

Stop Buying Customer Satisfaction with Your Profits

Seven design guidelines to boost Order-to-Delivery Excellence



Strategic Vision. Smart Implementation.

INSIGHTS

//01

Despite companies spend up to 12% of their revenue on firefighting, 19% of customers are still unsatisfied with delivery performance.

//02

Offering customers the flexibility to make trade-offs among product characteristics, price point, and delivery time creates real competitive advantage.

//03

Flexibility and speed for customers result from stability and resilience in operations.

Introduction

An intelligent Order-to-Delivery design combines flexibility with stability

Order-to-Delivery (O2D) is a company's key end-to-end cross-functional business process to fulfill customer needs in the most efficient yet flexible way. Interaction between sales, production & logistics, procurement, finance, and development is crucial. However, companies across all industries are facing similar challenges with delivery performance: 48 percent¹ of companies would like to have shorter lead times, while 19 percent of customers² are unsatisfied with on-time delivery. At the same time up to 12 percent of annual revenue³ is lost in profits due to internal struggles and turbulence stemming from process inefficiencies. Furthermore, organizations complain of inefficient decision-making across all process partners involved, especially sales, production and procurement.

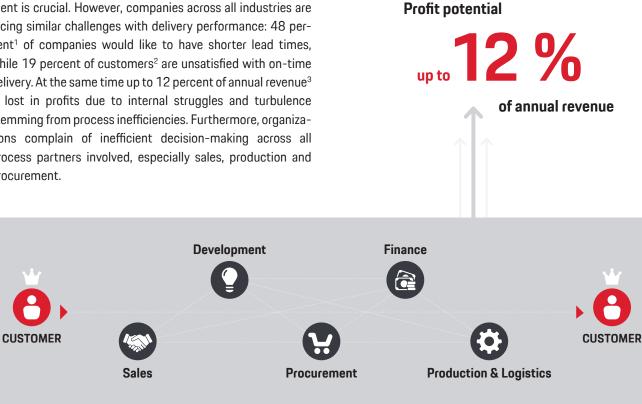


Figure 1. Cross-functional stakeholders involved in O2D business process

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These challenges require businesses to adapt their organization to be able to think end to end and react to changing supply and demand situations. New technologies must be utilized to make decisions quickly and in the interest of the whole company. In order to improve customer satisfaction, firms need to define a customer-oriented Order-to-Delivery strategy that aligns all functional strategies. Lastly, to improve the bottom line, a profitable operating model must be created which aligns the product and service offering with production and the supply chain as well as delivers customer delight.

¹ Porsche Consulting responsiveness survey (2019).

² For example, in the automotive industry: NCBS EU5 (2019).

³ Project experience turbulence costs from industry automotive, industrial goods, aviation and aerospace.

Understand customer preferences Customer satisfaction, profitability, Continuously integrate the customer

Seven Design Guidelines

Paving the way to Order-to-Delivery Excellence

A comprehensive O2D setup enables companies to tackle such challenges. Based on the credo "Plan stable. Act flexible. Be profitable." Porsche Consulting has developed seven design guidelines to pave the way to Order-to-Delivery Excellence. O2D Excellence defines a company's ability to increase competitive advantage by satisfying customers with suitable and flexible value propositions while ensuring resilient operations.

The design guidelines in this study help to boost O2D Excellence by using an intelligent cross-functional strategy deployment and establishing an end-to-end coordination of key players (sales, production and procurement), while considering the financial impact and developmental requirements. The study also presents an in-depth automotive use case that applies digital tools and data analytics as enabling technologies.

PLAN STABLE. ACT FLEXIBLE. BE PROFITABLE.

Digital touch points

Figure 2. Design guidelines to boost O2D Excellence © Porsche Consulting

DESIGN GUIDELINES

01

02

03

04

05

06

07

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1011011

responsiveness

Customer-centric approach

Create competitive advantage

Differentiate the business

Look across the pond

Abandon silo thinking

Do the data homework

management

and leadership

Strategic positioning based on

End-to-end business process

Cross-functional collaboration

Basis for integrated, scenariobased decision-making

customer groups and lead times

01 Understand customer preferences

Customer-centric approach

The needs and desires of current and prospective customers should form the foundation of all considerations, yet be called into question on a continual basis. The ability to produce what the customer wants at the right point in time, however, poses a significant challenge to most manufacturing firms. Production relies on long-term forecasts, especially for custom-built products with longer lead times. When real demand does not match the forecasts, firms miss out on potential revenue and are faced with selling off inventory at a deep discount. This lose-lose situation not only hurts the bottom line but also denies the customers their desired specification of a given product.

One solution often applied to this problem is an attempt to offset lower profit margins by manufacturing more efficiently and improving productivity. On the market side, focus is placed too often on selling stock rather than optimizing the entire value chain. Time and resources are frequently at the expense of the customer perspective. The greater the reliance on forecasts and split focus to improve operational efficiencies, the more businesses lose sight of actual customer requirements and preferences.

Understanding the key aspects of customer demand is the first step. It is important to realign company decision-making

with customer needs and see variability in customer preferences as an opportunity for value creation. Real competitive advantage can be achieved by offering customers the flexibility to make trade-offs among the dimensions of product characteristic, price point, and delivery time. In industries with customized high-volume products, one way to get closer to actual customer demand is to customize the product later in the production process. This allows companies to respond faster to individual orders and stabilize the production.

Porsche Consulting has developed an operating model that heightens the customer-centric perspective and maps the core O2D activities. Figure 3 depicts the 'horizontal h' as a reference model for the automotive industry. It includes all planning and execution activities to ensure a smooth delivery to and the full satisfaction of the customer. The model illustrates the entire O2D process, detached from departmental boundaries. This encompasses every relevant process stepfrom initial customer contact at the point of order to the vehicle's final delivery. The operating model illustrates the interplay and coordination of production & logistics and procurement. Its central aim is to integrate the sub-processes as seamlessly as possible to find the right balance between flexibility for markets and stability for operations. In line with our first design guideline, the model begins and ends with the customer.

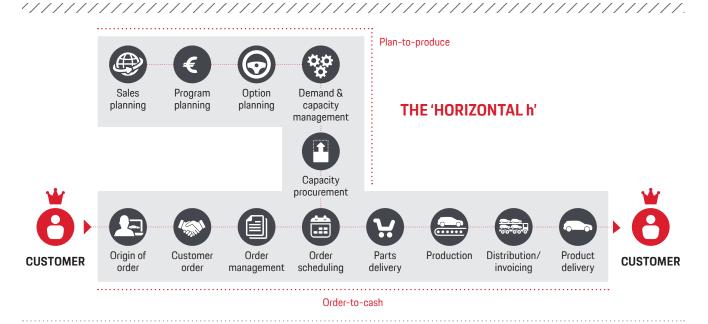


Figure 3. Porsche Consulting O2D reference model: the 'horizontal h'

02 Create competitive advantage



Customer satisfaction, profitability, responsiveness

Order-to-Delivery as a key element for value creation contributes strongly to achieving three main company targets: customer satisfaction, profitability, and responsiveness. Providing products and services with outstanding delivery performance and placing the customer at the center of activity before purchase, during production, and after handover—drives customer satisfaction. All internal and external activities necessary to deliver products and services directly incur costs. The better those capacities are aligned and synchronized with demand flexibility requirements, the more cost-efficient and profitable the company. Lastly, changing market developments call for an intelligent and resilient setup that will heighten responsiveness along the entire value chain while ensuring stability for the production system and supply chain.



Turbulence costs and loss of market potential are two significant roadblocks to achieving the set of Order-to-Delivery targets. Turbulence costs incurred by ensuring delivery performance despite planning errors or discrepancies in operations carry annual cost-saving potential in the hundreds of millions of euros⁴. Missed revenue opportunities on the market side can also be considerable. Porsche Consulting has developed a number of cost driver and revenue-increasing levers to assess a company's improvement potential (see figure 5).



· Effort for replanning and rescheduling

· Effort for operative trouble shooting

Costs for rework due to missing parts

Additional direct costs due to unstable forecast

· Scrapping costs

ramp-up phase

Additional energy costs

• Inventory of raw materials

Inventory of semi-finished goodsInventory of finished goods

Turbulence costs and loss of market potential



Revenue potential—influenced by sales

No/less additional customization	 Products without or with less customization and additional services
Discounts	 Products with discount, because product cannot be delivered in line with market requirements
Lost sales	 Due to bottlenecks in supply chain Due to long delivery lead times Due to uncertain delivery lead times

Cost drivers—influenced by operations

Figure 5. Levers to evaluate turbulence costs and to increase market potential

· Late/short-term investments, especially in

⁴ Automotive industry project experience

Indirect

Material

costs

Stock

Invest

personnel

03 Differentiate the business



Strategic positioning based on customer groups and lead time

Changing market conditions dictate that companies must reinvent product and service offerings along the way. There is a growing need to observe the market, identify new opportunities, and generate novel offerings and thus greater differentiation from competitors. Customer preferences and behavior vary greatly across most companies' target groups. Current and potential customer demographics can differ substantially depending on the industry. In addition to economic wealth, other distinguishing factors include price sensitivity, desired product attributes, and patience with regard to availability and delivery times. Products and business models are derived from these heterogeneities in the customer base, ideally offering customers a choice that corresponds to their individual preferences. As this is often not economically feasible, an alternate approach involves modifying the existing business model to address the differences in buyer groups.

Figure 6 lists five characteristics to consider in designing the O2D process accordingly. Companies can offer the same or a very similar product and capitalize on various customer price sensitivities by offering faster deliveries in exchange for a higher price. Amazon Prime exemplifies a successful implementation of this approach. Additional services and advantages are offered to customers who are willing to pay an extra fee. Ranking customer preferences to determine the leading factor for any given customer type is a proven method. Should customers prioritize speedy delivery and availability over the product's full customization, they can be offered a preconfigured product in the process of value creation. In 2018, 41 percent of consumers were willing to pay an extra fee for faster delivery of products they had ordered⁵.

01	CUSTOMER GROUPS		
	Build-to-order	► Build-to-stock	
02	VALUE PROPOSITION		
	Personalized	► Modular	
03	VALUE CREATION		
	▶ On-demand	▶ Generic	
04	PRODUCTION CONCEPT		
	▶ Fast	▶ Simple	
05	SUPPLY-CHAIN CONFIGURATION		
	Responsive	▶ Efficient	
Figure	6. O2D design characteri	stics © Porsche Consulting	

AUTOMOTIVE BEHIND THE SCENES

In addition to getting to know existing customer groups better, entirely new customer clusters might develop in the future. Cities or service providers might be responsible for the lion's share of mobility sales in the future. Only by implementing true cross-functional strategies and processes such substantial changes to the business model can be managed successfully.

⁵ PwC: Global Consumer Insights Survey (2018).

04 | Look across the pond



End-to-end business process management

A well-functioning O2D setup generates full transparency for all parties, thereby enabling fast and company-wide decision-making. Many different cross-functional stakeholders are involved, including sales functions from central to regional levels as well as production and procurement. Full transparency for these participants can only be created by reliably eliminating redundancies in the current process. Information relevant for quick and optimal decision-making needs to be consolidated and processed at a single point in the organization. Redundant, decentralized alignments between functions and autonomous decision-making can cause inefficiencies in the process and become a source of errors.

Consolidating all information at a single point allows problems such as planning violations or bottlenecks to be identified at an early stage and prevented by appropriate countermeasures. Selling products or services that cannot be realized on time undermines customer satisfaction and brand value. Attempts to optimize processes in production plants are redundant unless they consider the ability to deliver product, for example, by being aligned with shipment plans.

All efforts and objectives of the individual departments within the O2D process need to be constantly aligned with a common overall goal. An O2D strategy must therefore be aligned with the functional and business strategies. Common cross-functional guidelines and business rules are essential to the organization: they ensure a coordinated effort and a shift in mindset from functional to process orientation.

All departments must be aligned with a set of approved process principles and parameters as well as the dimensions used to measure O2D's performance. Key performance indicators (KPIs) that fully consider the end-to-end character of an O2D process must be defined and frequently reviewed for adherence with the organization's overall goals and priorities.

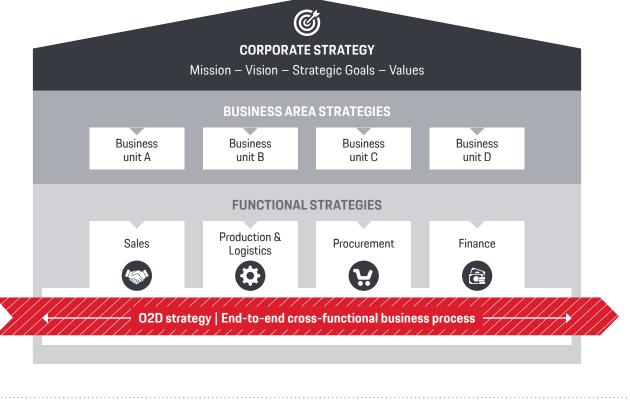


Figure 7. End-to-end cross-functional O2D strategy

05 | Abandon silo thinking



Cross-functional collaboration and leadership

Departments and functions often prioritize their internal goals above those of others and of the overall business (see figure 8). This comes as no surprise, given that an organization's functions are constantly competing for resources and the attention of management. How to harmonize sales and operations objectives? One solution to ensure better crossfunctional coordination is to implement one designated O2D organization with line responsibility as well as authority for strategic process design. Appointing a head of Order-to-Delivery who reports directly to the C-level not only ensures the seamless alignment of the departments but also signals the process relevance to the entire organization (see figure 9). This position within the business must retain a level of neutrality to act as a mediator between the varying interests of the functional departments, yet also have the courage to prioritize interests for the good of the whole.

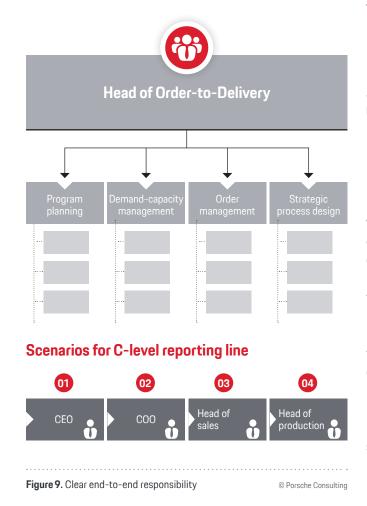




Figure 8. Sales and operations objectives

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In order to make the right decisions quickly for a companywide optimum, processes and communication cannot stop at department borders. A shift in culture and leadership is necessary within the organization. The overall success of the O2D process is conditional to establishing a culture of collaboration. Incentive systems and output KPIs are proven tools for modifying behavior. While sustainable change will need to be intrinsically anchored within the organization, extrinsic incentives are often necessary to nudge individuals in the desired direction. KPIs could involve on-time delivery, planning stability, or the achievement of a reduced absolute delivery time. Low costs of stock or contribution margins could also be employed as measures to alter behavior and processes via extrinsic incentives.

06 Do the data homework



Basis for integrated, scenario-based decision-making

The ability to source, process, pool, and finally leverage data has become a key success factor for companies. Yet, 53 percent of C-level business executives in major US companies revealed in 2019 that they have not begun treating data as a business asset⁶. To leverage data's full potential all of the different data sources should be seamlessly connected, for example, to draw the correct conclusions using intelligent algorithms.

Which data becomes relevant in an O2D context? On the market side, understanding the routines and habits of existing and potential new customers has become more important than ever before. Data on consumer preferences is constantly generated in unprecedented resolution directly at the point of customer contact. Such data can be capitalized on when there is a fully established end-to-end process and a model of collaboration between sales, production and procurement. Patterns on potential customers' social media pages can automatically be translated into meaningful information for the production plan and subsequent supply-chain activities. Predictive analytics will thus continue to play a key role in foreseeing consumer preferences and anticipating market demand at an early stage.

Figure 10 illustrates the four stages of fully capitalizing on data. The first step is accessing the relevant data sources.

The ability to process and transfer data from its source is the second step. As digitalization progresses, the real benefit of utilizing big data will be generated by pooling the relevant data across all functions. The information only becomes meaningful by triangulating data points from different sources and using qualitative data to offer context for quantitative raw data points. Hence, an organization needs to secure the availability and accessibility of all relevant data across all departments involved. Lastly, the most crucial step is to leverage data and draw meaningful conclusions, which in turn will enable companies to make scenario-based decisions.

AUTOMOTIVE BEHIND THE SCENES

Within the automotive industry, data patterns collected on internet car configurators, for instance, can promptly inform the business that certain offerings may become more or less popular in the future. Achieving a continuous and meaningful information flow from the closest customer touch point, such as a smart phone, to the business is the goal of an intelligent and well-functioning Order-to-Delivery.

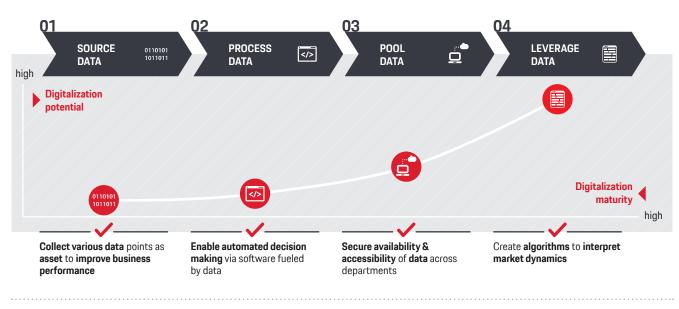


Figure 10. Four steps to fully utilize potential of data

⁶ Randy Bean and Thomas H. Davenport, "Companies Are Failing in Their Efforts to Become Data-Driven," Harvard Business Review, February 05, 2019 https://hbr.org/2019/02/companies-are-failing-in their-efforts-to-become-data-driven.

07 | Continuously integrate the customer



Digital touch points

Today customers are used to receiving detailed updates about their orders when shopping on e-commerce platforms. Seamless customer-centric information flow—such as parcel tracking services, the possibility to choose delivery times, or change the drop-off location the night before delivery—has become the new standard for consumers. According to global consumer insights surveys, 54 percent of consumers highly value order tracking while 44 percent value the option to select a specific delivery time⁷. However, this standard has not yet found its way into manufacturing industries.

Despite a greater degree of specificity within products, emotionally involving customers in the O2D process can generate additional revenue while also increasing customer satisfaction. The customer experience—from order placement to product handover—can be enhanced by real-time updates, enabling late order changes, and offering additional products or services. This further emotionalizes the customer for the product and the brand. It strengthens the bond between the company and the customers and delivers valuable additional data. Market potential is left untapped and competitors could potentially fill the vacuum created when this opportunity goes unexploited.

Using digital interfaces such as apps or online platforms, customers could configure and individualize certain adaptable dimensions even before the product's final delivery. This would enable a higher state of curation and personalization at the point of delivery and create valuable customer insights for the business. Such an interface holds considerable upselling potential as an additional revenue stream, for example, in the form of product upgrades or additional services like insurance. Additionally, the customer could be informed of the state of production by receiving updates via photos that create joyful anticipation. Information on the CO₂ emission of the production as well as the suppliers or manufacturers could be shared to ecologically conscientious/interested consumers.

AUTOMOTIVE BEHIND THE SCENES

Today, most automotive retail organizations are in direct contact with their customer twice: when an order is placed and upon delivery. These touch points are also the two most emotional moments within the entire ordering process. While the focus of customer interaction is limited to these two touch points, a vast communication vacuum is created and potential left unexploited. Some automotive OEMs have begun to engage and emotionalize their customers during the waiting phase by sharing production photos of customers' cars. Overseas customers get detailed insights into the logistics of their vehicle.



Figure 11. Emotional involvement of the customer along © Porsche Consulting Order-to-Delivery process

⁷ PwC, "Global Consumer Insights Survey 2018"

Virtual Build-to-Order: A use case from the automotive industry

Improving stock vehicle offerings to match true customer demand through automation and artificial intelligence

Virtual Build-to-Order (VBtO) exemplifies the implementation of a future-oriented and data-driven use case. VBtO is the first step toward employing artificial intelligence to better anticipate and serve customer needs. It is one concrete example of ensuring customer satisfaction while improving profitability. VBtO shows the greatest potential in traditional buildto-stock markets (e.g., China or the USA), where customers typically purchase their vehicles directly from the dealer showroom. VBtO's main objective is to offer customers in build-to-stock markets the opportunity to purchase a showroom vehicle that meets their exact specifications. This is possible by assisting the dealer in the months prior, during its stock vehicle configuration and ordering process, with a tool that uses an intelligent car configuration algorithm to predict future customer preferences. VBtO can realize an increase of 2 to 3 percent in options load revenue per vehicle. Discounts used to incentivize the purchase of less appealing vehicles can be reduced. An increase in vehicle turnover rate is also possible, as vehicles are sold off the dealer's lot faster than conventional build-to-stock configurations.

STATUS QUO > Mismatch between customer demand and dealer stock

Today dealers are confronted with circumstances that make stock vehicle ordering increasingly complex: The volume of vehicles is expanding steadily. A large number of individualization options leads to countless vehicle configurations. Delivery lead times for cars are becoming longer. Moreover, the entire ordering process needs to be completed within a very short period of time. Unfortunately, there is little system support to leverage the massive amount of data available today. Each dealer must ultimately configure each stock vehicle based on his/her experience and intuition. The result? The customer's individual preferences are often not in stock.

CLOSING THE GAP > Optimization of dealer-specific stock vehicle configurations

As a rule, high contribution margins are behind extra options (e.g., leather package or driver assistance systems) that are added to a vehicle's configuration. Analyses reveal a typically lower option load of stock vehicles (build-to-stock) compared to customer-specified vehicles (build-to-order). This might be the result of dealers ordering stock vehicles in a risk-averse way due to the uncertainty of a stock car's quick salability. VBtO addresses several issues simultaneously: First, ordering configurations with a higher realizable option load positively affects the profitability of dealers and OEMs. Second, fewer discounts are necessary because configurations suit customer needs. Finally, the foresight achieved with VBtO increases planning stability (forecast) on the OEM side regarding future demand for certain options and volumes. This in turn boosts the responsiveness of the entire O2D process.

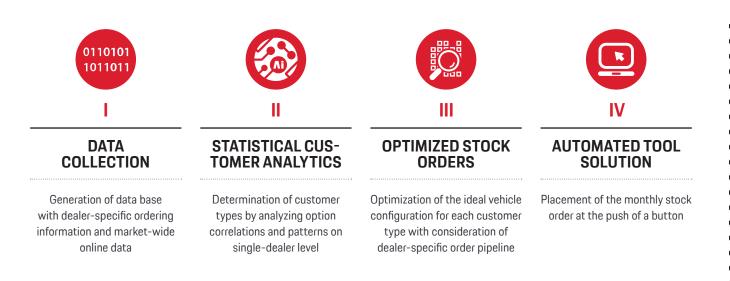
Virtual Build-to-Order uses advanced statistical methods to address the aforementioned issues, aiming to substantially optimize dealer-specific stock vehicle configurations. It processes historical data from the dealer, market, and customer to predict the latter's future needs—and provides the best possible configuration recommendations. Four pillars describe VBtO methodology: 

Figure 12. Virtual Build-to-Order methodology at a glance

- I > Data collection: The foundation and input for VBtO is a comprehensive database, which includes 100 percent vehicle configurations that represent customer demand. The database is constantly supplied with new data from different relevant sources. This data is clustered into two groups. The first group is comprised of dynamic data, such as historic and real-time retail data (build-to-stock and build-to-order configurations), and internet car configurations. The second group consists of static data, such as price and options and other data.
- Statistical customer analytics: Statistical customer analytics determine customer types by analyzing option correlations and patterns. Data input is used to create these customer types through factor and cluster analysis. Customer types are differentiated across budget classes and configuration or equipment combinations. As a result, the factor and cluster analysis determines 100 percent configurations with an optimized combination of options for each of the identified clusters.
- Optimized stock orders: The optimal order quantity per configuration of a dealer-specific order takes the pipeline and OEM supply-chain stability into account. Decisions consider economic viability and current stock and are made in accordance with the company's best interests.
- IV > Automated tool solution: A simple, user-friendly order interface simplifies the front-end process for dealerships. The tool allows monthly stock to be ordered at the push of a button, while eliminating any individual decision-making biases. It can be seamlessly integrated into existing order management systems and ensures that the overall order process remains unchanged. Nevertheless, the dealer can order without the VBtO tool at any time.

Get Started Order-to-Delivery <360° Quick Check

Assess your Order-to-Delivery maturity online to discover opportunities for your business.

With Porsche Consulting's Order-to-Delivery 360° Quick Check, you can evaluate your O2D maturity by answering questions in five building blocks. The quick check's easy-to-use online survey helps identify a company's primary areas of action to boost Order-to-Delivery Excellence. The survey differentiates among five categories of questions:

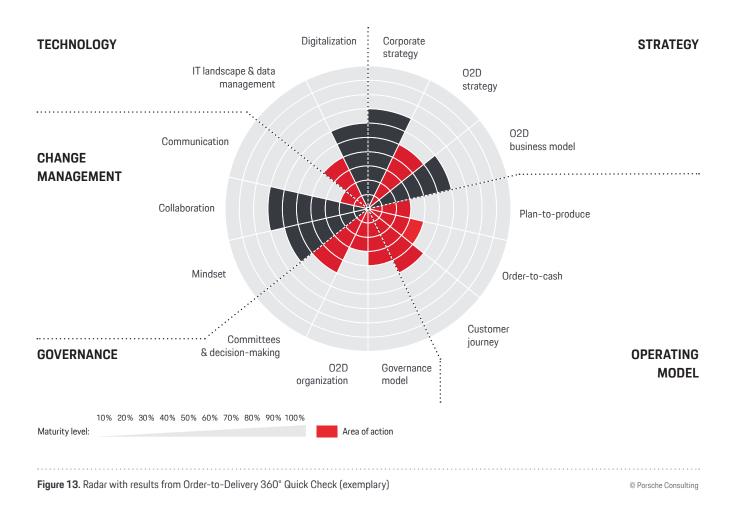
Strategy: assesses the general O2D setup and its alignment with the corporate strategy.

- Coperating model: measures the end-to-end nature and overall O2D process maturity.
- **Governance:** checks the governance structure and current decision-making during the process.
- Change Management: appraises collaboration within and the mindset of a company's O2D process participants as well as internal communication.



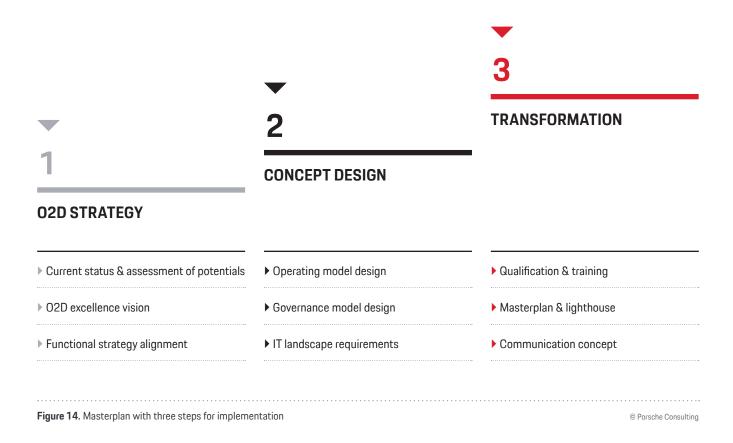
Technology: evaluates current IT systems and the degree of digitalization in the O2D process.

Beyond any potential O2D shortcomings and areas of action, the quick check will also uncover existing gaps in perception. The survey is intended to illuminate your O2D process from an array of angles within the organization. The Porsche Consulting Order-to-Delivery 360° Quick Check is a proven methodology to gain insight into the maturity of the O2D process—quickly and reliably. Please use the QR code to see an extract from the survey.



Steps for implementation

Based on the Order-to-Delivery 360° Quick Check results and further deep-dive interviews with key stakeholders, a strategy development should assess potentials, define an O2D-Excellence vision, and develop business rules to align functional strategies. The concept design phase focuses on the operating model, governance and steering model, and the IT landscape requirements, including data management, Al use cases and enabling technologies. Transformation should start with a lighthouse and be accompanied by a consistent communication and qualification concept.



IN BRIEF

- Real competitive advantage can be achieved by offering customers the flexibility to make trade-offs among the dimensions of product characteristic, price point and delivery time.
- Turbulence costs incurred by ensuring delivery performance carry annual cost-saving potential. Furthermore, missed revenue opportunities on the market side show room for improvement.
- Companies can offer the same or a very similar product and capitalize on various customer price sensitivities by offering faster deliveries in exchange for a higher price.
- Quick and valid information availability and short decision paths are key for optimal decisions, such as identifying planning bottlenecks and taking appropriate countermeasures.
- One designated O2D organization with line responsibility as well as authority for strategic process design is one solution to ensure better cross-functional coordination.
- Data on consumer preferences can be capitalized on when there is a fully established end-to-end process and a model of collaboration between sales, production, and procurement.
- The customer experience—from order placement to product handover—further emotionalizes the customer for the product and the brand and increases customer satisfaction.

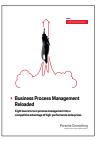
Further reading



White Paper Künstliche Intelligenz in der Produktionsplanung und -steuerung



White Paper Block Chain im Supply Chain Management



White Paper Business Process Management



Study High Performance Organization



White Paper Customer Experience Excellence

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