

**CONSUMER PACKAGED
GOODS & RETAIL**

5 KEY INSIGHTS FOR SUCCESSFUL SUPPLY CHAIN LEADERSHIP

Unlock the power of an integrated food & beverage supply chain with this Q&A guide.

Meet the Experts



Adrian Wood

DELMIA Strategic Business Development and Marketing Director, Dassault Systèmes

Adrian Wood has spent over 20 years in customer-facing positions ranging from sales and marketing to fulfillment and account management. He focuses on problem-solving and development within emerging and rapid growth segments to enable customer success across various industries, from high-tech to retail and logistics, and across multiple disciplines such as supply chain, manufacturing simulation and analytics.



Laurent Smadja

Global Consumer Packaged Goods & Retail Industry Business Value Consultant Director, Dassault Systèmes

Laurent Smadja started his career as a business intelligence architect in a multinational technology company. After five years, he joined a worldwide retailer to build their global corporate business intelligence system, transitioning to the assortment and merchandising director role in 2013. He brought his retail experience to Dassault Systèmes in 2018 as a value expert for the consumer packaged goods & retail industry.



THE SUPPLY CHAIN CONUNDRUM

Supply chain leaders today face formidable challenges. As the industry recovers from the impact of COVID-19, supply chain leaders are pressured to achieve profits and sustainability goals while surpassing consumer expectations.

However, the supply chain strategies that once led to success are no longer adequate in these unprecedented times.

The recent pandemic underscored the industry's limited capacity to respond to disruptions with **agility**. Labor shortages, factory closures and logistical delays¹ triggered widespread supply chain disruptions, leaving shelves empty and causing financial losses for businesses.

The lack of **visibility** into the end-to-end supply chain operations — a challenge long in the making and exacerbated by the pandemic — makes it hard to **forecast** demand and supply, leading to **poor inventory management**.

Furthermore, the recent push toward **more sustainably produced products**² highlights the imperative for low-carbon designs, eco-friendly materials and renewable energy sources. Yet, without the right plan, these sustainable initiatives could incur substantial initial financial investments, eroding profits further.

Given these profound challenges, building a **resilient supply chain** is crucial to staying ahead.

But where do supply chain leaders start?

¹ OECD: [Food Supply Chains and COVID 19: Impacts and Policy Lessons](#)

² Forbes: [Consumers Demand Sustainable Products and Shopping Formats](#)



FROM MANUAL WORKFLOWS TO DIGITAL EXCELLENCE

Digitalization paves the way to rebuilding today's food & beverage supply chain.

While some may still rely on manual Excel spreadsheet planning, it is worth considering the **gains in speed, precision and efficiency** that digitalization offers.

Upgrading to the Dassault Systèmes **3DEXPERIENCE®** platform unlocks a faster, more profitable and greener supply chain with the potential to exceed KPIs.



ABOUT THIS Q&A GUIDE

This guide **identifies critical questions** on building an **optimal supply chain with a digital platform approach** and digs deep into our expert's insights to answer them.

It unveils the **benefits of the 3DEXPERIENCE platform** and the **value** of our supply chain planning and optimization solution across the value chain.

CREATING THE OPTIMAL SUPPLY CHAIN

Get answers to vital questions related to the following five pillars:



Building Resilience

Q How can supply chain leaders build a resilient supply chain to withstand future disruptions?





Global supply chain disruptions pose significant challenges, costing companies an average of USD 184 million annually³.

According to both Adrian Wood, DELMIA's Strategic Business Development and Marketing Director, and Laurent Smadja, Global Consumer Packaged Goods & Retail Industry Business Value Consultant Director, **agility and visibility** are keys to resilience and adaptability in such circumstances.

To attain these vital attributes, a **single platform integrating stakeholders from end to end** and facilitating **real-time collaboration** is crucial.

Wood emphasizes the critical role of data in this process, stating, "**The 3DEXPERIENCE platform turns data into valuable insights for supply chain leaders to understand the situation clearly and pivot as quickly as possible.**"

Furthermore, data aggregated on the **3DEXPERIENCE** platform provides a **single source of truth crucial to answering the industry's unique needs** and mitigating disruptions. Supply chain leaders can **analyze** and **manage** complex flows at a **micro level**, from recipes to production and distribution.

Planning inaccuracies at any of these levels can lead to overstocks or stockouts that cost billions of dollars annually⁴. To overcome this, the platform enables **accurate forecasting** using what-if scenarios simulation for optimized decision-making, resilient contingency plans and proactive risk mitigation. As a result, supply chain leaders can **prevent any disconnect between production and the supply chain, better control** profits, reduce carbon footprint and mitigate potential disruptions with an integrated, realistic, precise solution.

³ Statista: [Estimated Average Annual Cost to Respondents' Organizations as a Result of Global Supply Chain Disruption in 2021](#)

⁴ Supermarket News: [Consumers Say 1 in 5 items they want to buy is out of stock](#)

CUSTOMER HIGHLIGHT

RECIPE FOR SUCCESS

As a prolific family-owned organic food manufacturer producing a million meals daily, Amy's Kitchen faced the intricate challenges of recipe complexity, diverse SKUs and fluctuating labor requirements. Dassault Systèmes' DELMIA Quintiq solutions provided Amy's Kitchen with the much-needed visibility and insights to optimize its approach, plan for uncertainties, improve distribution and optimize the use of resources. [Read the full story here.](#)

“We required a supply chain planning and optimization platform that could accommodate our intricate scheduling requirements, which stems from our unique approach of assembling and cooking products simultaneously. DELMIA Quintiq has an outstanding track record in the industry and its software platform will enable us to maintain the high quality and fulfillment standards our customers have come to expect.”

Andy Berliner

CEO, Amy's Kitchen

Mastering Complexities

Q The supply chain is often a complex puzzle. How do supply chain leaders determine what, when, where and how much to produce without sacrificing profits?





Consider the complexities of sourcing: A sauce recipe demands a dozen ingredients with countless variations based not only on taste but also on ingredient costs, lead times, availability and more. Scale this to twenty different sauces, and you're sourcing a colossal amount of ingredients and generating millions of variations – beyond what a spreadsheet can support.

Now, imagine the power of a digital platform streamlining this process.

The **3DEXPERIENCE** platform capabilities help improve two strategic areas:



Demand and supply planning



Production scheduling

DEMAND AND SUPPLY PLANNING

In an industry characterized by fast-moving, low margins and limited shelf-life, being able to anticipate new, emerging demands and producing the right amount of goods are essential.

Wood emphasizes, "In **demand planning**, it's imperative to **generate the right product inventory levels, ensuring products are available in the right quantities, at the right locations and times**. Make too little and you miss the market. Make too much and you compromise profits and generate wastage. Ensuring your products are consistently available on the shelves will also foster loyalty and safeguard your profits."

Meanwhile, **efficient supply planning** empowers supply chain leaders to source materials and ingredients fast, determine the optimal product mix and connect to the right suppliers to ensure timely materials delivery at the most cost-effective rates.

"If you don't align your suppliers, you will miss the opportunity to meet demands effectively. Here's where the **3DEXPERIENCE** platform becomes invaluable. It equips you with **insights to source better and optimize supply planning decisions** amid competing priorities, helping you get your **product to the market first at the least cost,**" says Wood.

PRODUCTION SCHEDULING

Production scheduling is a critical aspect of **improving productivity** within the confines of a production facility. It optimizes every production line, such as bottling and packaging, scheduling of labor resources and managing other floor constraints, such as machine changeover times.

"The **3DEXPERIENCE** platform allows you to see the potential best combinations, such as machine availability, workforce status and required tools, in a matter of minutes. It tackles constraints that are difficult to manage manually. This helps to optimize processes and meet customer orders on time and in full," explains Wood.

Production scheduling with the **3DEXPERIENCE** platform also ensures:

- » Streamlined production processes leading to increased efficiency and reduced waste at every level, particularly for products with shorter shelf-life
- » Decreased likelihood of production delays and cost overruns
- » Accelerated processes, from order acceptance to delivery time

CUSTOMER HIGHLIGHT

THE PERFECT BLEND IN MASTERING COMPLEXITIES

How does the DELMIA Quintiq Supply Chain Planning solution help one of the world's largest food & beverage companies optimize material usage and throughput and improve revenue? Listen to the [podcast](#) and discover the platform-driven advantage in delivering value, sourcing at the lowest cost and keeping quality consistent in complex scenarios. Also featured are project insights from The Logic Factory.

“The ability (in scenario modeling) to quickly create separate planning instances in the system was a game changer for us. We could create plans with different demand schedules, supply availability pictures or pricing scenarios, and compare the outputs of those plans to get an idea of how they would impact everything from inventory flows to formula costs. Along that line, the visibility and openness of the solution is a huge benefit.”

Staff data scientist

Driving Efficiency

Q How can supply chain leaders leverage a digital platform-based approach and data analytics to enhance supply chain efficiency?





Approximately \$600 billion worth of food is lost globally during or just after harvest — underscoring the urgency for **supply chain efficiency**.

Our **3DEXPERIENCE** platform supports data analytics, offering crucial visibility and agility to improve efficiency.

Historical data, in particular, is central in demand forecasting. It enables planners to construct **predictive models with the virtual twin**, forecasting the success of new flavors or new products in the market without incurring any actual costs. This helps **in optimizing inventory management and reducing waste**.

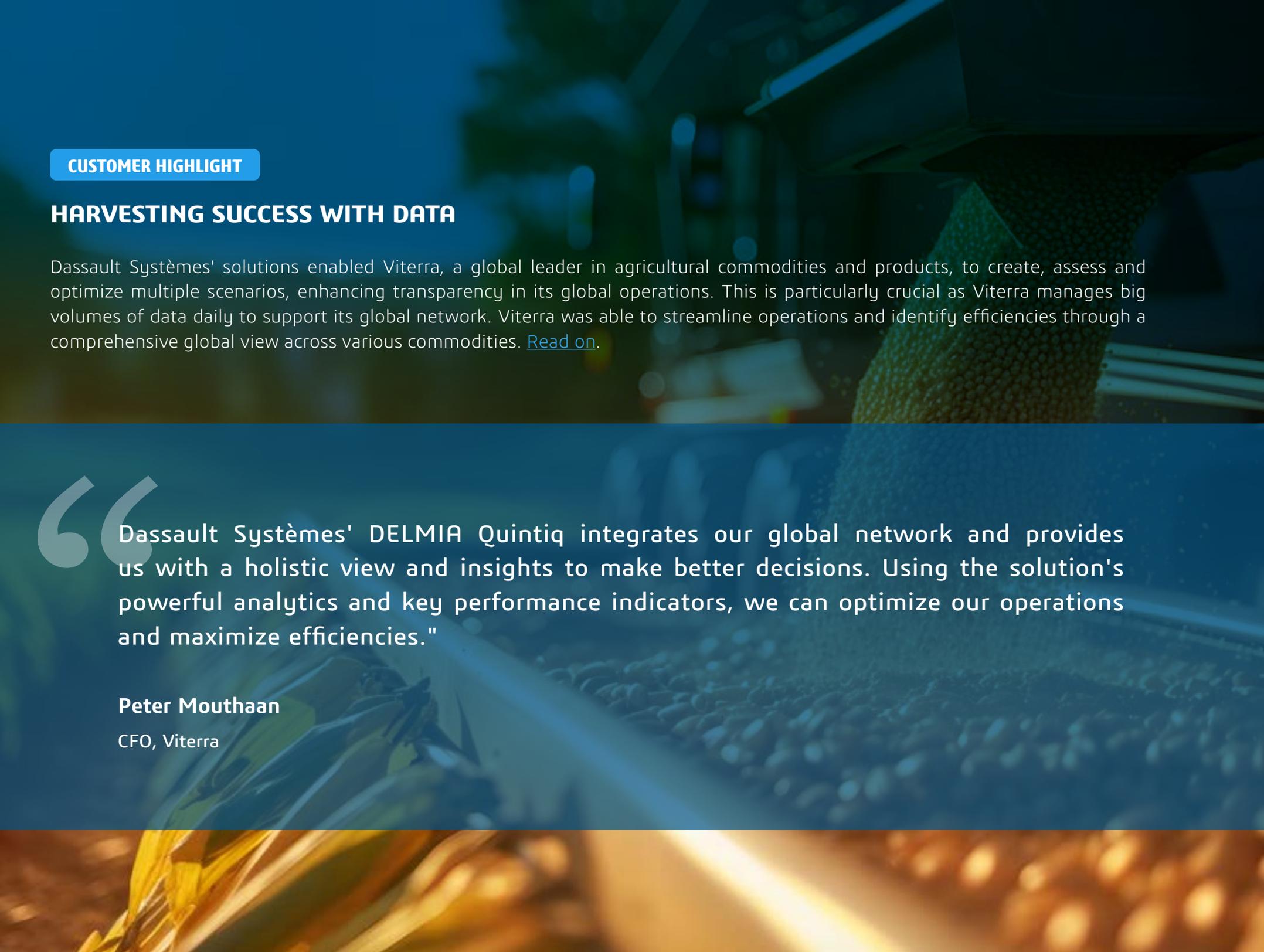
Strategically, leveraging historical data can **enhance factory floor productivity** by allowing supply chain leaders to anticipate machine breakdowns or schedule production line maintenance, reducing downtime.

Data insights on weather patterns, commodity pricing and geopolitical situations allow leaders to make **informed decisions** for **alternative sourcing strategies**.

With data analytics, leaders can plan and **expedite sustainable innovation in packaging, production and delivery routes**. This approach minimizes carbon footprint, fuel consumption, and associated risks in the last-mile delivery.

The hallmark of the **3DEXPERIENCE** platform is its ability to **centralize data**, allowing **accessibility** across stakeholders for informed decision-making. Collaboration on the platform enables multiple stakeholders to reach a consensus for the most optimal plans in the most efficient manner in any given complex situation. This consolidation significantly **reduces the risk of planning errors and boosts confidence in inventory management accuracy**.

Smadja stresses, **"Improving efficiency is the key to protecting profitability. Our platform-driven data analytics and capabilities make it happen."**



CUSTOMER HIGHLIGHT

HARVESTING SUCCESS WITH DATA

Dassault Systèmes' solutions enabled Viterra, a global leader in agricultural commodities and products, to create, assess and optimize multiple scenarios, enhancing transparency in its global operations. This is particularly crucial as Viterra manages big volumes of data daily to support its global network. Viterra was able to streamline operations and identify efficiencies through a comprehensive global view across various commodities. [Read on.](#)

“Dassault Systèmes' DELMIA Quintiq integrates our global network and provides us with a holistic view and insights to make better decisions. Using the solution's powerful analytics and key performance indicators, we can optimize our operations and maximize efficiencies.”

Peter Mouthaan

CFO, Viterra

Preserving Profits and the Environment

Q Today's supply chain leaders must be cost-effective while minimizing environmental impact. How can leaders strike a balance between these two goals?





Cutting costs across sourcing, logistics, operations, labor and inventory while curbing carbon emissions, waste and energy consumption can be overwhelming. KPIs often pit operational efficiency against financial considerations.

"For instance, we can invest more money to expedite delivery sustainably, but this will erode profit margins," explains Wood.

The most effective strategy for optimizing cost and sustainability goals lies in harnessing the power of the virtual twin.

By modeling diverse constraints and KPIs on the **3DEXPERIENCE** platform to optimize outcomes across various scenarios, supply chain leaders can decide on the best trade-offs among varied objectives to achieve their goals.

Wood further underscores the platform's potential, stating, **"While a company typically crafts one strategic plan per quarter, our virtual twin combined with advanced optimization empowers them to potentially develop five strategic plans daily."**

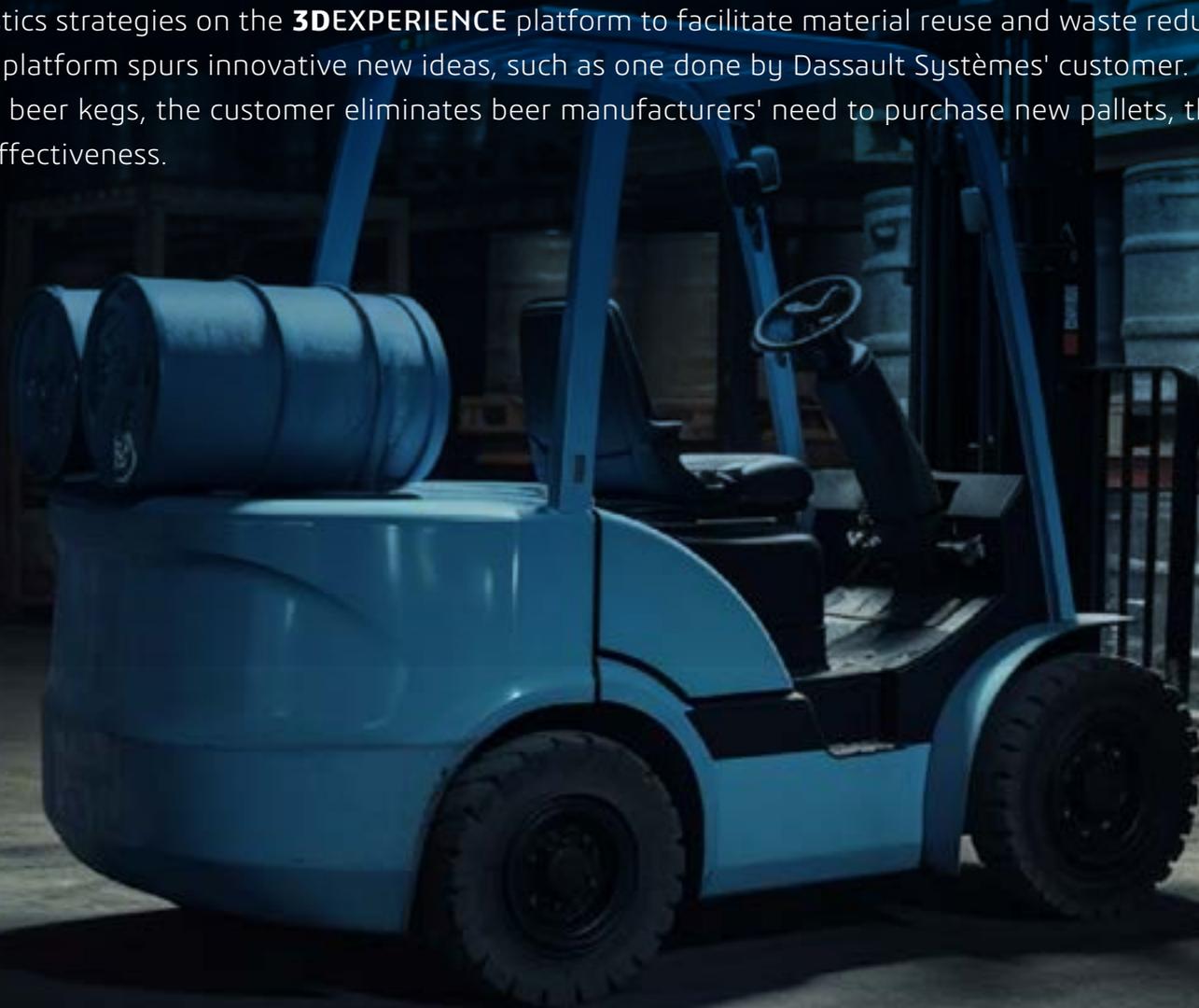
Here's how to further leverage the virtual twin effectively for cost and sustainability goals:

- » Enhance operational efficiency and foster innovative sustainable practices across the supply chain network and suppliers, such as green logistics, energy-efficient transportation and eco-friendly packaging
- » Derive accurate, data-driven forecasts for effective demand planning, capacity planning and cost and waste reduction
- » Integrate reverse logistics seamlessly into the supply chain

CUSTOMER HIGHLIGHT

BREWING SUCCESS IN CIRCULARITY

The key to a circular supply chain lies in efficiently combining the crucial aspects of raw materials sourcing, design, production and outbound and return logistics strategies on the **3DEXPERIENCE** platform to facilitate material reuse and waste reduction. Beyond that, collaboration on the platform spurs innovative new ideas, such as one done by Dassault Systèmes' customer. By renting out pallets to be shipped with beer kegs, the customer eliminates beer manufacturers' need to purchase new pallets, thus promoting reuse and boosting cost-effectiveness.



Delivering on Customer Promises

Q How can supply chain leaders efficiently fulfill customers' demands and improve customer service level performance?





Elevating customer service levels must ultimately be aligned with profitability and sustainability objectives.

The key to delivering this promise is to infuse customer service focus into every facet of the planning process from end to end. The **visibility on the 3DEXPERIENCE platform enables such an integration**, ensuring that all stakeholders are steadfastly committed to delivering on the customer promise.

Here are some key actions to achieve this synergy:



Integrated demand and supply planning:

Improve demand forecasting accuracy by integrating demand and supply planning to prevent stockouts and optimize overall productivity



Inventory optimization:

Balance inventory levels and demand to boost just-in-time production, meeting consumer needs efficiently



Optimized decision-making process:

Streamline processes for on-time pickup and delivery to ensure timely fulfillment of customer demands

CUSTOMER HIGHLIGHT

FULFILLING GLOBAL DEMANDS EFFICIENTLY

Dassault Systèmes DELMIA Quintiq solutions revolutionized JBS USA's livestock disassembly and optimization process to improve forward sales position from 30% to 80%. Find out how the digital planning solutions provided end-to-end visibility into product availability, order acceptance and production schedules to fulfill demands better. [Read the case study here.](#)

“We chose DELMIA Quintiq for its team's deep commitment to understanding the complexities of our meat processing business,”

Eric Wallin

Senior Vice President and Head of
Beef Finance and Business Analysis, JBS USA

Bonus: 6 Steps to Improving Your Capability-to-Promise

Do you know you can improve your company's ability to keep order promises in just six easy steps? Discover how to unlock healthy profits through process optimization and leveraging goals and personnel input.

Ready for a Supply Chain Transformation?

As the food & beverage supply chain continues to evolve, it is incumbent upon the supply chain leaders today to be more proactive in decision-making and strategic in planning.

Equipping yourself with the **3DEXPERIENCE** platform tools and capabilities to enhance **visibility and agility is fundamental to building a resilient supply chain**. It fosters seamless collaboration and agile adaptation to excel and achieve profitable and sustainable growth.

Learn more [here](#).

Our **3DEXPERIENCE**® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the **3DEXPERIENCE** Company, is a catalyst for human progress. We provide business and people with collaborative virtual environments to imagine sustainable innovations. By creating virtual twin experiences of the real world with our **3DEXPERIENCE** platform and applications, our customers can redefine the creation, production and life-cycle-management processes of their offer and thus have a meaningful impact to make the world more sustainable. The beauty of the Experience Economy is that it is a human-centered economy for the benefit of all – consumers, patients and citizens.

Dassault Systèmes brings value to more than 300,000 customers of all sizes, in all industries, in more than 150 countries. For more information, visit www.3ds.com.



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