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DRIVING OPERATIONAL EXCELLENCE IN THE AUTOMOTIVE INDUSTRY

Integrated planning solution for automotive OEMs powered by AWS, Anaplan and Deloitte

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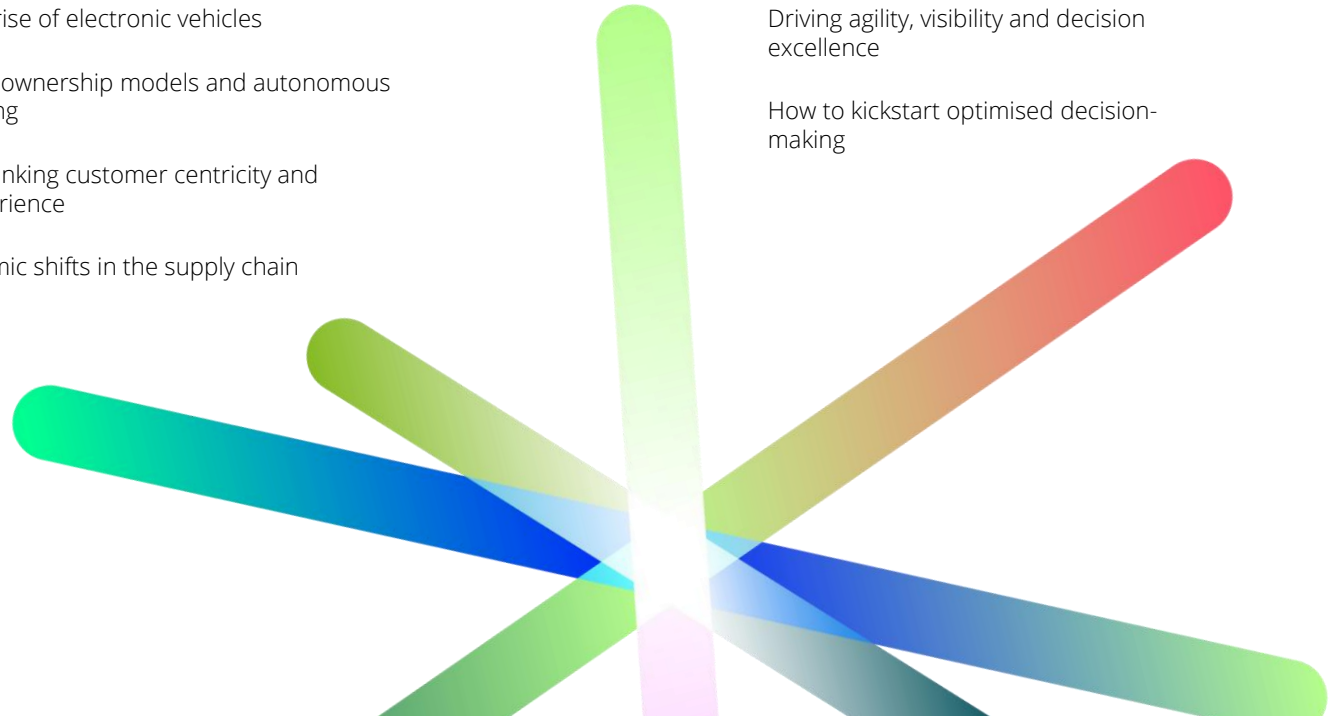

The global automotive industry is undergoing dramatic change across the entire value chain.

Introduction

Global original equipment manufacturers (OEMs) are reinventing themselves as new players enter the automotive sector. Automotive OEMs are also coping with economic uncertainty, political volatility and new tariff restrictions – while in parallel keeping focus on strategic sustainability objectives.

Faced with similar economic and market challenges, suppliers within the automotive sector are also experiencing disruption – resulting in a lack of predictability in what historically were (relatively) stable supply chains.

Ever-tightening margins mean that suppliers need to match supply and demand as closely and quickly as possible while managing cost, quality and risk. Look no further than 2021, when shortages of a single component – semiconductors – resulted in $210 billion in lost revenue.[1]

$210bn ***revenue lost from chip shortage***

The reality is that the industry is requiring manufacturers to unlock value from untapped sources or through business efficiencies to boost cash flow: this is a critical step towards funding investments for continuous innovation and cost reduction. Leading carmakers are connecting product development teams, plant operations teams and finance teams to ensure their technology roadmaps, engineering platforms and business strategies are aligned with their resources to deliver customer and shareholder value. To realise their strategic objectives, agile connected planning is an essential ingredient for successful enterprise digital transformation and agile business planning.

By uniting Anaplan's scenario planning and analysis platform, AWS' scalable AI/ML-powered cloud infrastructure, and Deloitte's deep supply chain and transformation expertise, we help organisations break down silos, connect data across the value chain, and unlock end-to-end visibility, predictive insights, and sustainable, low-risk transformation. The result: faster, smarter, and more resilient decision-making in today's dynamic market environment.

About this paper

This paper examines the challenges the auto industry currently faces; how agile connected planning is paving a prosperous future for automakers and what lies ahead for the future of vehicle production.

1. Waylan, Michael, "Chip Shortage Expected to Cost Auto Industry $210 Billion in revenue in 2021" CNBC, September 23, 2021

The fusion of automotive and technology

Automotive manufacturers are the new tech giants

Embracing artificial intelligence (AI), connected cars and autonomous vehicles, OEMs are witnessing a major market transformation. With wide adoption of 5G and Internet of Things (IoT) devices, manufacturers are embedding software into their vehicles to drive innovation, collect consumer data and deliver new value-added services. Although some carmakers have plans to introduce their own connected service ecosystems, consumers in some global markets still believe their next vehicle should retain the ability to connect with their smartphone.

This transition from hardware manufacturer to software developer means OEMs will continue investing in research and development (R&D) to drive competitive advantage, changing production lines and development processes and working with new data-driven business models.

OEMs are driving differentiation by integrating connected technology, AI and data-driven features, such as car connectivity, assistance systems and infotainment solutions, into new vehicles. However, perceived consumer benefits vary by region and trust remains a concern.

Source: Deloitte, 2025 Global Automotive Consumer Study

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The rise of electronic vehicles

Electric vehicles have transformed consumer purchasing behaviour

Since 1990s when Ford released its first concept car, the popularity of electric vehicles (EVs) has grown amid climate change concerns, volatile petrol prices, regulation and increased air pollution in cities across the world. This is forcing stalwarts to up their game and double down on accelerating efficiency and transformation across supply chains, delivering better customer experiences and accelerating investments that drive innovation. EV-only automotive companies are competing head-to-head in key markets, disrupting and reshaping the automotive landscape.[1]

Transitioning to electric-only vehicles

Many major manufacturers set targets to transition to electric cars in the next two decades – and to invest in reliable charging infrastructure to accelerate adoption.

2022

Honda *announces that it aims for carbon neutrality by 2050, sets a target for all automobiles sold by Honda to be EVs and FCVs.*[2]

2025

JLR *hires 50 specialists to maximise the resilience of new electric vehicle supply chains and uphold ethical standards, amid ongoing geopolitical uncertainty.*[3]

2030

JLR *will reposition the company as an electric-first, modern luxury carmaker by 2030*[4]

VW *will make 70% of global sales electric.*[5]

2030

IONNA*, a JV founded by BMW, General Motors, Honda, Hyundai, Mercedes-Benz, Kia and Stellantis plans to open 30,000 ultra-fast charging stations by 2030.*[6]

2040

Volvo *commits to become a fully electric car company and to reach net zero greenhouse gas emissions by 2040.*[7]

The rise of the EV sector has introduced new players, like Tesla, BYD and Lucid, and transformed the business models of industry leaders like Volkswagen, Jaguar Land Rover and General Motors. In many markets, consumer preference is transitioning to EVs, driven by lower running costs, regulatory changes and concern about climate change. This trend is triggering a paradigm shift in the way that OEMs and suppliers develop, build and sell products.

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New ownership models and autonomous driving

The growth of mobility-as-a-service

People are increasingly transitioning from traditional vehicle ownership to mobility-as-a-service (MaaS), vehicle subscription services and non-traditional commuting solutions. Electronic scooters, e-bikes, autonomous vehicles and ride-sharing services like Uber and Bolt are a common transportation method in urban settings.

Increasingly, employers are embracing this trend by offering flexible mobility-as-a-service (MaaS) benefits to employees, in lieu of leased automobiles. In Deloitte's 2025 Global Automotive Consumer Study, consumer preference in the 18- to 34-year-old demographic is skewing away from traditional vehicle ownership in favour of a MaaS solution in markets such as India, China and Southeast Asia.

The rise of self-driving vehicles

The US administration plans to speed up the rollout and use of self-driving vehicles. Proposals would see certain self-driving vehicles exempted from some safety requirements, for example, rearview mirrors, and changes to the rules around reporting of accidents and crashes.[1]

In Dubai, the Roads and Transport Authority (RTA) is kickstarting pilot operations in 2025 of self-driving taxis with Uber and WeRide. Initially, the autonomous vehicles (AVs) will operate with a safety driver on board and be available via the Uber app. The trials aim to pave the way for the full-scale, driverless commercial rollout of robotaxis in Dubai by 2026.[2]

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2. https://gulfnews.com/business/markets/dubai-to-start-driverless-taxi-trials-with-uber-weride-this-year-1.500164195

Rethinking customer centricity and experience

We see a convergence of customer experience – from initial contact to post-sales – between the automotive showroom and the digital world, both outside and inside the car.

Buying decisions of customers are influenced more than ever before by access to a variety of information formats and channels – all the way to virtual driving experiences. However, this will not replace a customer's desire for an actual test drive.

Christopher Nürk, Enterprise Performance Leader Germany and Automotive Partner

Boosting brand loyalty and customer experience

The global automotive industry is undergoing a tremendous amount of change at an unprecedented pace. At the centre of this change sits a consumer with rapidly evolving expectations of the mobility experience. Vehicle brand defection is on the rise, signalling the need to build strong customer relationships. This includes optimising and digitising the entire product lifecycle, while providing outstanding customer experiences.

Purchasing models, mobility trends and transparency

Consumers now have a broader range of purchasing options than ever before – from traditional automotive dealerships and agency retail models to online, manufacturer-led purchase processes. However, consumer preferences remain highly variable by market and demographic. For instance, while some customers may embrace end-to-end digital purchasing, others still expect to physically interact with a vehicle before committing to a purchase, particularly in markets where test drives and in-person experiences are culturally embedded.

Beyond how customers buy, a more fundamental shift is underway in what they are buying into. Increasingly, consumers are moving away from traditional ownership towards alternative access models such as leasing, subscription services and MaaS solutions. These evolving ownership structures add complexity to strategic planning – more so than the transition to digital purchasing alone – as they signal a change in mindset from ownership to usage and access. As these models scale, manufacturers and dealerships must rethink customer lifetime value, loyalty strategies and operational infrastructure to accommodate more dynamic, flexible engagement.

Customers also demand greater personalisation, transparency and control during the purchase or subscription journey. Rising expectations are driving the adoption of innovative, customer-centric technologies that offer more visibility into pricing, availability and production timelines. Programmes such as JLR's *Build Your Own* configurator are highly successful, increasing engagement and drawing in first-time buyers by putting creative control into the hands of the customer.

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Seismic shifts in the supply chain

Supply chains at a crossroads: adapting to the new automotive landscape

As the automotive industry transforms – driven by electrification, evolving ownership models and growing demand for seamless, tech-integrated customer experiences – OEMs face mounting supply chain complexity, with shifting parts requirements, compressed timelines and increasingly personalised customer expectations reshaping how vehicles are designed, built and delivered.

Challenge no. 1

OEMs, dealer networks, national sales companies (NSCs) and finance companies must shift focus from efficiency and profitability to agility, connectivity and sustainability to remain successful.

Challenge no. 2

Data sources are siloed and managed in spreadsheets, leading to Excel fatigue, lack of real-time visibility and outputs that are prone to human error.

Challenge no. 3

OEMs need to focus on having the ability to predict various scenarios and build sensitivity analysis, depending on what is happening in each geography.

Challenge no. 4

Product development, plant operations and finance teams must be connected to ensure long-term technology roadmaps and business strategies are aligned with changing demand and resources.

The automotive industry's future isn't paved with predictable roads; it's a dynamic landscape reshaped by subscription models and shifting consumer behaviour. This disruption presents both immense opportunity and unprecedented challenges, demanding a strategic agility that transcends traditional forecasting and embraces the unpredictable.

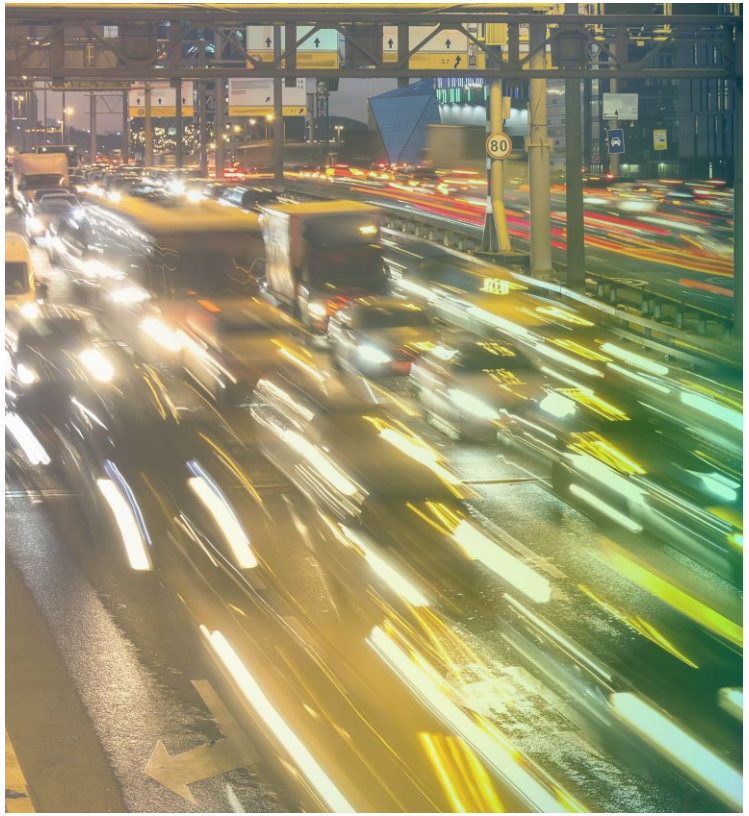
Sarah Noble, Partner and Head of Supply Chain, Deloitte UK

Shaping the road ahead with agile supply chain planning

The new era of supply chain transformation

The aforementioned trends and evolutions are having a significant impact on traditional automotive business models. In this new era of agile connected planning:

- Leading industry players will need to keep pace with newer, more nimble players entering the EV sector, requiring accelerated production lines and increased innovation.
- R&D investment is increasingly being allocated to invest in software solutions and improving customer experiences, instead of solely investing in product ranges.
- Supply chains are intensely scrutinised and require constant modification as uncertainty and volatility continues to dominate.
- Customer-centricity will be key to competitive advantage as consumers conduct increasingly digital buying journeys.
- Transparency and connection across the purchase journey will be demanded by customers requiring greater levels of connectivity between all their suppliers.
- Vehicle inventory will fall significantly in some markets due to increased utilisation and the rise of mobility-as-a-service (MaaS).
- There is an increased link between software and hardware and the convergence of the front and back office in product lifecycle management.
- Successful MaaS and vehicle subscription models will be driven by customer demand for convenience, flexibility and the availability of vehicles.



Plan intelligently to boost resilience

Planning for what's next now

With the increasing pressure from consumers, regulators, new market entrants and other market disruptors, automotive industry leaders need better business agility and transparency to navigate market, economic and political uncertainty. This requires business stakeholders to apply scenario-based thinking that enables them to make informed, data-driven decisions – and be able to act and execute those decisions – in days and minutes, not weeks, months or years.

Automobile manufacturers and suppliers are transforming financial, commercial and operational planning through agile connected planning solutions, powered by Deloitte, Anaplan and AWS.

Through Anaplan's AI-infused planning and analysis platform, powered by AWS cloud solutions, Deloitte helps organisations across the automotive value chain to apply scenario planning and modelling, aggregate disparate data sets and streamline business processes to support decision intelligence and accelerate time-to-value.

OEMs that are removing functional silos from their planning processes not only gain consistency, but also significantly improve their reaction times and data quality, which in turn helps achieve better cost-efficiency and profitability.

Christopher Nürk, Enterprise Performance Leader Germany and Automotive Partner

Sources

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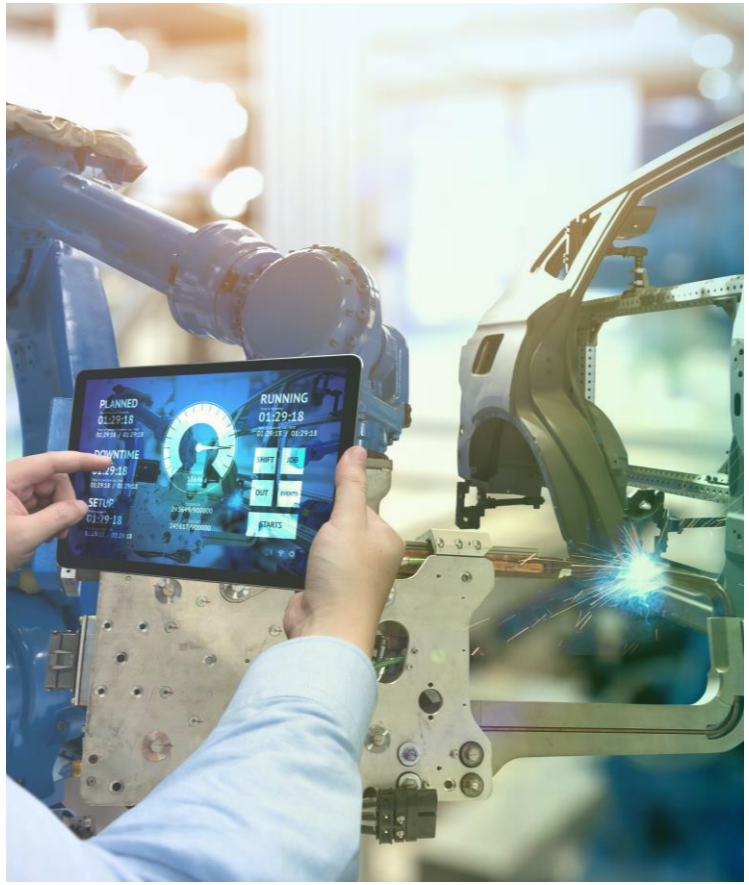
Driving agility, visibility and decision excellence



From plan to action in real time

Agile supply chain planning extends visibility across the organisation and drives decision excellence.

- Leveraging AWS's cloud solutions and Anaplan's AI-infused platform delivers valuable, actionable insights and enables enterprises to make better business planning decisions and mitigate risk.
- Syncing all enterprise planning data into a single standardised source of truth eliminates operational silos and unites departments on one platform, yielding end-to-end data visibility and integrity across the organisation.
- Enhancing collaboration with customers, suppliers and other network partners, while optimising execution by leveraging risk- informed, data-driven and scenario-based business planning.
- Increasing the timely utilisation of assets and resources results in an increased return on invested capital as well as an increase in the return on R&D, driving innovation.
- Improving product margins by forecasting the financial metrics for each product being developed, allowing resources to be focused on the highest margin products, driving revenue.
- Improving demand forecasting accuracy by leveraging embedded optimisation capabilities and AI-infused planning algorithms, resulting in products delivered on schedule and accelerating time-to-market, therefore speeding time-to-revenue.
- From engineering, procurement, HR and sales, to supply chain and executive management teams – all functions are unified in one connected and collaborative business planning environment.

How to kickstart optimised decision-making

Initiating agile supply chain planning in your organisation

Start in one area of your business – usually the one with the biggest pain point – and then, after seeing the positive results of agile connected planning, expand it to other parts of the enterprise.

The strategy is what is called the "**honeycomb effect**" (as depicted on the right) because Anaplan's AI-infused scenario planning and analysis platform can be used across an entire tech stack: one platform and one code stream leveraged across all business functions.

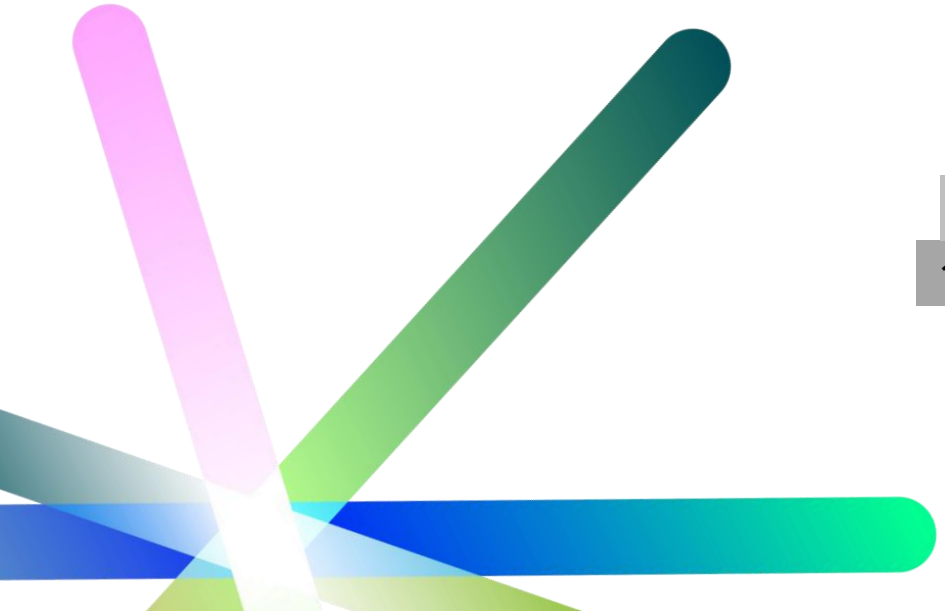
CASE STUDY

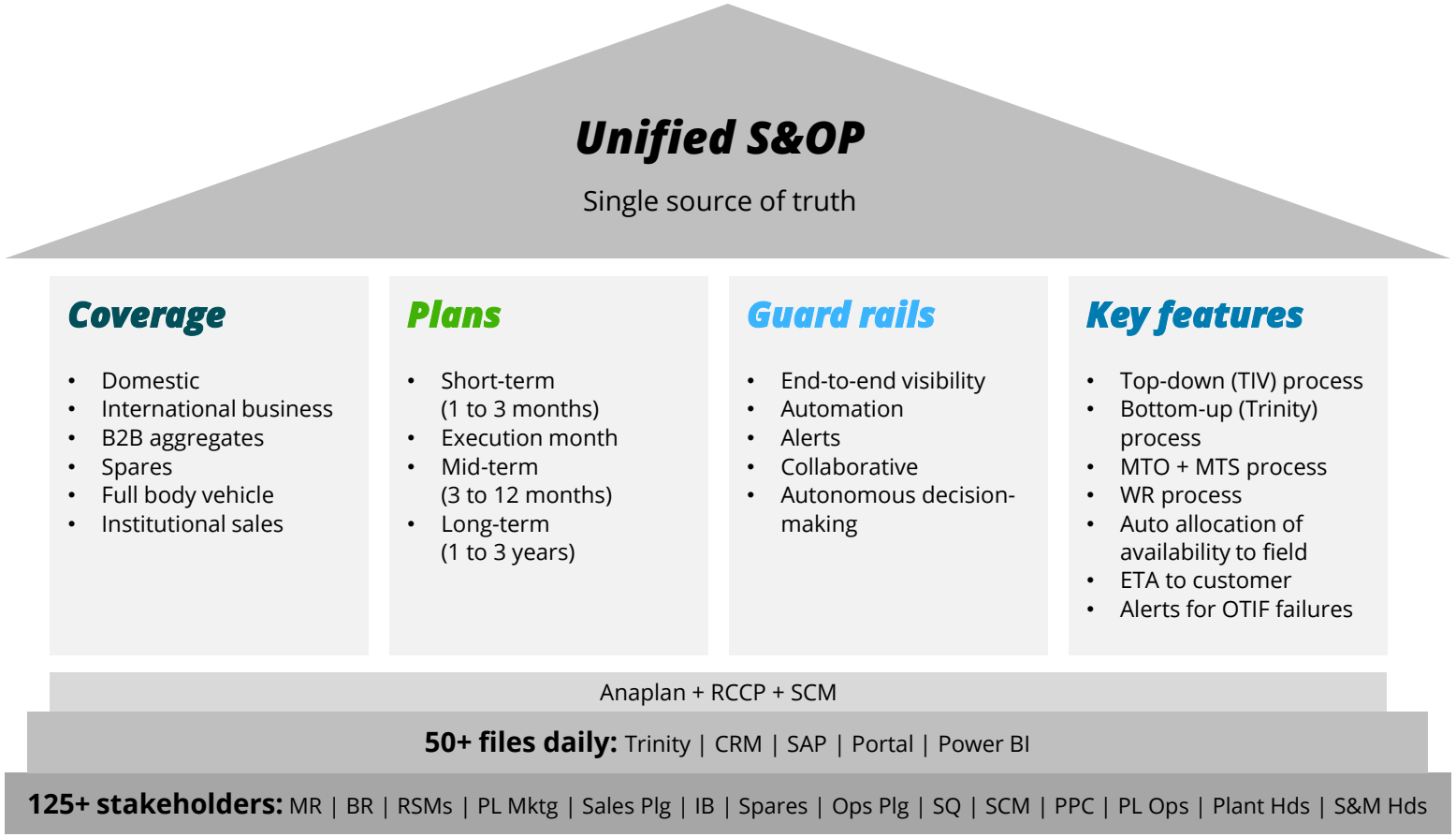
DRIVING VOLUME-TO-VALUE WITH A LEADING MULTINATIONAL AUTOMOTIVE MANUFACTURER

Overview

Transforming sales and operations planning (S&OP)

A multi-billion-dollar global vehicle and automotive products manufacturer has embarked on an enterprise-wide transformation strategy, with particular emphasis on people, processes and technology. The organisation moved its entire global sales and operations planning (S&OP) process onto the Anaplan platform in the space of just 20 weeks.





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Unifying S&OP across the organisation

The challenge

- Planning is done in Excel and offline, so data is not available on a single platform.
- Offline work is completed by bringing people, not systems, together.
- Forecasting and scenario modelling are difficult.
- Had previous experience with Anaplan in a specific business unit, so launched an initiative of improving S&OP maturity across the value chain.

The approach

Deloitte helped the global automotive player to implement Anaplan in a phased manner, beginning with S&OP use cases. The finance function was then included with a long-term view of transforming the performance governance by eventually connecting all the key plan and review elements on one common platform.

Implementing integrated supply chain planning

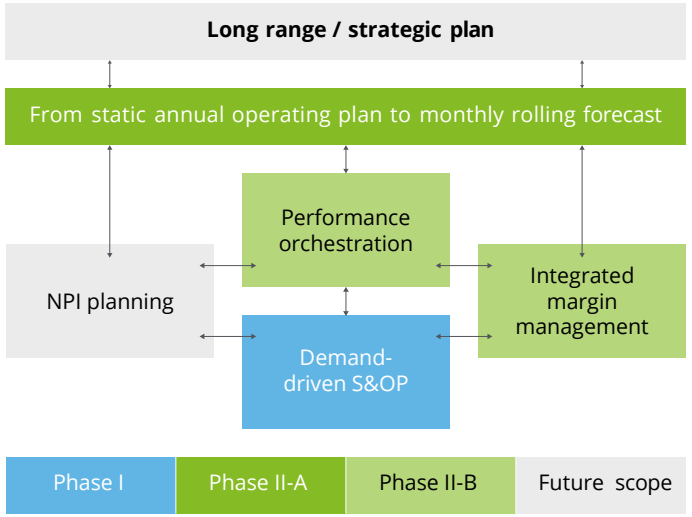
Driving the transformation to agile supply chain planning

Deloitte also acted as a guide and mentor with the challenges that are commonly associated with any digital transformation programme, such as lack of in-house IT skills, inefficient management of data and managing change.

The organisation's broad S&OP agenda included a large value chain community of dealers, suppliers and internal business functions. It was therefore critical to the success of the Anaplan-AWS deployment to ensure that all stakeholders could see the value in the transformation project, whether it was automating mundane tasks, simplifying processes, or integrating enterprise-level systems such as SAP and CRM.

Building blocks for effective business partnering

Our step-by-step approach covered phases I, II-A and II-B (as depicted below) and quickly demonstrated value and built trust across all stakeholders by focusing on the biggest pain points in one area and then rolling out to subsequent process areas.



Connected planning roadmap

Leveraging planning with an integrated platform

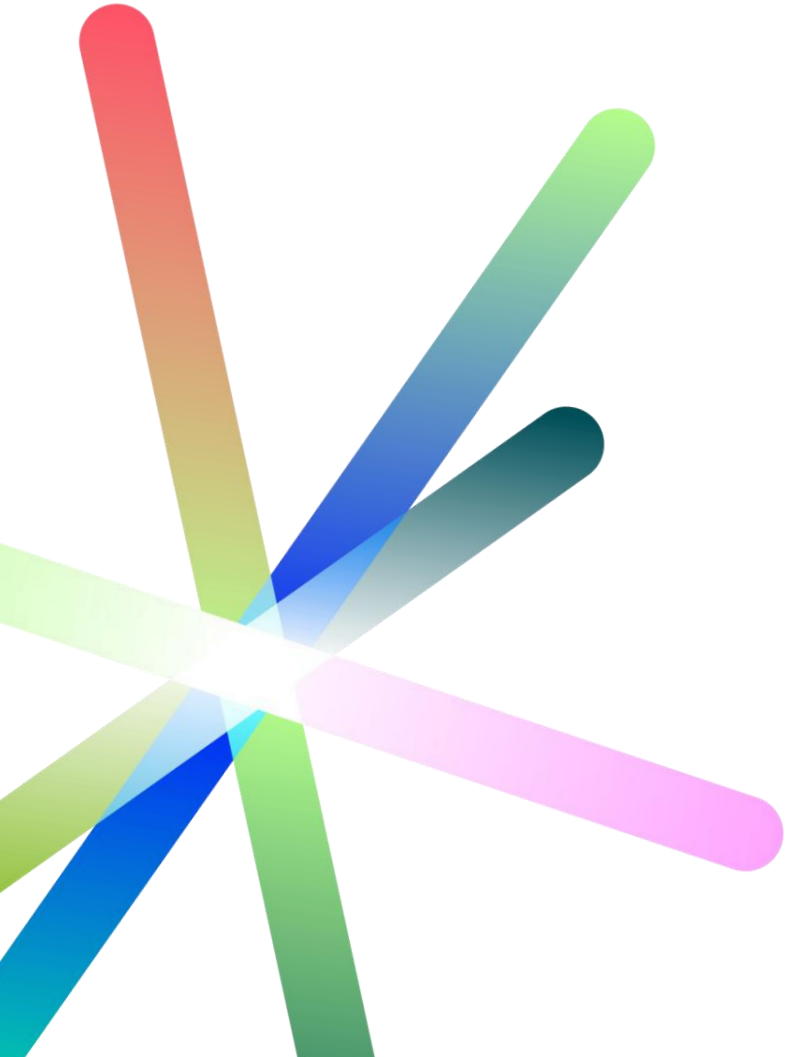
The impact

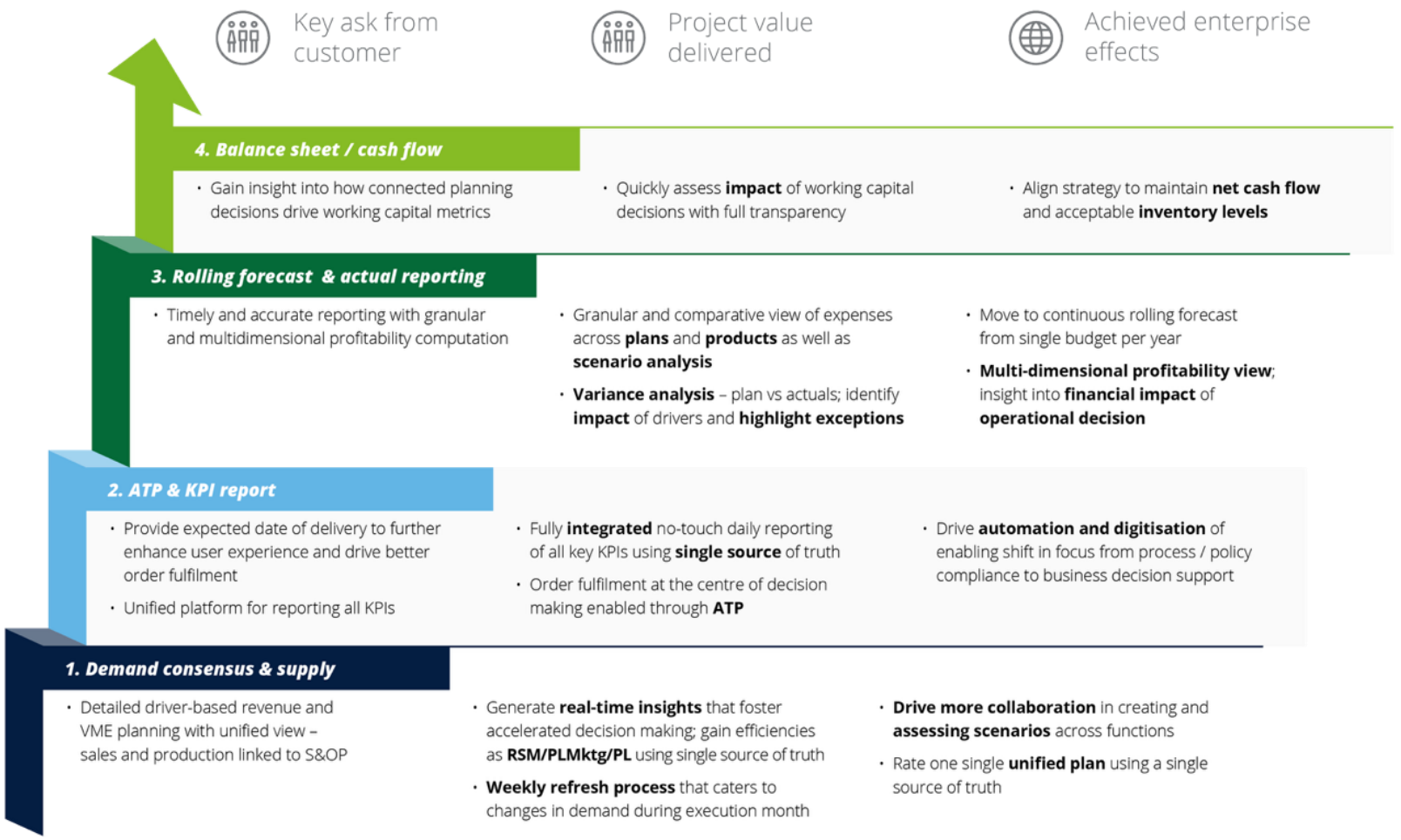
AWS, Anaplan and Deloitte have become central to delivering transformation within this globally recognised leading automotive company by bringing transparency, openness and accountability to the company's S&OP functions.

An integrated planning platform delivers keys benefits to stakeholders across the automotive manufacturer and its dealer network

SYSTEM	*KEY STAKEHOLDERS*	*ENABLERS*
Leadership Team	Executive Leadership BU Head	• Business agility to react to changing market conditions • Integrated top-down, bottom-up tracking against actuals
Dd-Ss Planners	Demand, Supply Planners RM and Procurement Planners	• Integrated operations data with financial impact • Rapid scenario planning for various supply chains
Operations, Manufacturing	Plant Managers Production Planners	• Connect production plans across volume, cost and profits • Plan and schedule optimum FTE / line manning
Sales, Marketing	State Head Regional Sales Managers	• Rapid top-down, bottom-up analysis of sales plans • Visibility of price and profitability for sales negotiations
Dealers	Dealers	• Visibility of vehicle allocation • Ease of consolidation of bottom-up demand
R&D	R&D Heads New Product Development Teams	• End-to-end project lifestyle planning with WBS and actuals • Scenario plan various project risks, schedules and costs
Finance	FP&A Leads Financial Business Partners, Controllers	• Granular P&L planning and variance analysis • Capex, depreciation and cash flow analysis
HR	Workforce Planners Incentive and Compensation Planners	• Plan FTEs according to production volumes • Optimise directs, indirects and contract mix

Unlocking customer value through optimised decision-making





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Anaplan for Supply Chain is the only cloud-native, AI-infused platform for scenario planning and analysis. By connecting strategy to execution, this solution optimises supply chain decision-making across business functions and units, volume and value, suppliers and customers.

www.anaplan.com

Amazon Web Services (AWS) is the world's most comprehensive and broadly adopted cloud platform, offering over 200 fully featured services from data centres across the globe. Millions of customers – from the fastest-growing start-ups to the largest enterprises and leading government agencies – use AWS to lower costs, increase agility and accelerate innovation.

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