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Next generation commerce

From In-Store to Online:
How to overcome new challenges in the food industry

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Introduction

The online grocery business is growing rapidly. Its market value has doubled between 2016 and 2018, indicating that consumers are beginning to feel more comfortable ordering essentials and certain foods online. When the coronavirus COVID-19 pandemic hit in early 2020, having a digital presence for online ordering and delivery services became critical for businesses to remain afloat. Digital commerce has become a serious channel for food retailers, even if the purchase rate does not yet reach the in-store retail.

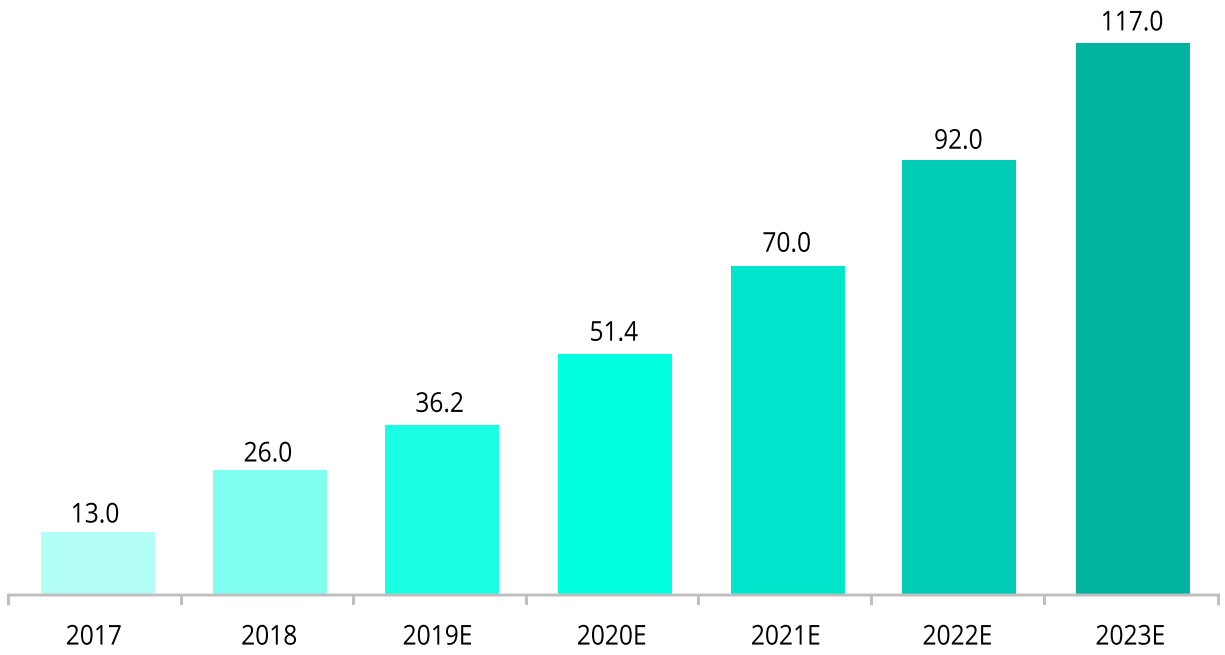
> ***"The online grocery market has a sizable number of shoppers, but they generally buy online infrequently."***
> – Deborah Weinswig, CEO at Coresight Research[1]

According to studies, 11% of US adults buy groceries online once a month, 7% also buy fresh food. This range is similar for consumers in many other countries around the world. Online food shopping is more common among parents and high income adults.

[1] https://www.supermarketnews.com
[2] https://news.gallup.com/home.aspx

Online Grocery Market Forecast

Billions ($)



Source: Business Insider Intelligence estimates

Market research predicts that the online demand for food will continue to grow. Although we cannot estimate the long-term effects of the COVID-19 Pandemic, there are already new business models beyond online shops that have emerged and are paving the way toward omnichannel grocery. Pioneers such as Walmart, Tesco, Rewe, and others set the scene with online marketplaces where consumers can buy much more than just food. Convenience store chains in the US including WaWa and Circle K are also ramping up omnichannel selling, which indicates a broader acceptance of online food and meal purchasing.

> ***"Food retailers can't afford not to take e-commerce seriously in the long run."***
> – Christian Wanner, online grocery pioneer, CEO at LeShop[3]

[3] https://www.businessinsider.de

Online grocery business models

The higher the demand for online grocery, the more business models diversify. While online shops still play a major role in food retail, they are no longer the only channel for customers. Major retailers with stores in multiple locations now offer customers the option to Buy Online Pickup In Store (BOPIS) or "Click & Collect".

In the following chart, we have compiled an overview of various online food business models.

Selected online food retailers and their business models

Business model	*Example provider*	*B2C*	*B2B*	*Click & Collect*
Online shop	Amazon Fresh (US, DE, UK, JPN, IND)	x		
	Amazon Go (US)	x		x
	Dawn Foods (US)		x	x
	Krogers (US)	x		x
	Sainsbury's (UK)	x		x
	Salling Group (DK)	x		x
	Tesco (UK)	x		x
	Walmart (US)	x		x
Marketplace	Foodl (NL)		x	
	Rewe (DE)	x		x
	Transgourmet (DE)		x	
Meal delivery	beets&roots (DE)	x		
	Takeaway (DK), Lieferando (DE)	x	x	
	Uber Eats (UK,US)	x		
Subscription	Hello Fresh (DE, US)	x		
	Kochhaus (DE)	x		x
	Krogers (US)	x		
Crowd-commerce	Buy a cow (DE)	x	x	

[4] https://www.mckinsey.com/

Business Model Definitions

Online shop: 1:1 adaptation of grocery online; retailers sell their products in their online stores.

Marketplace: retailers expand their portfolio with products from partners on their platforms.

Meal delivery: suppliers sell prepared food online and deliver home.

Subscription: retailers deliver e.g. prepared grocery for cooking on a subscription basis.

Crowd-commerce: combines crowdfunding and retailers for sustainable meat delivery.

Benefit from international demand

Online businesses have opened the door to international markets, giving retailers access to new customers and an opportunity to expand into market niches with regional products.

Belgian online food retailers, for example, gain a quarter of their purchases from foreign customers[5]. In this case online shops have the advantage that they are naturally multilingual. Other examples from the US, such as Amazon International Food Market and Global Food, also prove that durable foods are suitable for international online retail.

Basically, online grocery across country borders tends to be profitable with regional food specialties that are not available in stores abroad. Therefore, food retailers planning to cross borders online should provide a product range that attracts international customers.

Cross-border commerce causes extra legal and organizational challenges, which we discuss in more detail below in the section ‘processes’.

[5] https://www.retaildetail.eu/

Challenges in online grocery business

> ***"Getting into e-commerce isn't a trivial matter for a grocery retailer."***
> – McKinsey[6]

The convenience of shopping for groceries online is tempting, but convenience is not everything. Consumers will only buy food online if the offer is convincing. They are not willing to sacrifice the price, quality and assortment they have become used to in stores, and they will not accept cumbersome delivery or collecting arrangements.

McKinsey found what's keeping consumers from buying online:[7]

1. poor or expensive **delivery**
2. product **assortment** too small
3. online **prices** too high
4. poor food **quality**

The challenge for grocery retailers is to create online offerings that add tangible benefits to in-store sales beyond the delivery service, such as expanded assortments, exclusive offers or regular discount campaigns. This is particularly critical as long as operational costs for warehousing and delivery cannot be reduced through economies of scale.

To get their online business up and running fast and to limit operational costs from the start, retailers need to leverage synergies between old and new retail channels. To achieve this, structures, processes and technologies must be integrated and governed through an overall omnichannel strategy.

commercetools offers the technological platform for commerce system landscapes that grow with the changing requirements of omnichannel retail. Find out more below.

[6] https://www.mckinsey.com
[7] https://www.mckinsey.com

Requirements on data, processes and technology

Data quality

Product and buyer information is the fuel for online grocery. The buying experience and sales success strongly depends on the quality of the data that retailers provide for online sales. Requirements for the structure and content of data are higher than in conventional retail. In addition, requirements may also vary in different countries and regions, which is relevant in cross-border commerce, for example.

Product data has far more roles in online business than just presenting products. Regarding the labelling of food, the same regulatory rules apply as in physical stores. Since buyers cannot touch goods online to gain insights, retailers should make product information as transparent as possible. The more information such as dietary information, expiration date and detailed product description the buyer can see, the more trust is created.

The e-food market has particularly high requirements to provide information transparency for consumers. Besides meeting legal requirements, retailers must provide consumers with assurance that they are getting top quality products. One way to do this is to provide shoppers with insights into the supply chain and tell stories about partners that customers can trust.

Beyond informing buyers, product data enables important functions on sales platforms. Product search engines, for example, need meta-data to interpret search queries and find suitable products. The same applies to automated product recommendations and personalization of content on retail platforms.

Buyer data is both used and collected at each touchpoint along the purchase process. Systematic tracking of user behavior helps identify weaknesses and potentials and continuously improve online buying experience.

The challenge for retailers is not just to collect data, but to analyze and translate it into actions that drive sales.

Example: Sainsbury's helps customers find products that suit their diet plans

Data quality management

In many companies, data is edited manually, whether stored in product or customer databases. This causes a lot of effort and frustration, while data quality remains poor. Automation technology and machine learning today offer retailers feasible approaches to improve data quality management and make internal processes more efficient.

Tool-tip: commercetools' partner eCube has developed a tool to automate product data consolidation and continuously improve data quality.
For more information please visit www.chioro.de.

Processes

Online marketplaces like Amazon, including subsidiaries like Amazon Go and Fresh, have set the standard for 24/7 shopping experience and process excellence. Online shopping is fast and convenient, so order processing and fulfillment must be too. Buyers are used to simply returning purchased goods or getting substitutes for poor quality and buying across national borders. This creates new challenges for grocery retailers who start selling online.

Automating processes and workflows

Technology today offers many approaches to at least partially automate processes in online sales. The aim of automation is to reduce manual effort, cost and failure rates and improve workflow quality, speed and scaling for example in order processing and fulfillment but also in pricing and personalization of content.

Functional areas to automate

Purchasing	*Order processing and fulfilment*
• Suggest individual shopping lists, remind of products • Recommend products from previous purchases • Suggest products suitable for current selection • Choose receipt and get ready-to-use shopping list • Dynamic pricing including volume discounts and promotions • Customize content to individual user behavior • Multi product search for full shopping lists • Customer service using chatbots and AI	• Payment verification with quick credit card processing • Shipping and customer address verification • Real-time inventory updates • Aligning third-party logistics or freight forwarding • Automate frequent shipping notifications for customers • Tracking system pain points causing delays and customer dissatisfaction • Return and complaint reporting • Enabling end-to-end order visibility • Automate substitution and refunding

For many of these functions and workflows there are ready-to-use software services, easy to test and implement. This requires sales platforms designed as a modular service-based software architecture so that services can be easily added and connected via standard API.

Product return and substitute management

> ***"You cannot imagine how much energy goes into substitute management."***
> – Christian Wanner, online grocery pioneer, CEO at LeShop[8]

Returning and replacing products is called "the dark side of online retail" from an economic perspective. Just as buyers return electronic devices free of charge on Amazon, they expect the same with food. For food retailers new to online retailing, this raises essential questions:

Should product return and exchange be processed online, in-store or both?
This determines how processes and responsibilities in sales online and in stores have to be integrated or reorganized.

Should buyers be able to return packaged, non-perishable food without reason, or only if there is a reason for replacement?
This determines how consumers perceive buying experience and service compared to other retailers.

In any case, technology and process automation can help realize the best solution for retailers and consumers. Retailers should take the opportunity to connect sales online and in-store through shared platform technology.

[8] https://www.mckinsey.com

Real-time information on product recalls

Many retailers new to online business tend to operate digital sales as a side project. This can result, for example, in updates on product recalls, being published in stores first and too late, or not at all, online. This happens although online is the fastest communication channel to the customer.

For critical information to be published at all consumer touchpoints according to regulations, internal information flows must be fully streamlined and integrated. Technology can help to ensure that internal and external communication always follows defined processes. Current information from manufacturers is ideally published automatically in retailers online shops, without humans being involved.

Walmart, for example, integrates the latest callback information from recalls.gov so that consumer communication is always reliable and up-to-date.

Handling international transactions

49% of retailers think it is difficult to sell in foreign countries[9]. Besides language barriers, the main challenges are organizing logistics, issues related to tax, duty and data protection, as well as localizing data feeds and customer service.

Different legal conditions: Data protection, consumer rights and contract law differ from country to country even within the European Union, even more so in international commerce.

Bureaucratic hurdles: Different tax systems, VAT rates and customs duties offer plenty of scope for the automation of sales and pricing processes.

Logistics and delivery: High variable delivery charges for parcel shipments and returns, long delivery times and the handling of cross-border complaints require a high level of customer information transparency.

Modern technology helps retailers to automate complex processes in cross-border transactions in order to offer customers the best possible shopping experience, even when they are abroad.

[9] https://www.handelskraft.de/

Technology

As mentioned at the beginning of this paper, consumers today are still buying in smaller quantities online and less frequently than in-store. However, online demand will continue to grow, so retailers must prepare for high visitor and order volumes during certain times, days and seasons. Technology must also be able to withstand spikes in traffic without compromising performance.

Resilient technology is key to delivering lasting, superior shopping experiences and thus to sustainable growth. Functions and processes in all systems involved in online commerce must always work flawlessly, especially when demand is skyrocketing.

> ***"Being resilient is important because no matter how well a system is engineered, reality will sooner or later conspire to disrupt the system."***
> – Donald Firesmith, Carnegie Mellon University Pittsburgh[10]

Technology resiliency enables systems to respond without delay to buyer requests. Web content such as product descriptions must appear quickly at all times, products can be added to shopping carts without delay, and most importantly, systems must not collapse in the middle of ordering. This often happens when communication between connected systems does not work properly.

Integrate online commerce into existing system landscapes

Omnichannel commerce requires all systems to communicate and integrate with each other. This is particularly important when sales online and in stores are closely linked, as is the case with Click & Collect and curbside pickup. Even the return and substitution of online products in stores requires full integration of both worlds.

The following figure shows a typical network of systems and capabilities involved in omnichannel grocery. commercetools' API-first platform provides the foundation for full integration and data exchange.

[10] https://insights.sei.cmu.edu

Digital Business Tecnology Platform Capabilities

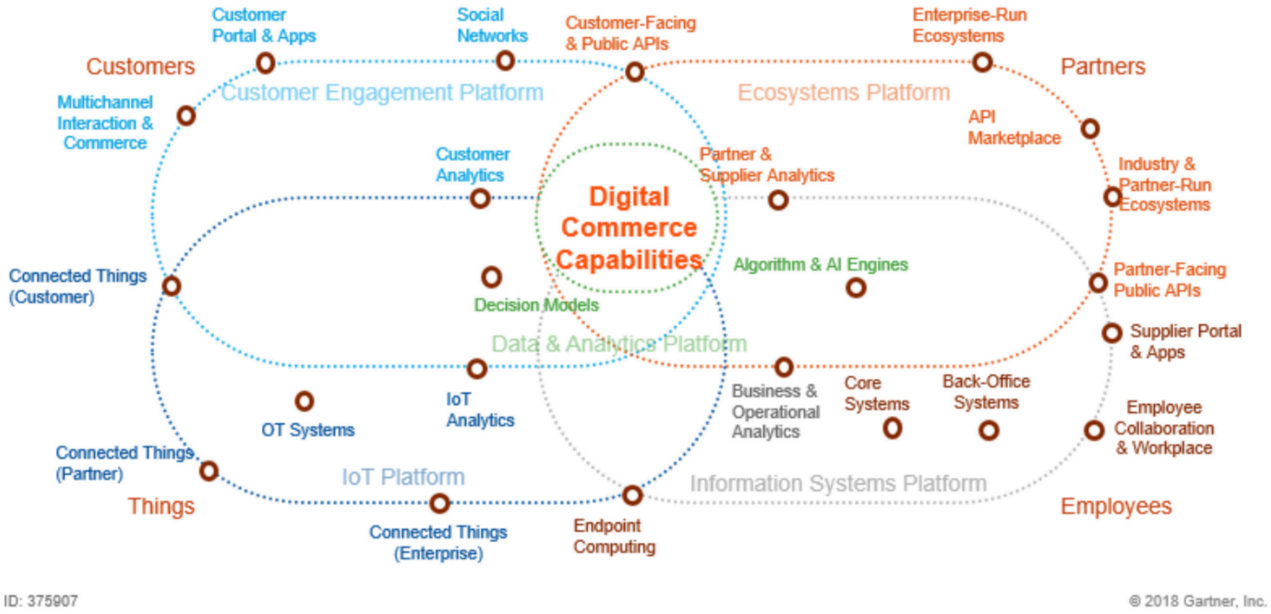


Figure 1. Digital Commerce at the Core Digital Business

Source: Gartner, The Three Approaches to Digital Commerce Platform Architecture and How to Choose Among Them, 23 October 2019, Mike Lowndes Sr Director Analyst [11]

Worth reading: this research outlines the three main approaches to commerce platform architecture and guides the reader in selecting the most appropriate solution. You can find it at www.gartner.com.[12]

Future-proof business through scalable systems

Networks of systems and services connected via standard interfaces (APIs) can be adapted to new requirements at any time if necessary. If the number of orders suddenly rises above average, for example, a conventional software system with integrated functions and capacities is costly and time-consuming to extend. The same applies if buyers want new payment methods or competitors shine with new services and touchpoints like mobile commerce, IoT and virtual reality applications.

[11] https://www.gartner.com/
[12] https://www.gartner.com/

Online grocery is in constant motion, so digital sales technology must be able to follow new developments at any time. Service-based system architectures that commercetools supports can be flexibly adjusted to new business needs. The modular structure also reduces the effort and risk of adjustments because each component can be added and removed like in a construction kit.

Scenario: online grocery needs to scale in case of a lockdown

Events with international impact, such as the outbreak of the 2020 Coronavirus, show that our stationary supply of food can quickly reach its limits or collapse. In such situations, online retail becomes an important pillar for public supply and welfare. When demand in online grocery skyrockets, systems that are unable to scale may crash. Therefore, having a scalable platform helps retailers stay prepared.

Below you will find out how REWE is preparing for future developments and possible uncertainties in the online food market.

How to get started with headless commerce

This approach is particularly relevant for grocery and food retailers who have been doing digital business for a long time, but whose commerce systems are aging: Technologies have become outdated and structures have grown increasingly inflexible to be adapted when needed; It takes too much time and effort to add new commerce functionality like new touch points. We call such static software systems monoliths.

Monolithic versus headless approach[13]

There are essentially two ways to move from a monolith to a flexible, service-based architecture:

1. Press reset and restart with a newly developed system

2. Unbundle the existing system function by function and transfer it to a new service structure ("strangler pattern")

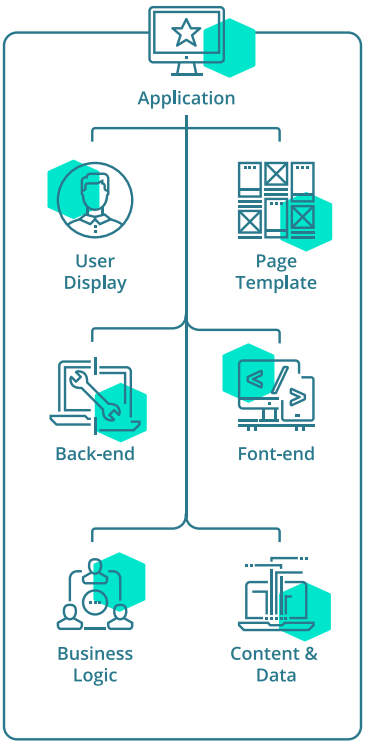
The path you choose depends on several factors. It requires a thorough analysis of the status quo and the company's strategic long-term objectives. Many of our clients such as Salling Group have decided to completely rebuild their commerce systems.

With its headless architecture, commercetools helps you separate the front end and back end of your customer experience without affecting ongoing business.

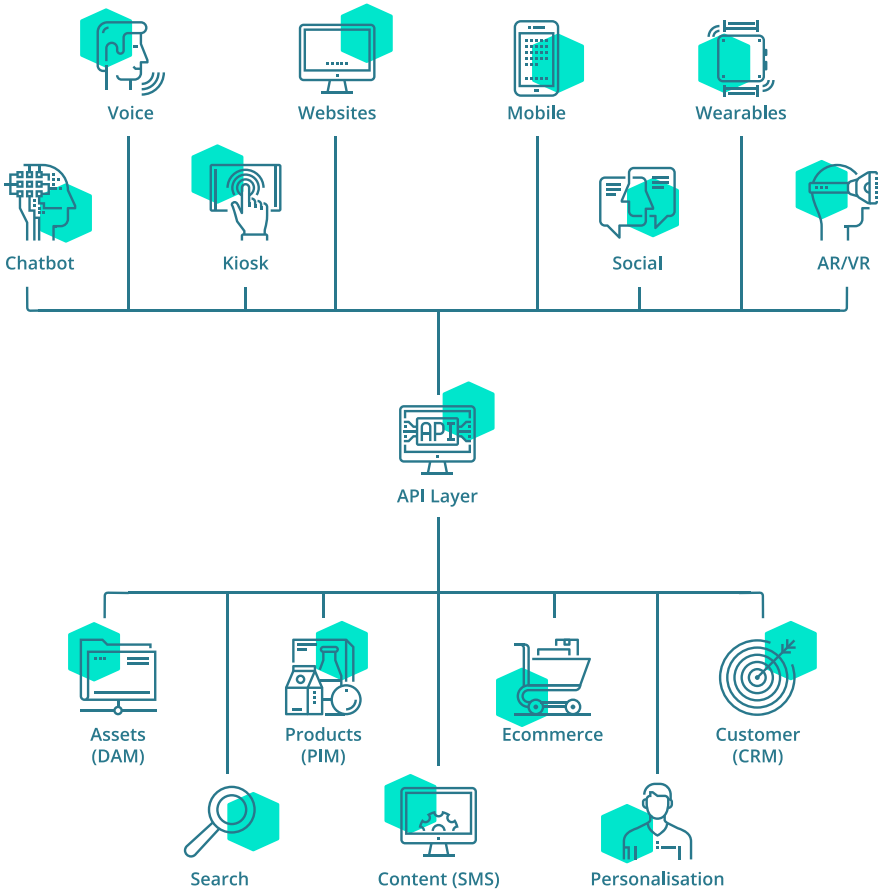
The headless architecture allows retailers to build exactly the features and microservices their customers want, all while freeing them to focus on delivering a great customer experience.

[13] https://www.profound.works/headless

Monolithic Approach



Headless Approach



Case Study:

REWE – From traditional shop to digital marketplace

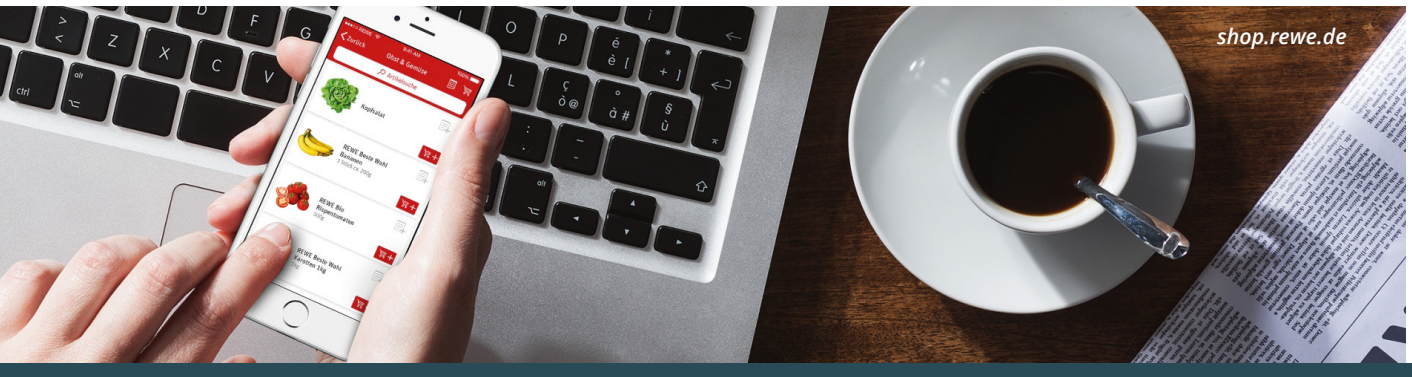
Company: REWE digital, founded in 2014, is the core of REWE Group's digital transformation. All of REWE Group's strategic and partly operational online activities are bundled here. One major objective of REWE digital is to digitize grocery retail in Germany. REWE digital aims to become the leading provider of online solutions in all markets relevant to the REWE Group.

Challenge: REWE is a pioneer and leader in online retailing of fresh foods in Germany. The company aims to further strengthen this position and expand its product range by adding exclusively selected partner products.

> ***"Setting up hundreds of additional REWE Click & Collect stations during such troubled times, as we are currently experiencing, wouldn't be possible without commercetools' headless platform, that allows our commerce ecosystem to adapt and grow flexibly with light speed."***
> – Dr. Robert Zores, CTO at REWE Digital

Solution: Since February 2018, customers have been able to buy food as well as kitchen and household goods from exclusive partners through the REWE delivery service at REWE.de. Since late 2019, they can also order long-lasting foods from REWE's private label brands, bestsellers and special offers – without minimum order volume and at no risk.

Results: REWE's delivery service offers about 150,000 food, kitchen and household products from REWE and 75 partners. Since launch in 2018, the number of partners, products and online revenue could be increased significantly. REWE's network of Click & Collect stations grows by multiple locations daily, supported by technology that adapts flexibly.



Case Study:

beets&roots – Integrate API-first approach into start-up's DNA

Company: beets&roots, founded by a Michelin star chef and a business savvy entrepreneur, specialises in healthy casual food delivery, pre-order and catering.

Challenge: The company wants to reflect its high standards of bringing individualized products to the customers' tables in an equally flexible and customized online service.

Solution: commercetools' API-first approach becomes part of beets&roots' technology DNA, headless platform lays the foundation for beets&roots' growing digital ecosystem.

> ***"Through commercetools we meet the needs of our customers without compromising the quality of the online experience."***
> – Dr. Nitin Maslekar, CTO Beets&Roots GmbH

Read the full story how a healthy restaurant chain is going the extra mile to serve a seamless customer experience at commercetools.com

Case Study:

Nuts.com – Headless technology boosts 90-year-old business

Company: Founded in 1929 Nuts.com today is a global online destination for nuts, dried fruits, superfood and a variety of snacks, delivering 4,000 products to fans worldwide.

Challenge: To provide the highest level of customer experience and to support business growth, Nuts.com needed a commerce platform that was agile, resilient and future-proof.

> ***"Moving to the commercetools commerce platform gives our technology, merchandising and marketing teams the foundation they need to continue to grow our business."***
> – Alex Shiferman, VP of technology at Nuts.com

Solution: Nuts.com's 20-year-old self-built online shop was replaced by a modular system based on commercetools' cloud-native, API-based platform.

About commercetools

commercetools is the world's leading platform for next-generation B2C and B2B commerce. To break the market out of being restrained by legacy suites, commercetools invented a headless, API-first, multi-tenant SaaS commerce platform that is cloud native and uses flexible microservices. This enables customers to deliver the best commerce experiences across all touchpoints.

www.commercetools.com

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