compliance and risk management, in digital formats is a straightforward process. This digital transformation streamlines compliance setup, aligning your company and suppliers for better collaboration.

The role of Supplier Experience in Future Visibility and Open Governance

Future visibility and open governance play a vital role on shaping the Supplier experience. The transparent sharing of information, encouraged by positive supplier experiences and supported by open governance, significantly affects critical areas of performance objectives.

COST. Effective capacity planning and demand forecasting, supported by clear communication, enable businesses to optimize cost efficiencies. Understanding future demands and capacities empowers cost-saving measures and smart resource allocation.

QUALITY. Essential to quality is maintaining a compliant supplier base and accurate supplier master data. Reliability and commitment to quality standards improves product and service quality, and reduces the risk of errors leading to better supplier experience.

SPEED. Future visibility relies on efficient demand forecasting and capacity planning. Transparent governance structures, simplifies these operations, reducing the need for manual work and speeding up decision-making. Real-time insights enable quick responses to market demands, enhancing operational speed and agility. All these results as a positive supplier experience.

DEPENDABILITY. Risk management and visibility are crucial aspects of dependability. Trust and collaboration foster supplier experience, while transparent governance models provide insight into potential risks and global crises. By establishing open channels of communication and shared understanding, businesses enhance dependability and resilience in uncertain times.

FLEXIBILITY. Future visibility allows for proactive adaptation to changing market dynamics. Trust on shared market understanding promotes supplier experience. This combination facilitates agile responses to changing conditions, gaining flexibility and competitiveness.

SUSTAINABILITY. Sustainable practices are supported by clear supplier base management and governance models. When customer encourages suppliers to commit on sustainability principles, it often leads to significant advantages for both parties. By integrating sustainability considerations into supplier relationships and governance models, businesses can reduce environmental and social impacts, promoting long-term resilience and responsible business practices.

Summary: Navigating Complex Supply Chains and Preparing for Future Challenges

In today's ever-evolving business landscape, it's crucial for leaders to gain a deep understanding of the complexities and vulnerabilities of modern value chains. Whether you're in manufacturing or any other sector, the dependence on suppliers for cost control, quality assurance, sustainability, technology adoption, product availability, and timely deliveries is clear.

TO THRIVE IN THIS DYNAMIC ENVIRONMENT, A FEW KEY PRINCIPLES EMERGE AS CRITICAL DRIVERS OF SUCCESS:

1. **Common goals:** Future visibility, achieved through mutually agreed objectives lies at the heart of a successful Supplier Experience. This approach fosters trust and supports robust business collaboration, ultimately delivering added value to end customers.

2. **Supply chain governance and security:** Gartner's recognition of the importance of Supply Chain Governance and Security underscores their significance. These elements ensure that supply chains remain resilient and secure even in challenging circumstances, making it vital for any organization's survival and growth.

3. **Adapting to unforeseen challenges:** The COVID-19 pandemic and geopolitical conflicts, like the one in Ukraine, demonstrated the unforeseeable challenges that businesses can face. However, it's evident that companies can better prepare themselves by developing shared market understanding and maintaining open communication with strategic suppliers. Such readiness can make a significant difference in mitigating risks and minimizing losses.

4. **Knowing your suppliers:** Many organizations lack a comprehensive understanding of their supplier base, particularly regarding compliance and supplier risk-related data. Centralizing supplier information in digital formats can simplify compliance setup and lead to more effective collaboration.
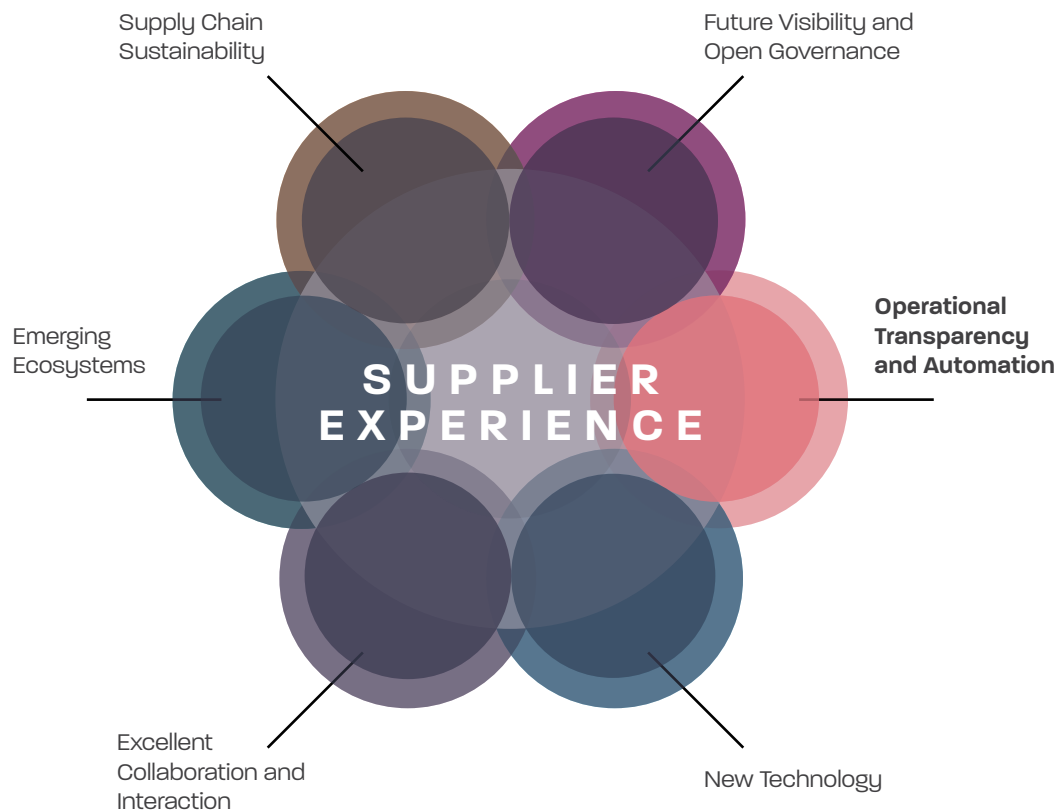
Figure 6. Six lenses of Supplier Experience – Operational transparency and automation.

Labels in figure:
- Supply Chain Sustainability
- Future Visibility and Open Governance
- Emerging Ecosystems
- SUPPLIER EXPERIENCE
- Operational Transparency and Automation
- Excellent Collaboration and Interaction
- New Technology

3.2. OPERATIONAL TRANSPARENCY AND AUTOMATION

As discussed earlier, it is truly remarkable how much non-value-added work companies still engage in today, particularly in purchasing and supply chain management. Today, a significant amount of time is wasted in business relations. For example, time is spent searching for information, creating reports, waiting for critical information from others, and manually inputting the same information multiple times into different systems across various companies. The primary challenge lies in effectively sharing and managing information, as well as fostering collaboration between companies. Fortunately, there is huge potential to enhance white-collar productivity within the value chain by reducing manual work and ensuring easy access to necessary information, anytime and anywhere.

Companies should prioritize the automation of information processes and the standardization of manual supply chain processes. This approach enables fast information availability and real-time reporting, resulting in improved delivery performance, enhanced effectiveness, sustainability, productivity, and quality from the perspective of the end customer.

By automating supply chain activities, routine processes can be streamlined, leading to a decrease in generated costs. When individuals are freed from spending time on manual routine work, they can focus on tasks that truly create end-customer value. This shift significantly allows personnel to dedicate their time to more value-added activities, such as development, sustainability, relationship management, learning, and optimization. Additionally, these types of tasks tend to be more enjoyable for employees compared to routine manual work. Consequently, transparent information sharing and automated processes between customers and suppliers strengthen sustainability and facilitate a competitive advantage within value chain competition.

Non-Value-Added Work Overloads Purchasers

One area where problems and improvement initiatives are prevalent is operative purchasing, which serves as an illustrative example for a more precise analysis. Our observations indicate that approximately 50 % of an

operative purchaser's working time in a typical manufacturing company is spent on non-value added work.

Examples of such work include:
- Comparing purchase orders with supplier order confirmations
- Manually inputting purchase order confirmations and related data (e.g. Green House Gas and quality certificates) into the ERP system
- Handling and manually sending purchase order-related documents
- Monitoring deliveries and reminding suppliers about late order confirmations, delayed deliveries, and upcoming important deliveries
- Searching through numerous emails for purchase order-related communication information
- Searching purchase order-related material certificates and quality documents

All of this work clearly adds no value and customers are unwilling to pay for it. Engaging in such routine manual tasks significantly reduces a company's operational efficiency, generates additional costs, causes unnecessary delivery delays, and, perhaps most importantly, decreases employee, supplier and end-customer satisfaction.

In the manufacturing industry, it is common for purchasers to be overloaded with heavy manual workloads, leaving insufficient time for more value-added and personally fulfilling tasks, such as supplier collaboration, sustainability development, quality management, coordination, innovation, sourcing, bidding, and negotiating. Just imagine what your company could achieve if your purchasers had an additional four hours each day to dedicate to these value-added activities instead of non-value-added work.

A Digital Transformation Journey for Improved Productivity and Happier Staff

The great news is that this kind of manual work can be effortlessly automated through the use of a digital platform and integrated APIs. For instance, the purchase order process can be automated by seamlessly integrating with an ERP system.

JUST IMAGINE WHAT YOUR COMPANY COULD ACHIEVE IF YOUR PURCHASERS HAD AN ADDITIONAL FOUR HOURS EACH DAY TO DEDICATE TO THESE VALUE-ADDED ACTIVITIES INSTEAD OF NON-VALUE-ADDED WORK.

Substantial evidence supports the benefits associated with this approach. Manufacturing companies have experienced remarkable improvements in productivity, while also lightening the workload of their purchasers. This enables them to shift their focus towards value-added and more enjoyable tasks. As a result, purchasing teams have successfully transitioned from manual, operational routines toward strategic and development-oriented work.

Outlined below are practical examples showcasing the benefits manufacturing companies have achieved:

- A remarkable 100 % improvement in the white-collar productivity of the operative purchasing team.
- Annual purchase budget savings of 2 %.
- A substantial 20 percentage-point enhancement in suppliers' on-time delivery (OTD).
- A 20 % reduction in supplier quality costs.
- Improved delivery-specific sustainability data tracking.
- A significant improvement in employee, supplier and end-customer satisfaction.

These figures are truly impressive, and implementing these changes is not a difficult task. The necessary technology is already available. It is merely a matter of prioritizing purchase management and starting the digital transformation journey toward a substantial leap in productivity and much happier purchasing staff, suppliers, and end-customers.

The role of Supplier Experience in Operational Transparency and Automation

Transparent communication, collaboration, and the cultivation of positive working relationships with suppliers, facilitated by automation, empower businesses to gain value and reach higher results in performance objectives. Obviously, these factors have a significant impact on supplier experience. The synergy of operational transparency and automation not only facilitates the identification of opportunities for improvement across these performance objectives but also plays a key role in achieving optimization across these critical elements.

COST. Automating tasks such as order processing, forecasting, and data input not only saves time but also allows customers and suppliers to focus on value-added activities, contributing significantly to cost savings. Additionally, operational transparency, coupled with mutual understanding of data, enables the identification of cost-saving opportunities collectively.

QUALITY. Operational transparency fosters a shared commitment to mutually understood instructions and quality standards throughout the supply chain. Automation further streamlines quality processes, such as supplier claims, making them more efficient and standardized. By treating suppliers as vital partners, not just transactional entities, the collaborative focus on delivering products or services that exceed customer expectations is strengthened. This approach, improved by operational transparency, ensures customer satisfaction and minimizes the risk of recalls or defects, contributing significantly to overall quality management.

SPEED. Operational transparency enables the way for quick information exchange, reducing delays and inefficiencies. Automation, as a driving force, speeds up processes, ensuring prompt responses and efficient order processing. Transparency and automated operations are instrumental in achieving the speed and efficiency objectives essential in today's fast-paced business environment.

DEPENDABILITY. Operational transparency establishes a solid foundation of trust and reliability in the supply chain. Clear communication and visibility into operational information, such as forecasting, ensure consistent performance. Automation contributes by standardizing processes, reducing the likelihood of errors, and enhancing overall dependability.

FLEXIBILITY. Operational transparency provides critical insights into changing demands, market conditions, and potential disruptions. Automation becomes the enabler for quick adjustments, allowing the supply chain to adapt promptly to evolving circumstances, such as design or schedule changes. This is a key for flexibility, ensuring efficient adjustments in a dynamic business landscape.

SUSTAINABILITY. Within the operative sustainability area, operational transparency plays crucial role. Collaborative efforts guided by shared values and practices, strengthened by transparent communication, are essential for reducing sustainability impacts. Automation, integrated into sustainability initiatives, aids in collecting data (e.g. CO_2 footprint of the products), monitoring, and reducing the environmental and social footprints.

Summary: Towards Operational Transparency and Automation

The non-value-added work in purchasing and supply chain management is a significant challenge for manufacturing companies. Manual tasks such as searching for information, creating reports, and inputting data multiple times into various systems waste valuable time and resources. To address this issue, companies should prioritize automating and standardizing manual supply chain processes. By doing so, they can improve delivery performance, enhance productivity and quality, and reduce costs. Automation allows employees to focus on value-added activities, such as development, sustainability, and relationship management, leading to increased satisfaction and a competitive advantage.

THE FOLLOWING STEPS WILL HELP TO GET STARTED IN IMPROVING OPERATIONAL TRANSPARENCY AND AUTOMATION:

1. **Implement modern supplier collaboration technologies:** Invest in advanced supplier collaboration technologies that enable the automation of manual tasks, real-time reporting, data sharing, and communication with suppliers. Integrate these systems with the existing ERP and other relevant software to streamline data flow and eliminate manual data entry. Ensure that these systems are user-friendly and accessible anytime, anywhere.

2. **Automate routine processes:** Identify repetitive and time-consuming tasks that can be automated. This may include comparing purchase orders with supplier order confirmations, handling and sending purchase order-related documents, and monitoring deliveries.

3. **Standardize supply chain processes:** Establish standardized processes and workflows across the supply chain to eliminate inefficiencies and reduce errors. Standardization enhances collaboration, reduces the need for manual work, and improves overall efficiency.

4. **Train and empower employees:** Provide comprehensive training to employees on the use of new information systems and automation tools. Empower them to take ownership of value-added activities such as supplier collaboration, sustainability development, and quality management. Encourage continuous learning and skill development to ensure employees are equipped to leverage automation and drive innovation within the organization.
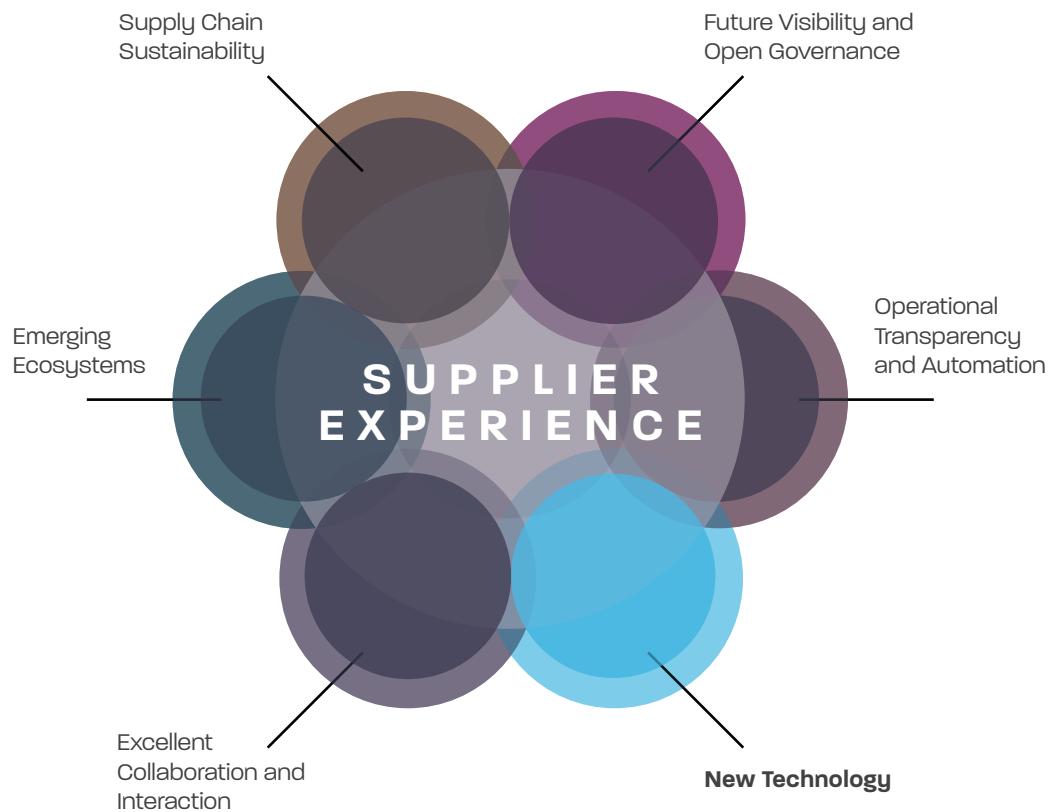
Supply Chain
Sustainability

Future Visibility and
Open Governance

Emerging
Ecosystems

**SUPPLIER
EXPERIENCE**

Operational
Transparency
and Automation

Excellent
Collaboration and
Interaction

New Technology

Figure 7. Six lenses of Supplier Experience – New technology.

3.3. NEW TECHNOLOGY

The latest organization research has recognized the importance of digital transformation in supply chain management. In the management literature, digitalization has become a crucial part of the strategic management discussion. Companies operating in the manufacturing ecosystem have become familiar with cloud technologies. Today, they are phasing out their legacy systems and adopting platforms that best match their needs. Traditional company-specific portals are reaching the end of their life cycle, and business ecosystems and platforms are here to stay.

The landscape of technological advancement has faced fresh demands in recent years. The emergence of new technology brings with it the potential to revolutionize work practices. Among these advancements, software and cloud services have significantly shifted towards an approach that seamlessly integrates the interaction between humans and technologies.

To enable this synergy, it is important for customers to provide a delightful environment for the suppliers that facilitates efficient collaboration in a digital world as well.

From the perspective of supply chain professionals, the rapid development of digital applications is both interesting and challenging. The challenge lies in the fact that it takes time for an organization, especially a network, to adopt new practices. If you always want to take advantage of the latest developments, you may find yourself constantly ahead of others without achieving collaborative gains.

Digital layers

Technological hype can be described in three layers as presented in A Playbook for Digital Supply Chain (2019). Firstly, there is a Digital Technology layer that encompasses basic **research and innovation**, including Artificial Intelligence, Machine Learning, Blockchain, GPS tracking, APIs, and Cloud technologies.

Secondly, the application layer consists of various **platforms** with specific functionalities. These platforms come in various types, such as Content

Service Platforms, IoT Platforms, Platforms for Workflow Collaboration, Business Intelligence (BI) systems, and System Integration Platforms.

Thirdly, supply chain practices are directly influenced by the numerous **commercial applications** available in the market. From the perspective of the supply chain processes, it appears that the majority of solutions are designed for intra-organizational collaboration. However, many of them include special features for inter-organizational collaboration, but these features often seem to be underdeveloped and rigid, following the traditional portal logic.

Digital technologies

Janet Hartley and William Sawaya published an article titled *Tortoise, Not the Hare: Digital Transformation of Supply Chain Business Processes* (Harvard Business Review, 2019). It addresses the paradigm shift in how supply chain professionals should navigate the rapid development of digital technologies.

The researchers suggest that organizations should ensure their readiness to adopt new technologies through these actions:

1. **Identify** a supply chain technology visionary who can navigate the maze of technologies and the evolving digital landscape.
2. **Develop** a digital technology roadmap for their supply chain processes.
3. **Update** foundational information systems.

THE LEADER NEEDS TO BE AWARE OF TECHNOLOGICAL TRENDS, ACTIVELY MONITOR CHANGES AND PROGRESS IN THE DIGITAL LANDSCAPE, AND HAVE A COMPREHENSIVE UNDERSTANDING OF SUPPLY CHAIN PROCESSES BETWEEN COMPANIES.

We find these suggestions very interesting and relevant. The leader needs to be aware of technological trends, actively monitor changes and progress in the digital landscape, and have a comprehensive understanding of supply chain processes between companies.

The role of digital platforms in supplier experience

A business relationship can be divided into four elements: operational, strategic, structural and social (Vesalainen 2002). Digital platforms fall under the structural dimension of a relationship – it makes a structural bond between the companies. These platforms allow companies to establish boundary processes and practices, facilitating the coordination of resources, data transfer, and information and knowledge sharing. Most importantly, SaaS-based digital platforms are budget-friendly and easily adaptable, even for smaller companies. This means that entire business ecosystems start using on the digital platform, ensuring great connectivity all across the ecosystem.

Let's take a look into Jakamo – a specialized digital platform designed for customer-supplier collaboration. It enables the integration of business ecosystems as a structural feature of business relationships. Jakamo is based on one-to-one business relationships, which are the basis for all networks and business ecosystems. Due to its patented feature, each firm using Jakamo defines itself as the centre of the network, which makes it possible to see the ecosystem always from one's own perspective. The wide availability of ready-made interface connections enables firms to be digitally connected with their partners cost-effectively, regardless of the diverse IT systems they use.

Jakamo is an example of the new era of best-of-breed solutions that have become popular in the manufacturing procurement tools landscape. The market has been emerged with new technologies and innovations, offering numerous alternatives for executives. Today, executives can choose the best solution for specific challenges, which can be seamlessly integrated as add-ons with their chosen suite or platform.

The development of the API (Application Programming Interface) economy changed the game significantly in the market of procurement tools. APIs are like bridges that help different software systems share and use data seamlessly - APIs connect various software applications together. Having well-documented and standard APIs gives software a big strategic edge in today's Best-of-Breed era.

Today, a software vendor's connectivity capability often ranks as the top requirement for executives making purchasing decisions. If your chosen software product is solely standalone and lacks APIs to enable smooth data transfer to other software, you face a substantial risk in your enterprise architecture.

Artificial intelligence

Artificial Intelligence (AI) is expected to have the most significant business impact among emerging technologies in the near future. In recent years, AI has been in the headlines daily, often characterized by either hype about its potential to revolutionize industries or fears of impending doomsday scenarios. With the barrage of news items and reports, it's no wonder that AI can sometimes seem like an overwhelming concept, as if everything will change overnight when it's implemented.

Visionaries talk about the concept of an autonomous supply chain, pointing to the opportunities created by technological developments to make the supply chain more autonomous from human intervention. The technologies most often referred to in this discussion are related to AI.

Order delivery management is an area where digitalization appears to play the most significant role, primarily because of the standardized data typically exchanged between customers and suppliers. So-called *no-touch ordering* is already possible today and is continuously growing. The *no-touch ordering* practice involves an ERP-to-ERP solution where customer order data is automatically transferred to the supplier's ERP system. In the market, there are integration platforms available to facilitate this automatic transfer. Currently, Application Programming Interfaces (APIs) play a critical role in this process, but in the future, AI will also play the most significant role in this space.

The role of Supplier Experience in New Technology

The adoption of new technology plays a crucial role to achieve positive supplier experience The collaboration and integration can significantly impact critical performance objectives.

COST. Leveraging new technology, such as cloud-based solutions and AI, minimizes IT costs while enhancing process standardization. The adoption of these technologies enables cost efficiencies and streamlined operations leading to gained supplier experience.

QUALITY. Adopting vertical, industry specific platforms, and optimizing data and information flows through the supply chain improves quality management. Process standardization and integration of best-of-breed technologies ensures commitment to quality standards and enhances overall product and service quality.

SPEED. Integration through APIs and optimized data and information flows streamlines the processes within the supply chain. Process standardization and AI implementation further enhances operational speed and agility, enabling fast responses to market demands which leads to improved supplier experience.

DEPENDABILITY. APIs and optimized data and information flows enhances visibility and dependability within the supply chain. Process standardization ensures consistency and reliability, fostering trust and improving supplier experience.

FLEXIBILITY. The system integration via APIs and optimized information flows enhances flexibility and adaptability to changing market conditions. Flexible solutions enable agile responses to evolving needs, ensuring the supply chain remains resilient and responsive. This has a positive impact on supplier experience.

SUSTAINABILITY. Integration through APIs and automated data tracking within the supply chain supports sustainability initiatives. New easily adaptable technologies enable the implementation of sustainable practices, reducing environmental and social impacts and promoting long-term sustainability goals.

Summary: Towards new technology

Modern technology should make it easy for businesses to share information quickly and transparently. It should allow seamless data transfer and smooth communication between the personnel of customer and supplier. But if we use complicated digital tools that are hard to understand, it can make it tough to achieve the goals we share in a business partnership.

In the context of supply chain sustainability, new technology plays a crucial role for manufacturing companies. Digital platforms offer multifaceted support to enhance supply chain sustainability. By delivering visibility, concrete use cases, and effective management tools, these platforms empower suppliers in commitment to compliance, driving development and innovation, and optimizing operational supply chain processes.

THE FOLLOWING STEPS WILL HELP TO GET STARTED WITH NEW TECHNOLOGY:

1. **Follow and understand technological trends** from various channels such as academics, competitors, peers, and other industries.

2. **Connect the trends with the value drivers** of supplier collaboration (read chapter 3.4.).

3. **Create digital technology roadmap** to address this challenge. A holistic and critically designed roadmap is essential to recognise opportunities and risks that may occur in the business environment in which a company operates.

4. **Ensure expertise and a diverse approach.** When designing and implementing the roadmap ensure that you have all the necessary expertise on board and a multidisciplinary approach.
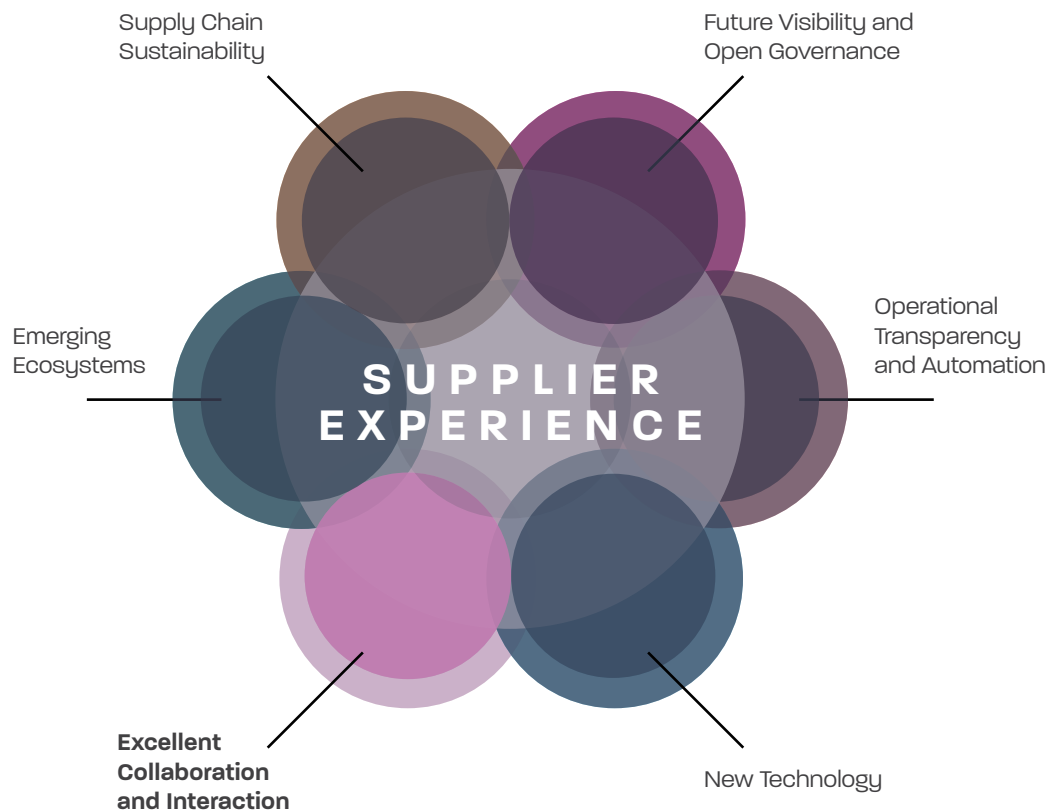
Figure 8. Six lenses of Supplier Experience – Excellent collaboration & interaction.

The labels around the diagram, clockwise from top:

Supply Chain Sustainability

Future Visibility and Open Governance

Operational Transparency and Automation

New Technology

Excellent Collaboration and Interaction

Emerging Ecosystems

Center: **SUPPLIER EXPERIENCE**

3.4. EXCELLENT COLLABORATION AND INTERACTION

A partnership as an integrated form of business relationship is not valuable in itself, but as an organizational solution for coping with challenging, uncertain business situations. When the business exchange between parties is complex, varying, and requires continuous development, and when the business environment develops fast, excellent collaboration capabilities are something that is needed to cope with these uncertainties.

Vesalainen (2021) argues, under such business conditions, strategic cooperation helps the parties of a relationship, or in a network, to streamline individual firms' actions to reach an optimal value-generating business ecosystem. Further, strategic cooperation is not possible without some cross-border structures where managers meet regularly. And finally, any cooperative arrangement is not possible without a positive social atmosphere in a relationship or a network.

THE AVAILABILITY OF KNOWLEDGE MAKES IT POSSIBLE TO **CO-CREATE SOMETHING UNIQUE** FASTER THAN IT WOULD BE POSSIBLE INTRA-ORGANIZATIONALLY.

The advantages of collaboration are based on the availability of physical resources, information, and knowledge through a cooperative interaction between the parties. In a partnership, firms are committed to serve customers as well as possible in all kinds of situations by allocating their resources to partners. Mutual interaction is a key to improve and continuously develop products, services, and processes. The smooth flow of information between the parties is an important factor for operational efficiency, and the availability of knowledge makes it possible to co-create something unique faster than it would be possible intra-organizationally.

The drivers of supply chain collaboration

Professor Jukka Vesalainen (2021) identifies six drivers that fuel supply chain collaboration in today's business landscape. The value drivers are:

1. **To ensure the availability of materials and services under situations of resource scarcity.** During challenging times like the Covid-19 pandemic, resource scarcity has shaken up markets. Firms that manage their supply networks by collaborative based logic outperform hierarchical or market-driven models when it comes to securing a steady supply flow. This is due to strategic connections, faster and coordinated reactions, and the positive atmosphere of trust, commitment, and unity even in tough situations.

2. **To ensure a smooth flow of operations in challenging exchange situations.** As business exchanges become more complex due to technology and services, collaborative relationships become essential. Technological supplies and service-based components require heightened information sharing and interaction among parties. Collaborative business relationships with structural, strategic, and social manifestations become critical in these scenarios.

3. **To control costs by co-development and optimization.** The market-based logic of supply chain management highlights the aggressive use of a market mechanism to ensure the lowest possible costs of purchasing. In contrast to market-driven strategies, collaborative supply chain management focuses on co-development and optimization, leading to shared rewards. Achieving this requires interaction, trust, commitment, and strategic alignment between partners.

4. **To ensure the best possible knowledge in R&D and continuous improvement.** Where the sharing of information generates mostly operational advantages, the sharing of knowledge generates strategic and long-term advantages. Partnership-based innovation can beat internal innovation processes, yielding long-term benefits. It is also important to notice the role of inter-organizational continuous improvement of products and processes. Without these practices the cross-border area remains a grey area in terms of developmental actions, thus causing

ineffectiveness at the business ecosystem level. So, in order to improve business ecosystem innovativeness and effectiveness as a strategic asset, all relevant knowledge of firms in an ecosystem should be harnessed for the common good.

5. **To ensure new business concepts based on co-creation.** Groups of firms, forming strategic coalitions, can collectively develop business concepts which have a common business boundary toward the customer. These coalitions integrate themselves as functional business groups and establish trusted relationships with customers. The social dimension of business relationship plays an important role here as firms' boundary spanners need to integrate themselves as well-functioning teams.

6. **To build sustainable supply chains.** B-to-B collaboration is essential in constructing sustainable value chains. Openness, transparency, and traceability through the entire business ecosystem are vital for sustainability. The smooth operation of sustainable supply chains requires strict coordination of resources, actions, and capacities to achieve economically and environmentally acceptable results. Furthermore, circular economy-based business models require excellent visibility to capitalize on sharing, leasing, reusing, repairing, refurnishing, and recycling opportunities.

Relational behaviour in strategic supplier relationships

Relying on hammer and dynamite method as a management approach isn't an effective way to foster collaboration, as the reach of authority doesn't extend beyond the boundaries of a company. Concentrating solely on driving down prices and frequently switching suppliers doesn't necessarily form the most optimal or rewarding method to manage cooperation between companies. Such practices can have negative effects, particularly on aspects like long-term learning in product development.

Numerous studies have demonstrated that highest performance (On-Time Delivery, Quality, Effective Capital Utilization, Productivity) in strategic supplier relationships are achieved through relational behaviour. Surprisingly,

the key is in personal behaviour. If the goal is to become one of the most effective relational leaders, the leader should consider these five tips into daily routines when managing the relationships across different companies.

1. **Focus on Active Listening.** Genuine listening leads to commitment. Listening shows a real interest to the opposite party. If the opposite feels you're interested in them, they will show interest in you. Approach conversations with honesty and genuine curiosity. Listening is the key to the opposite's commitment and flexibility.

2. **Don't shoot down the supplier's idea.** There are many ways to direct commitment and creativity into a negative circle. One of them is shooting down the ideas the supplier presents. Especially if the supplier holds a strategic role in your value chain, consider refining their ideas instead of rejection. Repeatedly shooting down ideas can discourage them from sharing more.

3. **Act with Kindness and Appropriateness.** There will always exist deviations, problems and critique in cross-company cooperation. A person committed to relational behaviour views these challenges as opportunities for growth and learning. Always try to give the critique in a soft and relevant way. Display kindness and correctness, even when addressing tough matters, and always avoid making it personal.

4. **Admit your own mistakes.** A mistake should be seen as an opportunity to learn. Acknowledging mistakes, openly and honestly, encourages suppliers to do the same. In an excellent relationship, both parties see the mistakes as an opportunity to learn. If you expect your suppliers to admit their mistakes, be ready to do the same.

5. **Explain "Why".** If the supplier doesn't understand the business environment and context you're working in, explain it to them. When suppliers understand why certain actions are crucial for your operations, they'll be motivated to align their efforts. Without an explanation, motivating anyone becomes challenging.

The role of Supplier Experience in Excellent Collaboration and Interaction

The collaborative spirit and mutual understanding significantly impact on supplier experience. Here are the impacts analysed from the perspective of the SCM performance objectives – cost, quality, speed, dependability, flexibility, and sustainability.

COST. Building a common understanding, fostering innovation collaboration and joint cost optimization lead to positive supplier experiences. By leveraging supplier expertise and shared goals, businesses can streamline processes and reduce unnecessary expenses.

QUALITY. Embracing a culture of learning from mistakes strengthens quality management within the supply chain. Positive supplier experiences encourage open communication and feedback, enabling continuous improvement and enhancement of product and service quality.

SPEED. Co-creation accelerates decision-making processes and enhances operational speed. Through collaborative efforts and shared expertise, businesses can promptly respond to market demands and changes more efficiently.

DEPENDABILITY. Ensuring the availability of materials and services is essential for maintaining dependability within the supply chain. Trust and reliability foster excellent supplier experience, ensuring consistent access to resources and minimizing disruptions.

FLEXIBILITY. Joint research and development (R&D) initiatives promote flexibility and adaptability. By collaborating on R&D projects, businesses can predict and respond to changing market trends and customer demands more effectively.

SUSTAINABILITY. Promoting respectful behaviour and ethical practices is fundamental to achieving sustainability goals. The culture of mutual respect and integrity allows a positive supplier experience, leading to sustainable business practices and enhanced supply chain sustainability.

Summary: Towards excellent collaboration and interaction

Customer-supplier relationships are more than just faceless entities at the organizational level. They thrive on complexity and require broad dialogue between professionals on both sides. Interaction forms the foundation of daily operations, with purchasers responsible for developing supplier relationships and meeting the diverse needs of stakeholders within their organization.

In today's landscape, continuous and context-driven interaction is essential for effective delivery management. This includes collaborative value creation, joint development initiatives, involving suppliers in research and development, mutual learning efforts, and collaborative troubleshooting and decision-making.

Excellent collaboration and interaction between companies result in various benefits, including increased agility, flexibility, responsiveness, sustainability, and productivity. This synergy resonates throughout the entire value chain, ultimately delivering enhanced value to the end customer.

THE FOLLOWING STEPS WILL HELP TO IMPROVE YOUR COLLABORATION AND INTERACTION WITH THE SUPPLIERS:

1. Identify the most relevant **supplier collaboration drivers** and outline the areas that require improvement.

2. Based on the five viewpoints presented in this chapter, define the **code of behaviour for supplier collaboration**

THE SYNERGY RESONATES THROUGHOUT THE ENTIRE VALUE CHAIN, ULTIMATELY **DELIVERING ENHANCED VALUE TO THE END CUSTOMER.**
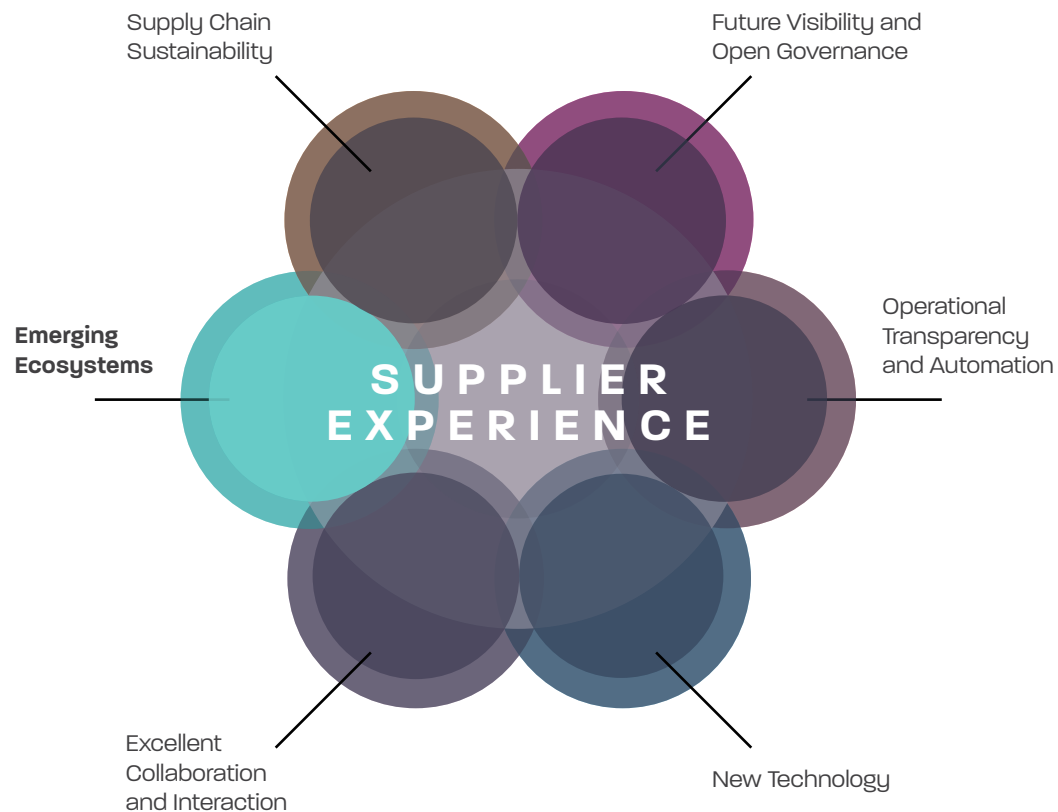
Supply Chain Sustainability

Future Visibility and Open Governance

Operational Transparency and Automation

Emerging Ecosystems

S U P P L I E R E X P E R I E N C E

Excellent Collaboration and Interaction

New Technology

Figure 9. Six lenses of Supplier Experience – Emerging ecosystems.

3.5. EMERGING ECOSYSTEMS

In this book, we approach emerging ecosystems more from the perspective of IT ecosystems and analyse the impacts of using vertical platforms to supplier experience. We argue that being part of a growing enterprise ecosystem offers significant advantages for companies and improves the overall supplier experience.

Industry-specific vertical IT ecosystems enables seamless, rapid, and secure global connections among industry players. This connectivity is achieved by leveraging existing companies within the ecosystem, rather than relying on traditional, hierarchic, silo-type, value chains. As a result, connectivity is enhanced, and processes, IT systems, and supplier-customer relations are standardized.

By utilizing vertical platforms (IT ecosystems), companies can overcome the limitations of fragmented and isolated approaches, such as traditional portals and extranets. This collaborative network approach streamlines operations, improves efficiency, and reduces complexity throughout the entire value chain. Besides, the focus on sustainability within the ecosystem not only benefits the companies involved but also has positive implications for end-customers.

To achieve future success, industries face a critical question: how can companies enhance their connectivity capabilities? By connectivity capability, we refer to an organization's ability to quickly and seamlessly connect at various levels to adapt to market demands. These levels include **1) Organizational connectivity:** Facilitating smooth collaboration ramp-up with suitable suppliers, **2) Personal connectivity:** Ensuring alignment with employees' values and working method, **3) Software connectivity:** Utilizing software capable of integrating easily with other systems, **4) Logistics connectivity:** Ensuring prompt implementation of delivery routines for goods, and **5) R&D connectivity:** Having complementary knowledge and skills in research and development activities.

This question drives innovation and strengthen collaboration, and enable the full potential utilization of the ecosystem. Prioritizing connectivity in supply chain management is crucial for remaining competitive, creating new growth opportunities, and driving industry advancements.

Connectivity Challenges in Procurement: Limitations of Portals and Extranets

In the literature, industry-specific IT ecosystems hosted by third parties are presented as Information Hubs for Ecosystems or Ecosystem Control Towers. In this book, we use the term *vertical platform* to define an industry-specific environment. It clearly differentiates from traditional portals, which we call as company-specific environments.

Procurement executives face specific challenges when establishing efficient connectivity. The three key challenges in traditional company-specific environments which we call portals (*Figure 10.*) and extranets are as follows:

1. **Company-Specific Environments:** Companies often face the limitations of company-specific portals that disturb effective communication and collaboration. These portals create silos and non-standardization, making it difficult to integrate information, streamline processes, or develop solutions for future needs.

2. **Multiple Customer Channels:** Suppliers typically work with multiple customer channels, each with its own communication requirements and systems. This multi-channel landscape increases the complexity of connectivity and requires diverse integration solutions.

3. **Complex Point-to-Point Integrations:** Establishing connections between suppliers and customers often involves complex and costly point-to-point integration options. These options require significant effort and resources, making scalability and maintenance challenging.
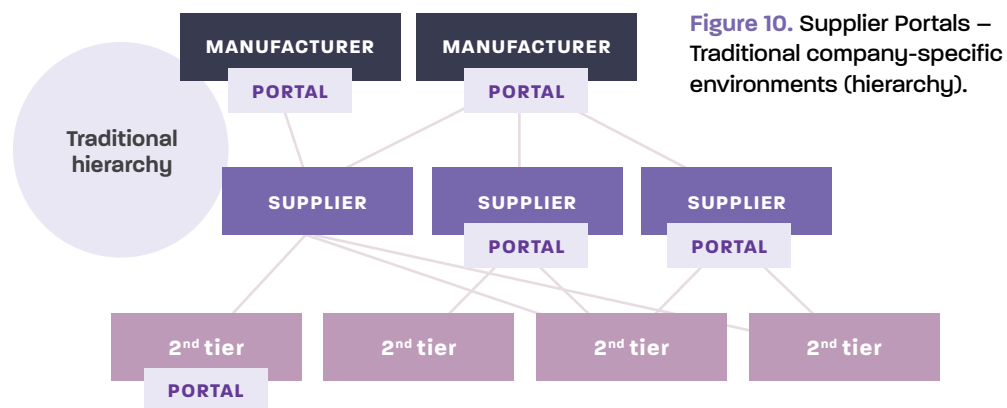

Figure 10. Supplier Portals – Traditional company-specific environments (hierarchy).

These challenges make it difficult to onboard suppliers and, typically, supplier coverage and commitment is low in traditional company-specific portals and extranets. Suppliers do not want to use different tools with all their customers.

Procurement Connectivity: The Power of Modern Ecosystem

The modern ecosystem approach (Figure 11.) with standard platforms offers a solution to these previously mentioned challenges. The three key elements of this approach are as follows:
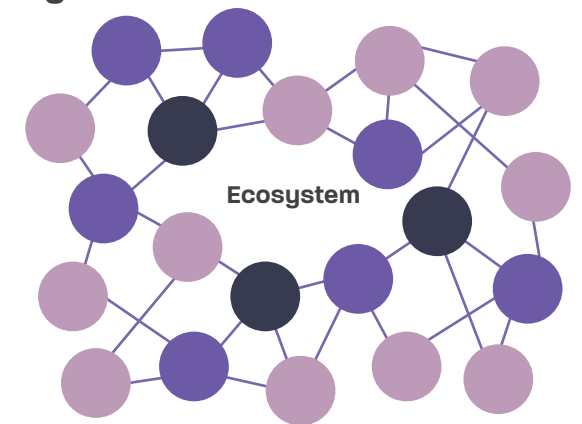

Figure 11. Vertical platform – Modern industry specific environment (ecosystem).

1. **Industry-Specific Shared Environments:** Both customers and suppliers can benefit from industry-specific shared IT environments, which provide a standardized platform for seamless communication and collaboration. These shared environments eliminate the need for company-specific portals, promoting a more integrated and efficient business ecosystem. They are also continuously developed based on feedback from multiple companies.

2. **Collaboration with Multiple Customers or Suppliers:** Companies can engage with multiple customers and suppliers within the same channel. This collaborative approach requires streamlined connectivity to ensure effective communication, standardized processes, data sharing, and coordination among the parties involved.

3. **Scalable Integration Options:** Scalable integration options play a crucial role in automating manual tasks, for instance, those related to purchase order and order confirmation processing between companies. Scalable, standardized API-based integrations establish flexible and expandable connections with both customers and suppliers, facilitating efficient information exchange and process automation.
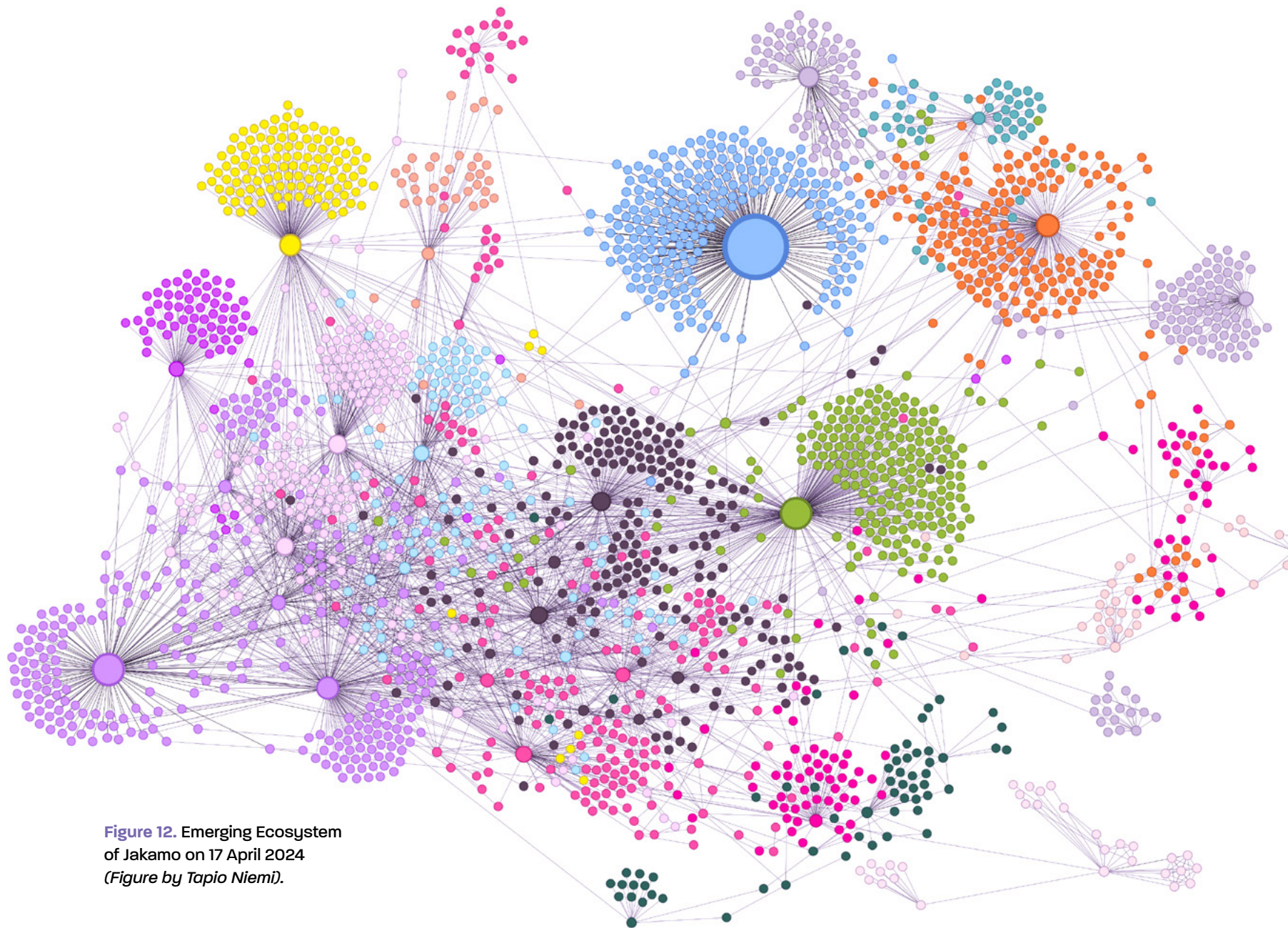
Figure 12. Emerging Ecosystem of Jakamo on 17 April 2024 *(Figure by Tapio Niemi).*

By leveraging industry-specific, ecosystem-based, shared environments, collaborating with multiple customers and/or suppliers in the same channel, and implementing scalable integration options, companies can simplify connectivity. This simplification engages suppliers, leading to high supplier coverage and commitment. It also enhances collaboration, improves operational efficiency, and enables smoother procurement processes throughout the supply chain.

Figure 12 provides a comprehensive view of a real emerging ecosystem, employing balls to represent the companies and lines to express the relations between them. These lines not only illustrate the interconnectedness within the ecosystem but also symbolize the digital connections facilitating the secure and selective sharing of information and data among the companies. Additionally, the size of each ball corresponds to the number of relationships the company has; thus, a larger ball indicates a bigger number of relationships. This visualization offers fascinating insights into the complex net of relationships that defines the dynamics of the industry-specific emerging ecosystem.

The role of Supplier Experience in Emerging Ecosystem

Connectivity capabilities and the unity of the network significantly influence critical areas of the performance objectives. Here are presented the connections to supplier experience.

COST. Scalable IT connections benefit both customers and suppliers, with development costs shared across the ecosystem, leading to improved efficiency. Streamlined processes and optimized resource utilization drive cost efficiency throughout the ecosystem and leads to positive supplier experience.

QUALITY. Reduced complexity enhances overall quality within the ecosystem. Clear communication and simplified processes promote positive supplier experience, reducing errors and improving the quality of products and services delivered.

SPEED. Facilitating fast connectivity between companies and enabling effective data sharing within business relationships accelerates operational speed. Efficient collaboration enables prompt responses to market demands and reducing time-to-market.

DEPENDABILITY. Streamlined operations and standardized processes enhance reliability within the ecosystem. Clear communication channels and efficient processes promote trust, ensuring consistent performance and minimizing disruptions.

FLEXIBILITY. Improved efficiency enhances adaptability within the ecosystem. Effective collaboration enable quick responses to changing market conditions and evolving customer needs.

SUSTAINABILITY. Effective and streamlined operations contribute to sustainability objectives within the ecosystem. Continuous improvement and responsible resource management are promoting long-term sustainability and resilience.

INDUSTRIES ARE UNDERGOING **A SHIFT TOWARDS A COLLABORATIVE ECOSYSTEM APPROACH**, WHERE CONNECTIVITY AND STANDARDIZATION ARE KEY DRIVERS OF SUCCESS.

Summary: Towards the Ecosystem Approach

Industries are undergoing a shift towards a collaborative ecosystem approach, where connectivity and standardization are key drivers of success. Traditional company-specific portals and extranets have challenges in terms of communication, collaboration, and integration within the supply chain.

To overcome these limitations, companies should apply the modern ecosystem approach, which includes industry-specific shared environments, collaboration with multiple customers and suppliers, and scalable integration options. By implementing these elements, companies can simplify connectivity, improve supplier coverage and commitment, enhance collaboration, and streamline procurement processes. This approach leads to increased operational efficiency, improved sustainability, cost savings, and a competitive advantage.

THE FOLLOWING STEPS WILL HELP YOU GET STARTED WITH THE ECOSYSTEM APPROACH:

1. **Use industry-specific shared environments:** Invest in industry-specific shared environments that serve as standardized platforms for supplier collaboration. These environments eliminate the need for company-specific portals and facilitate seamless integration among different stakeholders.

2. **Foster collaboration with multiple customers and suppliers:** Engage with multiple customers and suppliers within the same channel to leverage the benefits of collaboration. Streamline connectivity and communication processes to ensure effective collaboration, standardized workflows, and data sharing. Implement tools and technologies that enable smooth coordination and information exchange between various stakeholders involved in the procurement process.

3. **Implement scalable integration options:** Focus on scalable integration options that automate manual tasks and enable efficient information exchange between companies. Utilize standardized application programming interfaces (APIs) to establish flexible and expandable connections with both customers and suppliers. This approach allows for seamless integration with existing systems and ensures compatibility as the ecosystem expands or changes.

4. **Encourage supplier onboarding and commitment:** Highlight the advantages of the modern ecosystem approach to suppliers and emphasize the benefits of simplified connectivity, streamlined processes, and enhanced collaboration. Actively engage suppliers in the onboarding process and provide support and training to ensure their successful integration into the shared environments. Foster strong relationships with suppliers and incentivize their commitment to the ecosystem through mutual benefits and long-term partnerships.
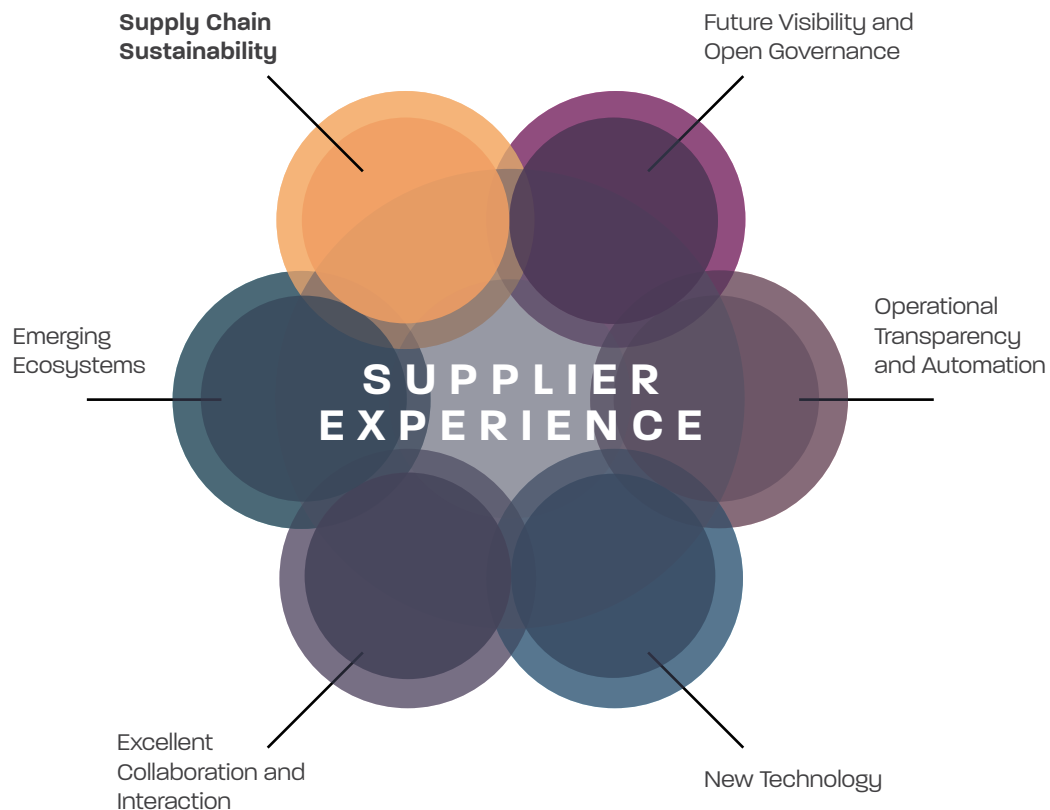
Figure 13. Six lenses of Supplier Experience – Supply chain sustainability.

3.6. SUPPLY CHAIN SUSTAINABILITY

Sustainability is likely the biggest megatrend that will disrupt the global economy and businesses in the near future. Alongside another megatrend, digitalization, will revolutionize companies' business models, revenue logics, and operations more than we believe and sooner than we think. Sustainability should not be handled as a separate corporate responsibility function but rather as an integral part of the company's strategy, considered holistically in all decision-making processes.

During the past years we have been witnessing the difficulty of implementing sustainability actions into the supply chain. In other words, companies find it difficult to govern the necessary actions and track the required data from suppliers (Scope 3 upstream). As we introduced Adler's governance model in the Introduction chapter, it can also be applied to sustainability implementation towards the suppliers. There governance models have different impacts on supplier experience and therefore to overall success as well.

By using the hierarchical governance mechanism, customers instruct their suppliers to carry out the required activities. The customer holds authority in monitoring the sustainability data from suppliers. Using the market mechanism as governance model, customers choose suppliers to deliver goods based on their willingness to provide the required sustainability data in the requested format.

With the trust-based governance model, based on collaborative partnership, sustainability requirements are viewed as joint development initiatives and actions towards mutual success. Customer explains to suppliers why these requirements and actions are urgent and important, and together with the suppliers, they seek the best way to manage and track the required data. Often, the customer also needs to change their processes to provide an optimal environment for their suppliers to act effectively in changed situation. This requires a collaborative mindset on both the customers and supplier sides.

Based on our experiences and observations, we encourage companies to utilize more the trust-based governance mechanism when implementing supply chain sustainability actions. There is evidence that this governance model offers better opportunities for success compared to the other two.
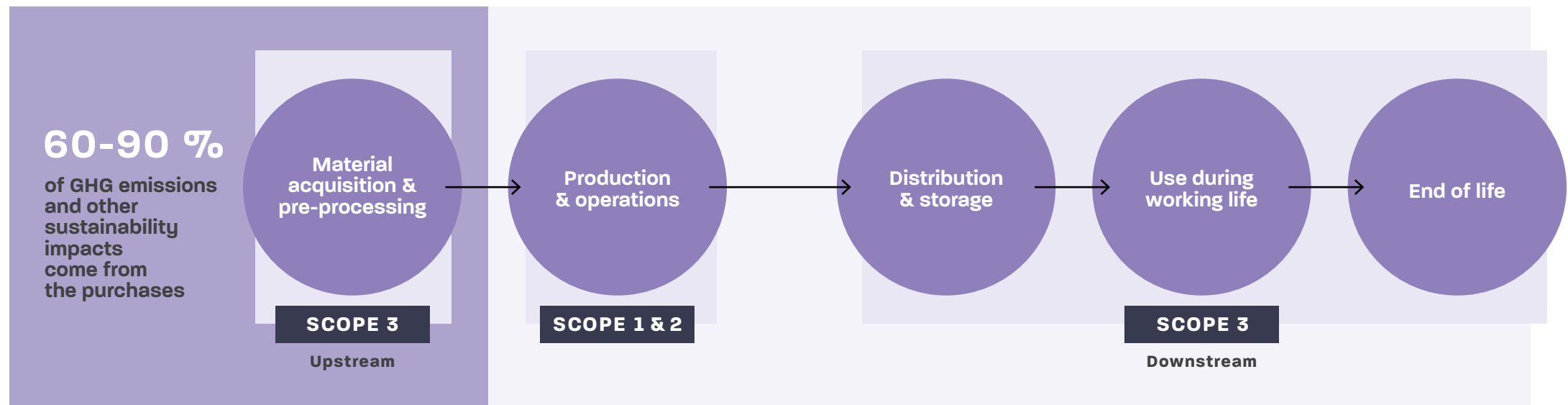
60-90 % of GHG emissions and other sustainability impacts come from the purchases

| Material acquisition & pre-processing | Production & operations | Distribution & storage | Use during working life | End of life |

SCOPE 3 — Upstream

SCOPE 1 & 2

SCOPE 3 — Downstream

Figure 14: GHG emissions footprint of a product in its value chain (modified image based on the *GHG Protocol – McKinsey analysis*)

Why is Supply Chain Sustainability important?

Currently, industries such as consumer goods, food, and energy are leading the way towards sustainability transformation. However, it is crucial to understand that sustainability will impact every industry, including manufacturing.

There is a growing interest in companies regarding **ESG (Environment, Social, Governance)** related initiatives. As a part of this discussion, Supply Chain Sustainability has emerged as a crucial topic due to political changes, new regulations, shifting investment and loaning environments, and evolving consumer values. What was once considered a nice-to-have aspect is now an essential strategic target for company management.

Enterprises have a significant impact on society and the environment. They create jobs, pay taxes, and provide products, but they also impact highly on greenhouse gas (GHG) emissions, biodiversity loss, pollution, equality, human

rights, diversity and inclusion, working conditions, health and safety, training, and the development of new technologies and innovations. As an example, the manufacturing and production sectors generate 20 % of the world's CO2 emissions and consume 54 % of the world's energy sources. Therefore, the manufacturing industry is one of the main industries that needs to address global sustainability challenges.

Nowadays, products are typically produced in complex global supply chains. Therefore, the value-creation model of manufacturing companies is highly dependent on their supply chain. According to the *CDP 2020 Global Supply Chain Report*, supply chain emissions of organizations are 11,4 times higher than their operational emissions. This also applies to the manufacturing industry, where typically 60 – 90% of GHG emissions and other sustainability impacts arise from the purchases made in the supply chain, as presented in. This is why procurement plays a key role in the sustainability transformation of the manufacturing industry.

To summarize, the sustainability of companies is highly dependent on the sustainability of their supply chain. A major part of a company's environmental and social impacts come from its suppliers, and any sustainability issues within the supply chain can have serious impacts for a company's competitiveness. Therefore, managing sustainability solely within internal operations is not enough; supply chain sustainability management must also be tightly integrated. It is obvious that supply chain sustainability transformation should be a key driver for the manufacturing industry. So, why has it not been adopted more widely?

Why Is Supply Chain Sustainability Still Not a Priority?

In general, sustainability is often perceived as a complex and challenging topic, making it difficult to prioritize in supply chain management. Instead, actions taken in this area tend to focus on small improvements in separate areas, rather than adopting a holistic approach to sustainability. This lack of prioritization can be attributed to three main reasons:

1. **Lack of business cases:** Many executives struggle to see the financial payback of investing in sustainability. While it's relatively easy to estimate the impact of increasing productivity or adding value in monetary terms, the same clarity doesn't exist for sustainability initiatives. Consequently, sustainability is often excluded from the strategic development themes of procurement executives.

2. **Lack of resources and competencies:** Procurement teams are primarily focused on daily manual tasks, such as managing purchase orders and ensuring timely deliveries. As a result, there is limited time, expertise, and capacity available for dedicated sustainability development. The overwhelming amount of routine work leaves little room for strategic thinking and sustainable transformation within procurement organizations.

3. **Lack of understanding and concrete solutions:** While companies recognize the importance of sustainability in principle, they often struggle to translate this understanding into practical initiatives within supply chain management. Procurement executives lack a strategic view and concrete use cases of how to

approach sustainability effectively. The lack of actionable guidance makes it challenging to initiate concrete sustainability efforts within organizations.

In summary, the lack of prioritization of sustainability in supply chain management can be attributed to 1) the difficulty in estimating financial returns, 2) the overwhelming focus on daily operational tasks, and 3) the absence of clear guidance on how to implement sustainable practices. Overcoming these challenges requires building robust business cases, allocating resources and building expertise specifically for sustainability, and providing practical initiatives and applications to guide procurement executives in their sustainability journey.

Supply Chain Sustainability Is Becoming a Key Competitive Advantage

Climate change and biodiversity loss are the most significant challenges to humankind. Both issues are clearly linked to the global economy and businesses, as demonstrated in the 2021 report "The Economics of Biodiversity" led by Cambridge Professor Sir Partha Dasgupta. Climate change and biodiversity loss are scientifically-proven facts that should be integrated into decision-making across all industries, including manufacturing.

Supply chain sustainability management in the manufacturing industry has become increasingly vital for companies' success. Several rapid changes in politics and markets are forcing companies to align their operations with sustainable development.

Firstly, there are **global commitments** to sustainability goals by organizations such as the United Nations (2030 Agenda for Sustainable Development), the European Union, and various countries, regions, and cities. Many companies have also voluntarily joined initiatives like The Science Based Targets (SBTi). However, voluntary actions alone may soon be deemed insufficient, leading to **new legislation and regulations** that make sustainability management mandatory. For example, the European Corporate Sustainability Reporting Directive (CSRD) came into effect in January 2024. It requires stricter reporting obligations on certain-sized companies. Moreover, the EU is preparing additional directives such as the Corporate Sustainability Due Diligence Directive (CSDDD) and Digital Product Passport (DPP).

COMPANIES THAT FAIL
TO INVEST IN HOLISTIC
SUSTAINABILITY WILL SUFFER
FROM AN IRRESPONSIBLE
IMAGE, LOSE MARKET SHARE,
AND **BECOME OBSOLETE
COMPARED TO FORWARD-
THINKING COMPETITORS.**

Secondly, the **pricing of emissions is becoming visible**. Leading banks, venture capitalists (VCs), and funds have recently made concrete commitments to sustainability. For instance, Nordea bank announced a mid-term objective to reduce carbon emissions from its lending and investment portfolios by 40 – 50 % by 2030 and achieve complete carbon neutrality by 2050. Similarly, Norway's governmental wealth fund, worth 1.2 trillion dollars, is requesting more detailed climate-related data from portfolio companies with high CO2 emissions to better understand sustainability risks. Notably, companies that neglect sustainability will face difficulties securing future investments.

Furthermore, **consumers are increasingly demanding sustainability**, both from environmental and social perspectives. A 2022 study by KPMG consulting firm, involving 18,000 consumers, revealed that over half of the respondents considered sustainability to be an important factor in their consumer experience. This trend will soon impact the manufacturing industry's customers as well. Companies that fail to invest in holistic sustainability will suffer from an irresponsible image, lose market share, and become obsolete compared to forward-thinking competitors. This evolution will have a significant impact on supply chain management, with tangible financial implications for sustainability initiatives.

Finally, **supply chain digitalization** is another key factor already influencing sustainability efforts. New digital platforms enable practical initiatives and use cases for managing and developing supply chain sustainability. These platforms improve transparency, communication, and standardized management of sustainability at strategic and operational levels. Digitalization also automates manual routine tasks, freeing up 50 % of procurement professionals' work time for more value-adding activities such as sustainability management and development. This shift from operational to strategic work not only enhances supply chain sustainability but also improves employee and supplier satisfaction, reflecting social responsibility point of views.

How Can Digitalization Enable the Transformation of Supply Chain Sustainability?

As discussed earlier, supply chain sustainability can be a complex topic that requires a holistic approach at both the operational and strategic levels. Digitalization plays a crucial role in enabling manufacturing companies to transform their supply chain sustainability.

Digital platforms provide support for supply chain sustainability by offering visibility, concrete use cases, and manageability for supplier compliance, development and innovation initiatives, and operational processes related to sustainability. They enhance transparency, communication, and standardization in managing supply chain sustainability. Digital tools also facilitate sustainability risk management, reporting, and traceability.

Furthermore, digitalization enhances the productivity of procurement professionals by automating routine tasks, freeing up their time to develop new competencies and capabilities in supply chain sustainability. This not only improves employee and supplier satisfaction but also enables a shift towards more value-adding and fulfilling tasks. Modern and user-friendly tools enhance the entire supplier experience management process.

The three main themes of supply chain sustainability can be summarized as follows and are presented in *Figure 15.*

1. **Supplier Compliance:** Establishing a strong foundation for strategic supplier base sustainability management through supplier evaluation, monitoring, reporting processes, and the management of code of conducts, certificates, audits, contracts, instructions, and guidelines. Digitalization provides visibility, structured policies, risk mitigation, and a full audit trail for holistic supplier base sustainability management.

2. **Operative Sustainability:** Enhancing transparency and communication in daily supply chain processes, including purchase orders, claims, and engineering change management, is enabled by digitalization. It facilitates the management of delivery-specific sustainability requirements and data collection, such as tracking GHG emissions, material traceability, and energy efficiency certificates. Digitalization also enhances the quality of operative processes, leading to a significant impact on sustainability. Accurate data and continuous learning regarding purchase orders and supply chain quality are crucial from a sustainability perspective. For instance, avoiding manufacturing a component twice due to errors reduces emissions.

3. **Sustainability Innovation:** Collaborating with suppliers systematically to drive significant improvements in supply chain sustainability. This can involve initiatives such as design for sustainability (DFS), process innovation, and co-innovation for sustainable offerings, social responsibility initiatives, GHG footprint reduction, and waste minimization.
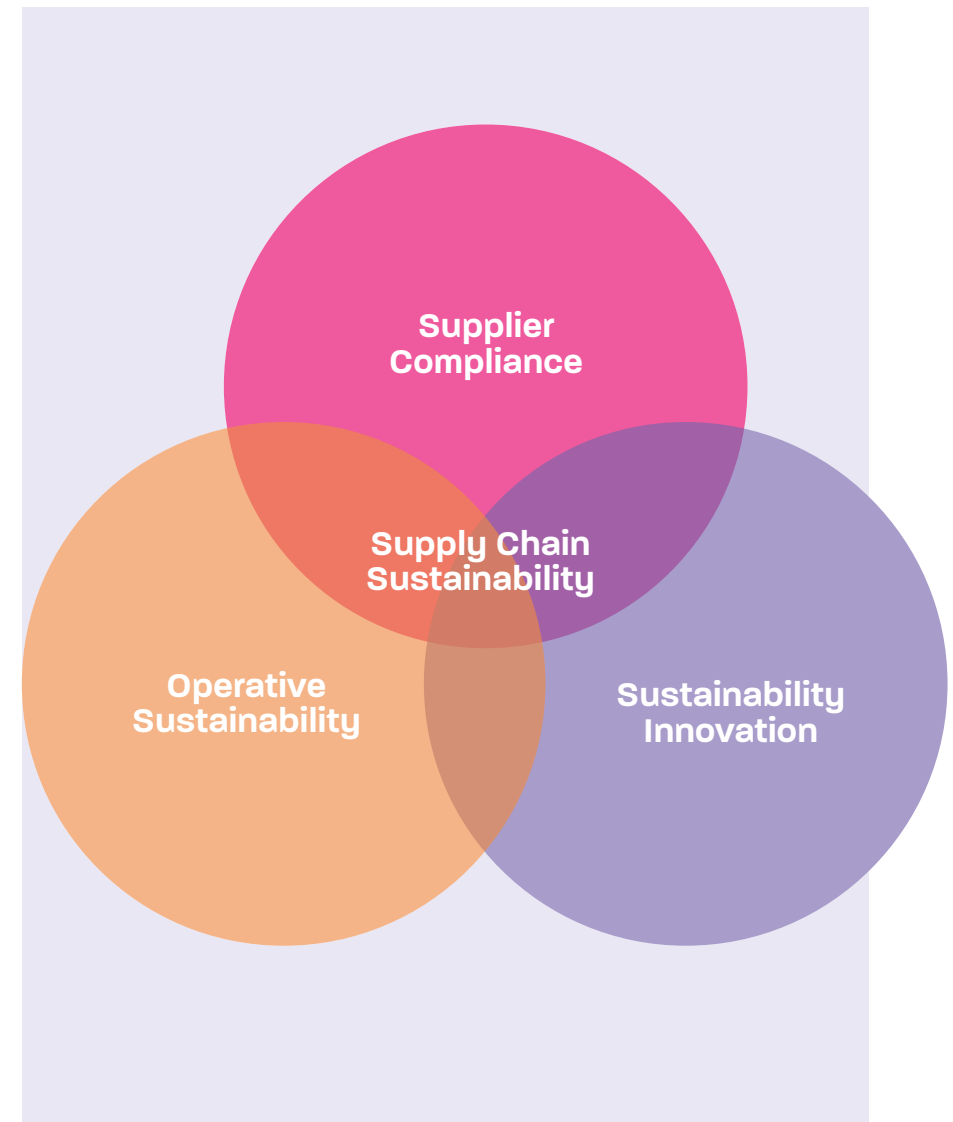

Figure 15: The holistic approach of Supply chain sustainability.

To provide more concrete examples, Table 1 below presents practical use cases that demonstrate how digitalization can facilitate the transformation of supply chain sustainability in relation to the well-known ESG (Environmental, Social, Governance) framework.

In summary, digitalization is a key enabler for supply chain sustainability. It provides tools and platforms that enhance visibility, communication, transparency, data-collection, risk management, and innovation. Moreover, it boosts productivity, empowers employees to develop sustainability-related competencies, and improves overall employee, supplier and end-customer satisfaction.

SCOPE 3 (Upstream)	ENVIRONMENTAL	SOCIAL	GOVERNANCE
Supplier Compliance	• Environmental impact assessments and evaluations • Environmental aspects specific supplier instructions and guidelines • GHG (Green House Gas) policies • Biodiversity loss policies	• Social impact assessments and evaluations • Diversity Equality and Inclusion (DEI) policies • Social aspects specific supplier instructions and guidelines • Conflict Minerals reporting • Labour rights and decent work • Child labour • Incident / accident reporting	• Contracts • Audits • Monitoring and reporting • Code of conduct • Third party certificates • Country of origin
Operative Sustainability	• Deliveries related GHG data collection • Recycled content percent • Deliveries related biodiversity loss impact data collection • Data of energy & water consumption • Deliveries related energy efficiency documents • RoHS data collection • REACH data collection • Optimal shipping planning (ASN)	• Deliveries related social impact data collection	• Material traceability documents • Standardized supplier quality processes • Standardized ECM / PPAP processes
Sustainability Innovation	• Co-design of carbon neutral products and materials • Improving and develop transportation and logistics processes in sustainable way	• Sustainable employee experience development in supply chain (white-collar & blue-collar)	• Design for sustainability (DFS) collaboration • Supplier early involvement

Table 1: Examples of digital use cases for supply chain sustainability transformation presented in ESG framework

The role of Supplier Experience in Supply Chain Sustainability

Supplier experience plays a significant role in shaping various aspects of supply chain sustainability. The efficiency and responsiveness fostered by positive supplier experiences significantly impact crucial areas of performance objectives.

COST. Implementing effective processes and products enhances cost efficiency. Furthermore, it enables improved responses to future market requirements, optimizing resource allocation and minimizing waste.

QUALITY. Long lifecycle products and traceability of materials and components improves product quality. Commitment to sustainability standards is enhancing the durability and reliability of products and has positive impact on supplier experience.

SPEED. Automated sustainability data tracking eliminates manual work and improves fast and accurate data collection. Real-time insights enable prompt responses to sustainability challenges, ensuring proactive management of environmental and social impacts.

DEPENDABILITY. Upholding social responsibility and corporate governance standards strengthens dependability within the supply chain. Trust and transparency are ensuring ethical practices and compliance with sustainability regulations.

FLEXIBILITY. Design for circular economy enhances flexibility and adaptability. Supplier collaboration enables the development of innovative solutions for sustainable product design and resource management, promoting resilience in dynamic market conditions.

SUSTAINABILITY: Managing supply chain sustainability holistically enables comprehensive tracking of sustainability data and development from the perspectives of supplier compliance, operational sustainability, and sustainability innovation with suppliers.

Summary: Towards Supply Chain Sustainability

Businesses are being shaped by two important trends: sustainability and digitalization. The business landscape is evolving rapidly, with changing politics, regulations, and increasing customer demand for sustainability throughout the supply chain. Additionally, there will soon be a financial incentive for sustainability initiatives, making it easier to estimate the business case. Digitalization will play a crucial role in enabling companies to transform their supply chain sustainability, providing visibility, concrete use cases, and manageability for supplier compliance, operational processes, and innovation collaboration related to sustainability.

The sustainability of companies relies heavily on the sustainability of their supply chains, as a significant share of their environmental and social impacts come from this area. Therefore, it is essential to develop new sustainability-related competencies and capabilities within procurement organizations. Shifting the focus from manual work to strategic and development-oriented tasks is crucial. Companies should invest systematically and comprehensively in supply chain sustainability, initiating concrete actions and use cases related to greenhouse gas emissions, pollution, biodiversity loss, equality, human rights, diversity and inclusion, working conditions, health and safety, training, and new technologies and innovations.

It is time to recognize sustainability as a valuable business driver and an integral part of delivering an excellent supplier experience. Companies that act early can gain significant competitive advantages by embarking on the journey towards supply chain sustainability transformation. Waiting too long may result in lost market share and becoming obsolete.

TO HELP YOU INITIATE THE TRANSFORMATION TOWARDS SUPPLY CHAIN SUSTAINABILITY, CONSIDER THE FOLLOWING CHECKLIST:

1. **Think holistically:** Take a comprehensive approach that considers both strategic and operational viewpoints. This includes supplier compliance, operational sustainability, and sustainability innovation.

2. **Include environmental, social aspects, and governance:** Incorporate considerations for environmental, social, and governance sustainability impacts throughout your supply chain.

3. **Set targets and define KPIs:** Establish clear targets and define key performance indicators (KPIs) to monitor and track progress effectively.

4. **Leverage digital tools:** Utilize digital platforms and tools to enable the sustainability transformation. Look for solutions that enhance the supplier experience and facilitate the implementation of concrete use cases.

5. **Develop new competencies and capabilities:** Identify areas where manual work can be eliminated and invest in building new sustainability-related competencies within your organization.

6. **Foster collaboration with suppliers:** Engage with suppliers at strategic and operational levels to foster collaboration and achieve impactful results across different sectors.

7. **Consider the scale:** Prioritize sustainability efforts by focusing on areas that have the most significant sustainability impact within your supply chain.

8. **Avoid greenwashing:** Stay true to meaningful and impactful actions rather than engaging in superficial measures aimed solely at creating a positive image.

EPILOGUE

*by Professor
Jukka Vesalainen*

EPILOGUE
BY PROFESSOR
JUKKA VESALAINEN

THE ROLE OF SUPPLIER EXPERIENCE IN THE EMERGING ECOSYSTEMIC BUSINESS ENVIRONMENT

This book introduces supplier experience as a new concept with a crucial role in modern supply chain management. Overall, the role of experience-based evidence in understanding the states of affairs is important because it reveals real conditions. As we know, management rhetoric often emphasizes firms' values, principles, and policies, which unfortunately do not always align with practice. Stakeholder experience, whether it be customer, user, or supplier experience, represents the final truth regarding how things truly are. A supply chain management-related example of this dates back to the 1990's when industrial customers launched 'partnership' as a revolutionary approach in managing supplier relationships. However, suppliers did not perceive any significant change, leading to negative supplier experience towards the new managerial approach.

Despite early criticism, partnership as a managerial principle has had and still has the potential for fruitful supply chain cooperation in the pursuit of high-performing supply chains. The theoretical roots of partnership can be traced back to the so-called relational approach to supply chain management, which emphasizes cooperation based on trust, unity, and openness between suppliers and industrial customers. However, it would be misleading to consider the relational approach as the sole driving force in the management of supplier-customer relationships. In fact, organizational theories recognize three different and partly opposing governance mechanisms that influence the formation of supplier-customer relationships within supply chains: hierarchy, market, and social factors.

Hierarchic governance mechanisms are based on power and dependency, with the more powerful party in a relationship (usually the customer) dictating the rules of the game. Market-based governance relies on managerial use of market mechanisms to select the right partners and as a threat to ensure current partners act as expected. Social mechanisms refer to the relational approach, emphasizing trust, unity, and openness in the social context of business relationships. Every business relationship is formed through these mechanisms, but the weights of the three mechanisms vary. This book is theoretically based on the interplay of these three governance mechanisms, and the concept of supplier experience is closely connected to the relational approach.

STAKEHOLDER EXPERIENCE, WHETHER IT BE CUSTOMER, USER, OR SUPPLIER EXPERIENCE, **REPRESENTS THE FINAL TRUTH REGARDING HOW THINGS TRULY ARE.**

The main premise of this book revolves around supplier experience as a central concept through which a set of important performance drivers of modern supply chains are analyzed. Supplier experience is seen as both a precondition and a result of these drivers, indicating a symmetric connection rather than a purely causal one. The central role of supplier experience originates from the authors' work as supply chain management consultants and, more recently, as co-founders and leaders of Jakamo – a SaaS company that developed an innovative supply chain management platform. Based on their experiences, they recognized the importance of fostering a positive social atmosphere in business relationships as an enabler of supply chain-wide development.

For example, to promote sustainable principles throughout the supply chain, strategic purchasers may achieve better results by adopting a relational approach rather than attempting to enforce new principles through authority or the threat of choosing a 'better' supplier. In practice, industrial customers utilize various means to develop the supply chain, as related to the three governance mechanisms mentioned earlier. According to our research findings (Vesalainen, Rajala & Wincent,2020), the most effective purchasing strategy combines all the three tactics.

The beauty of supplier experience as a concept lies in its power to unify logic within potentially opposing governance mechanisms. When supplier experience is primarily a social phenomenon, the nature of experience means that the supplier's personnel may interpret authoritarian or market-driven moves from the customer as acceptable if they perceive the moves as fair. This alignment between expectations and realization ensures that supplier experience remains positive, facilitating fruitful development. Along with its practical significance, supplier experience is an interesting new concept even theoretically.

ALONG WITH ITS PRACTICAL SIGNIFICANCE, **SUPPLIER EXPERIENCE IS AN INTERESTING NEW CONCEPT EVEN THEORETICALLY.**

While this book explicitly focuses on supplier experience, supply chain digitalization also plays a significant role. All the performance drivers presented in the book (such as new technology and sustainability) either directly or indirectly relate to supply chain digitalization. The authors also highlight the emergence of business ecosystem as one of the important performance drivers of modern supply chains. They argue that the traditional hierarchic set-up of the value chain is shifting towards a more ecosystemic way of organizing. What is, then, the role of digitalization in business ecosystems, if we understand a business ecosystem analogous to natural ecosystems?

To illustrate, consider a real ecosystem, such as a lake, with its fauna and flora. The level of oxygen in the lake is crucial for its flourishing, akin to how digitalization functions as a vital element in the business ecosystem. An ecosystemic business environment leverages digitalization to enhance the relevance and speed of information flows among networked firms, leading to improved overall performance. Researchers and consultants have suggested the concept of a 'control tower' or an 'information hub' as crucial components of ecosystemic business systems. However, these definitions may lean more towards a hierarchic (firm-centric) rather than an ecosystemic perspective. Instead, I argue that businesses are embedded in digital systems, forming an ecosystem with each other. In other words, any firm-centric digital system can not function as the center of such system, because it is impossible to define which one of all the firms in the ecosystem would be the 'center'.

Considering the ecosystem of digital systems and platforms as an underlying performance driver of modern supply chains, various experiences play a vital role. User experience focuses on how convenient a digital tool or platform is to use. Supplier and customer experiences represent role-based perspectives, with differing needs and expectations. The authors' practical observations, particularly during the era of customer-centric portals representing the state of the art in supply chain digitalization, led them to emphasize the importance of supplier experience, which perspective was previously neglected in practical management as well as in theoretical discussions.

In summary, the ecosystem formed by digital systems plays a crucial role as a source of 'oxygen' for a modern business ecosystem. To succeed in this 'ecosystemic' task, digital systems and platforms must serve well the needs of multiple stakeholders to generate positive experiences. The emergence of cloud technologies and Platform-as-a-Service offerings in the digital systems market aligns well with the ecosystem idea. The ecosystem of digital tools no longer needs to be firm-centric but should consider the needs and expectations of all the parties involved. The third parties offering cloud-based digital systems for inter-organizational use are the key actors to ensure the overall positive experience related to such systems.

TO SUCCEED IN THIS ECOSYSTEMIC' TASK, DIGITAL SYSTEMS AND PLATFORMS MUST **SERVE WELL THE NEEDS OF MULTIPLE STAKEHOLDERS TO GENERATE POSITIVE EXPERIENCES.**

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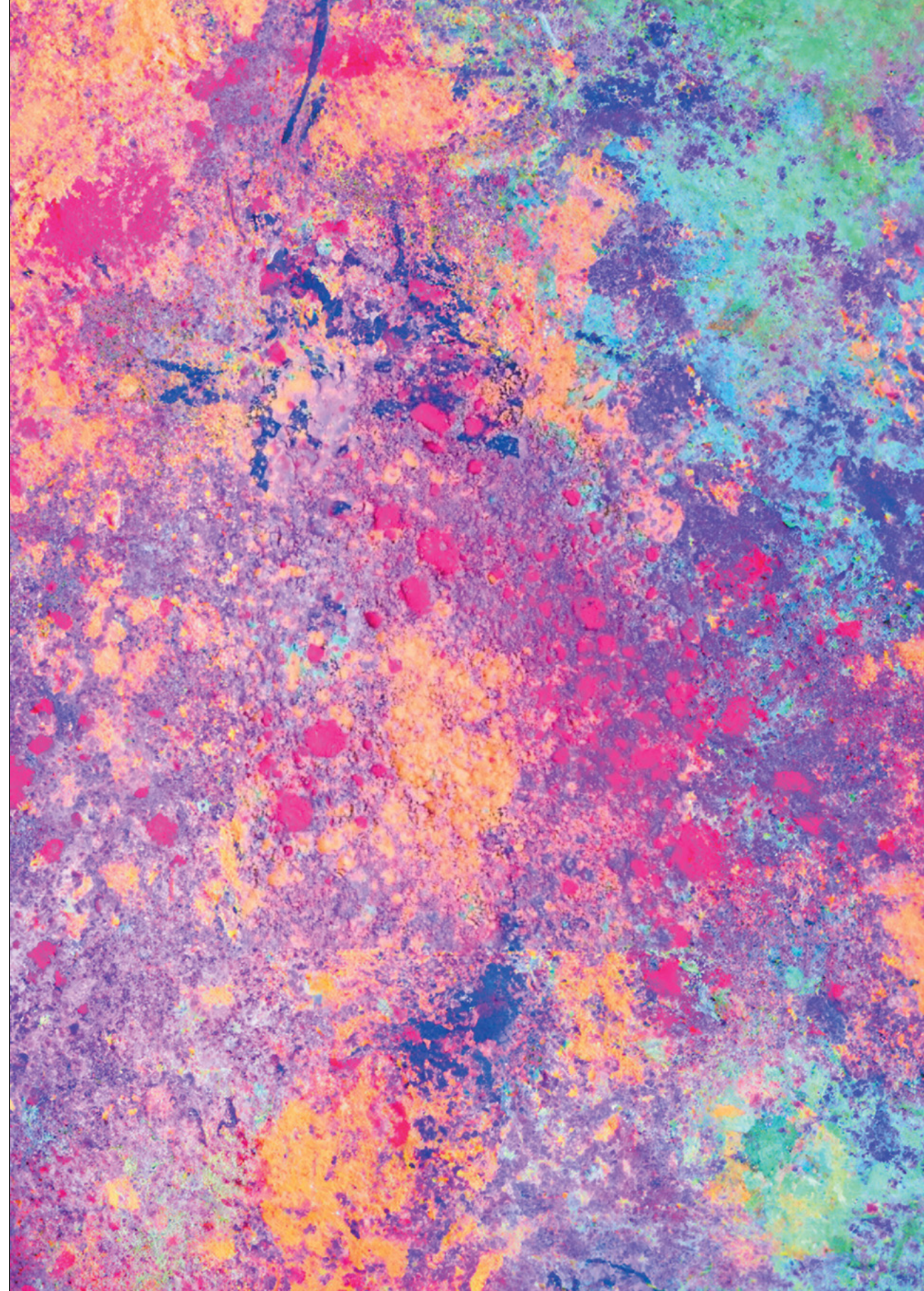
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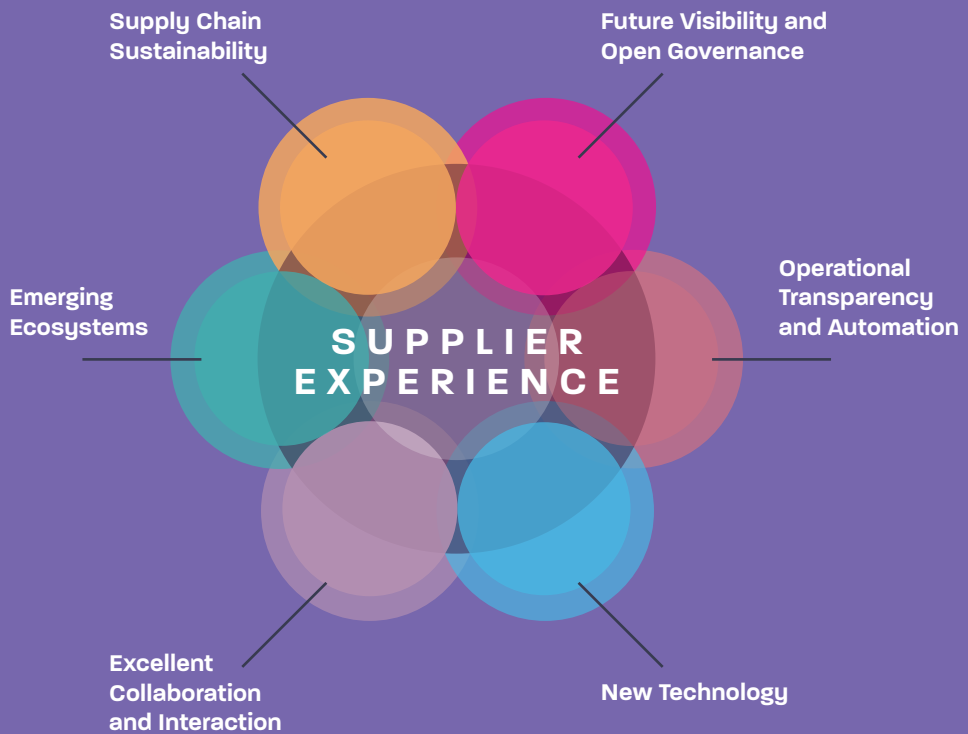
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In this book, supplier experience is presented holistically in the context of modern supplier collaboration, including operational, social, strategic, structural, sustainability, and technological approaches.

Supply Chain Sustainability

Future Visibility and Open Governance

Emerging Ecosystems

Operational Transparency and Automation

SUPPLIER EXPERIENCE

Excellent Collaboration and Interaction

New Technology

SUPPLIER EXPERIENCE is established within the customer-supplier business relationship.

It is subjective in nature and emerges when supplier compares the promises made by customer with their actual experiences.