

# Moving From Bricks to Clicks in Food and Restaurant Industry

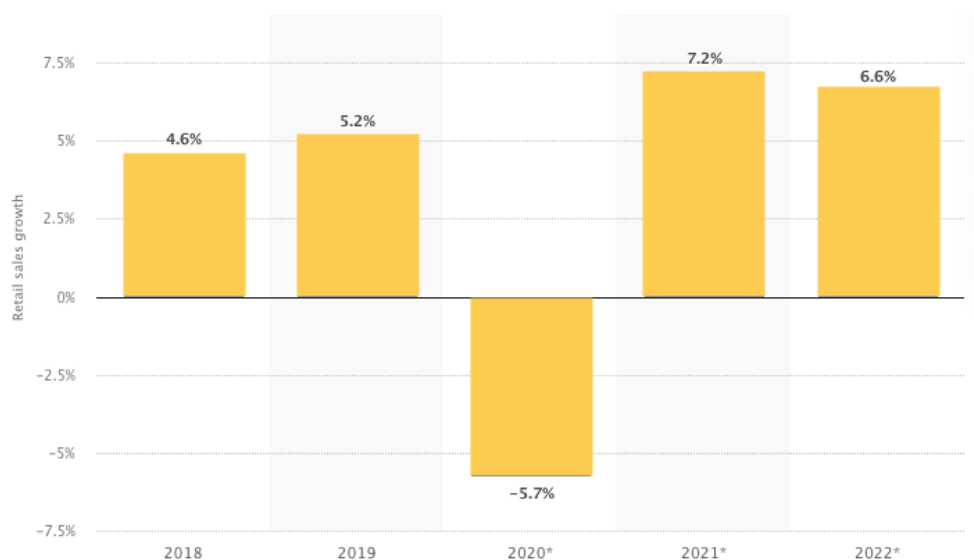


When the coronavirus COVID-19 pandemic hit in early 2020, having a digital presence for online ordering and delivery services became critical for businesses to remain afloat. Digital commerce has become a serious channel for food retailers and restaurants, even if the purchase rate does not yet reach the in-store retail.

## Why now is the time to expand online?

Many companies from the food and restaurant industry were facing a difficult choice – change their business model or go out of business. To fight for their survival, they were forced to innovate, adopt new technologies, find new target audiences or use new channels. Companies adapted by moving their sales online, implementing takeaway options, entering new marketplaces, offering curbside pick-up or BOPIS. Restaurants started offering online ordering in their physical locations, using QR menus, or food delivery. It has been a year and a half full of innovations, as companies had to quickly adapt and change. We have seen gigantic shifts in customer behavior due to the pandemic in 2020. Those trends are still valid in 2021:

- “Buy online pick up in-store” orders have increased by 62% in March 2020, year over year. [Source: Adobe Analytics.](#)
- There was a 19.2% drop in restaurant and bar sales during 2020 which translates to \$85.5 billion losses in the USA alone. [Source: RestaurantBusinessOnline.](#)
- Year-over-year daily change in seated restaurant diners due to the coronavirus (COVID-19) pandemic worldwide from February 24, 2020, to June 2, 2021. [Source: Statista.](#)
- Customers started cooking more at home, which was reflected by the sales growth in the food retail industry. This trend is predicted to continue in 2022. [Source: Statista.](#)
- Online grocery market forecast is predicting a rapid growth in the next 3 years, taking away that market share from brick and mortar retailers. [Source: eMarketer.](#)



*“Overnight, COVID-19 changed our usual way of doing business and sped up the urgency of having an ecommerce enabled website. We couldn’t have customers in our stores, where we were making 95% of our sales. So, we had to move those sales online, which has become a really important channel for us to sell to customers across the country.” – Becky Sunseri, Founder and Chief Creative Office of California ice-cream shop Tin Pot Creamery.*  
Source: BigCommerce.

In this whitepaper, we will cover the challenges and customer preferences shifts that 2020 brought. We will present case studies from companies who have successfully met the challenge and expanded their operations thanks to using MACH (Microservices-based, API-first, Cloud-native and Headless) software or implementing some MACH philosophy to in-house built software. We will discuss their story, the challenges and opportunities they encountered in the process of digital transformation and their experience with transforming their businesses using MACH software. We will summarize their learnings and what is important to be flexible and quickly adapt to newmarket conditions.



## Customer preferences in 2021

Customer trends in food retail and restaurant industries in 2021 show that expanding to online distribution channels and implementing online ordering in-store are the future. Some of the trends also cover safer ways to eat out at the venues like QR code menus, digital wallets, and online ordering at the restaurants.

1. The data from Deloitte's Global Consumer Tracker shows that 1 in 10 consumers across Europe shop online for food in 2021.
2. Off-premises dining is predicted to continue to remain popular among consumers and dominate restaurant sales. As restrictions start to wane eventually, **it's reported** that customers will use the following off-premise options more than they did pre-COVID:
  - Drive-throughs by 18%.
  - Call restaurants to place an order by 18%.
  - Use restaurant apps to order by 18%.
  - Use third-party delivery apps by 12%.
3. QR code menus – 1 in 5 customers say the option to access the menu on their phone through a QR code would make them more likely to choose one restaurant over another during the next few months. **Source: 2021 NRA State of the Industry Report.**
4. Contactless and mobile payments – Baby boomers and Gen Xs are much less likely to have tried contactless payment, but Millennials and Gen Zs will continue to use contactless payment options even once restrictions are lifted. 43% of millennials were already using contactless payment before the pandemic and 25% of Gen Zs tried it for the first-time during restrictions last year. **Source: 2021 NRA State of the Industry Report.**
5. Online ordering (native or third-party) – 50% of diners say the availability of online ordering would influence their choice of one restaurant over another. 79% of Baby boomers and 65% of Gen Xs are most likely to say they prefer to order directly through the restaurant for delivery. 44% of Gen Zs and 37% of millennials say that they will continue using third-party online ordering apps after restrictions are lifted. **Source: Datassential One Table Consumer Insights Report.**
6. Delivery and takeout – 6 in 10 adults are more likely to get food delivered than before the outbreak, which is higher among millennials with 71%. **Source: 2021 NRA State of the Industry Report.**

## Companies who did it the right way

After the pandemics struck, plenty of companies had to rapidly shift their business model and start selling online, offering curbside pick-up, takeaway or delivering home. Luckily, MACH (Microservices-based, API-first, Cloud-native and Headless) technology has come to the rescue and helped plenty of companies survive this crisis and successfully adapt to customer expectations and governmental regulations.

For inspiration, we wanted to show you a couple of companies that have successfully adapted to the new market conditions using MACH technology.



## Wilfred

Wilfred is an Italian business offering high-quality beef products. This originally B2B company used to cooperate mostly with local restaurants. Due to the COVID-19 crisis and a whole country stuck in lockdown in 2020, Wilfred had to change its business profile from B2B to B2C direct sales to survive.

They have opened an e-commerce platform selling DTC (direct to consumer) and implemented digital promotions and a referral program to boost customer acquisition. Since the beginning, they have chosen API-first, Headless platforms and a Microservices-based ecosystem, as they needed fast-to-implement solution that would not require a lot of IT maintenance, considering their team size. They have chosen Voucherify, a MACH Promotion Engine, as their solution for the digital promotions and referral program and Segment (part of Twilio) as their Customer Data Platform.

Quick e-commerce launch thanks to MACH technology and shifting to B2C sales has saved them from going out of business during COVID-19 pandemic.

[Read case study](#)



## ZX Ventures

2020 was not only a year of challenges for the food industry, but also a year of innovation and new business model opportunities. ZX Ventures, subsidiary of ABInbev, has launched a new DTC brand, Cerveza Siempre, in Mexico in 2018. Cerveza Siempre is a subscription business selling beer and beverages packages with home delivery. Their e-commerce was operating on Shopify as an e-commerce platform and LOVIS EOS as their ERP system. In 2019, the company had 2000 active subscribers.

2020 brought on a market opportunity for Cerveza Siempre, as due to COVID-19 people visited bars and restaurants less often and spent more time drinking pre-packed drinks at home. Since 2020, Cerveza Siempre has grown their user base 5x and, partially thanks to MACH technology, decreased their CAC by 70%.

MACH Technology has contributed to their success. To improve their results and harness the market opportunities, they chose Voucherify as their MACH Promotion Engine. They have managed to pass the 10 000 active subscriptions mark and increase customer base by 20% thanks to a referral program launched using Voucherify. Thanks to a flexible, API-based software they were able to test the promotions and referral program settings and optimize their promotional strategy for optimal results. MACH technology gave them the flexibility and robustness they needed when the market opportunity came in 2020.

[Read case study](#)



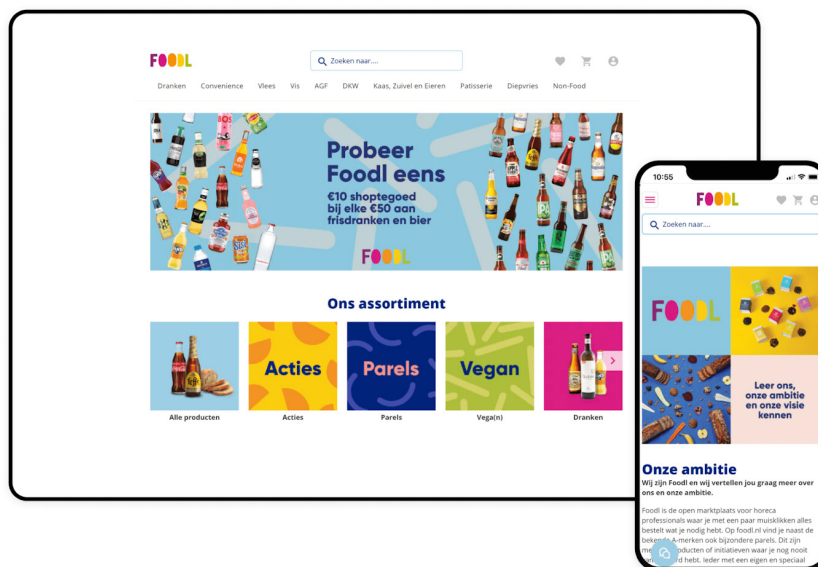
## Foodl

Foodl is the first Dutch food B2B marketplace connecting suppliers and HORECA professionals. Foodl was striving to:

- Provide outstanding customer experience.
- Offer insights to suppliers to help them deliver better services to their customers.
- Allow food entrepreneurs to discuss pricing and fulfilment needs with their suppliers.
- Allow small business owners to enter a professional marketplace.
- Give cheaper and easier scaling.

Foodl was launched right before the horeca industry closed down in early 2020. They chose to make the most of given circumstances and make the platform perfectly fit their clients. Choosing MACH (Microservices, APIs, Cloud-native, and Headless) tech stack, which consisted of commercetools at the backend and Vue Storefront as the frontend, with Mindcurv as the leading design and implementation agency turned out to be the foundation that made it possible. The chosen stack and architecture enabled a composable digital shop, where each component was plug-and-play, scalable, and replaceable. It provided exceptional user experience on multiple devices and a wide range of touchpoints. Their platform is future-proof and will adapt to any front-end solution thanks to its headless build. Thanks to MACH technology, Foodl could start small and scale up which was very important as the conditions at the launch time were not favorable.

Read the case studies on [Mindcurv](#), [Vue Storefront](#) and [commercetools](#) websites.

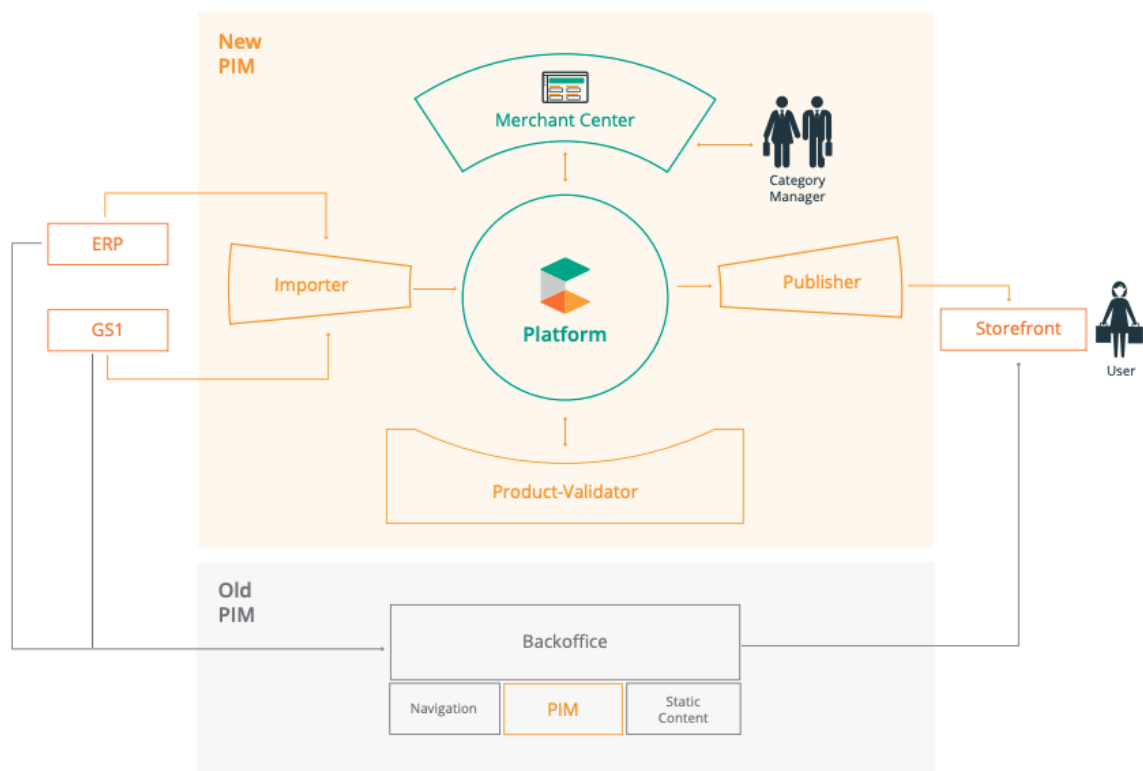


## REWE

REWE is a supermarket chain in Germany and the main brand of Rewe Group headquartered in Cologne. REWE is the second largest food retailer in Germany behind Edeka.

REWE has built its e-commerce business on commercetools, using MACH technology. It is a great example of how companies can prepare for market changes and become highly adaptable. Due to the excellent preparation of REWE's digital unit, the supermarket chain was well equipped for contact restrictions and the expansion of its online segment when COVID-19 struck the market.

Read [the interview with REWE, commercetools and Fulfillmenttools](#) and [REWE case study](#) to learn more.





## KFC

KFC adapted to the new market conditions in 2020 by rolling out e-commerce that allowed them to take online orders for both pick-up and delivery via its own digital platform. Microservices-first architecture enabled them to quickly adapt to the new requirements.

COVID's impact on KFC's operations was two-fold, KFC Digital Officer Nitin Chaturvedi explains:

*"On the one hand, the restaurant sector was hit pretty hard. A lot of our markets were hurting pretty heavily on sales, especially the ones that had mall-heavy stores or diner-heavy stores. Our franchisees were hurting on capital and cash flow, so there were a lot of negative and downward impacts across the globe. But on the flipside, digital really exploded. As consumers shifted to off-premise, our restaurant teams and our franchisees fundamentally pivoted the ways of working and in our business model, we captured the COVID tailwind and saw multiple years of progress in less than nine months."*

*"Pretty much every digital metric was accelerated, sales grew by a lot. We diversified our digital channels to make the business stronger for the future. We scaled by rapidly growing things like curbside [pick-up] and click-and-collect across the globe, and delivery. We made it the mandate of every function to digitize themselves, whether it was operations or marketing or real estate. As a result, we could open up multiple battle fronts at the same time and make progress a lot faster."*

KFC was well-prepared for shifting their sales to online and curbside pick-up. They have been investing heavily in digital transformation before the crisis and have made tech changes that have enabled them to become more flexible and future-proof.

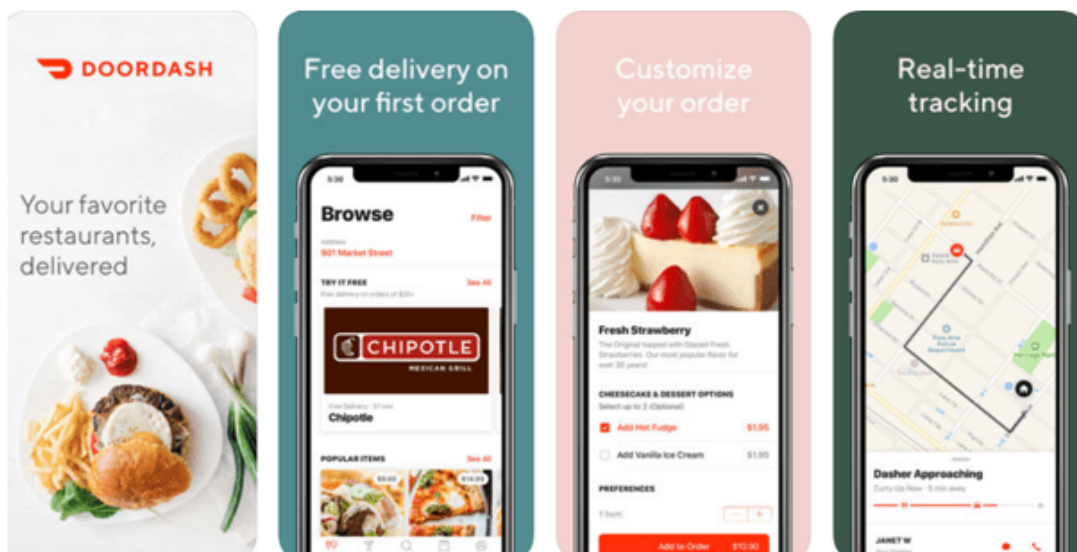
One of them was changing to AWS cloud hosting and a microservices-based architecture. Read [the post by Jaime Hall](#), Head of Architecture of KFC UK & Ireland, to learn more about their architecture.

## DoorDash

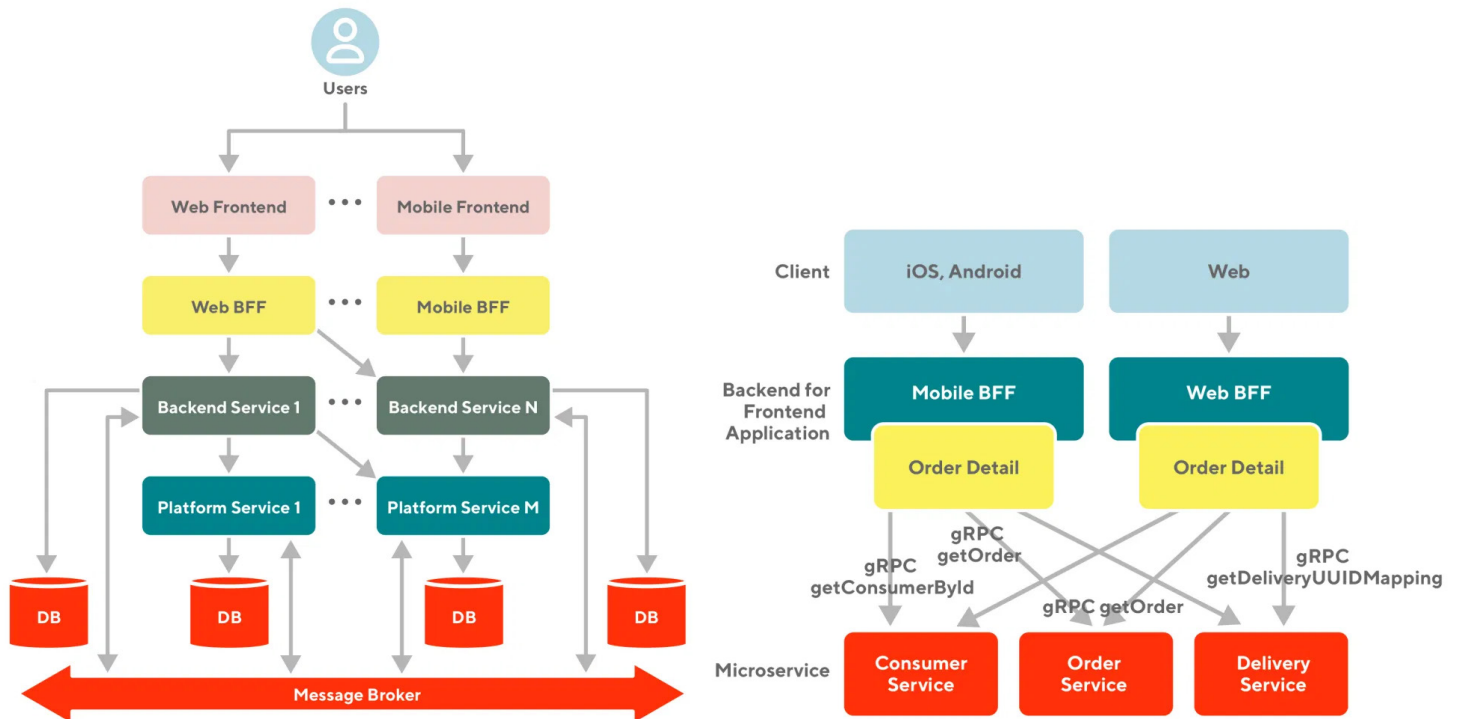
Microservices-based architecture helped not only KFC but other companies in the food industry tackle the challenges of COVID-19. DoorDash, a US-based Food Delivery app has seen a huge spike in traffic and merchants' interest in its services since March 2020. Merchants have raised new needs DoorDash had to add to its ecosystem quickly, for example requesting more promotional features. DoorDash already had [API-based, Headless architecture](#) in place for customer-facing applications which helps to implement new front-end solutions quickly. Luckily, they have just completed a [transition from monolith to microservices-based architecture](#) around that time, which have helped them increase the site reliability and add new features in light speed.

Read on [how DoorDash faced the challenges that came with COVID-19](#).

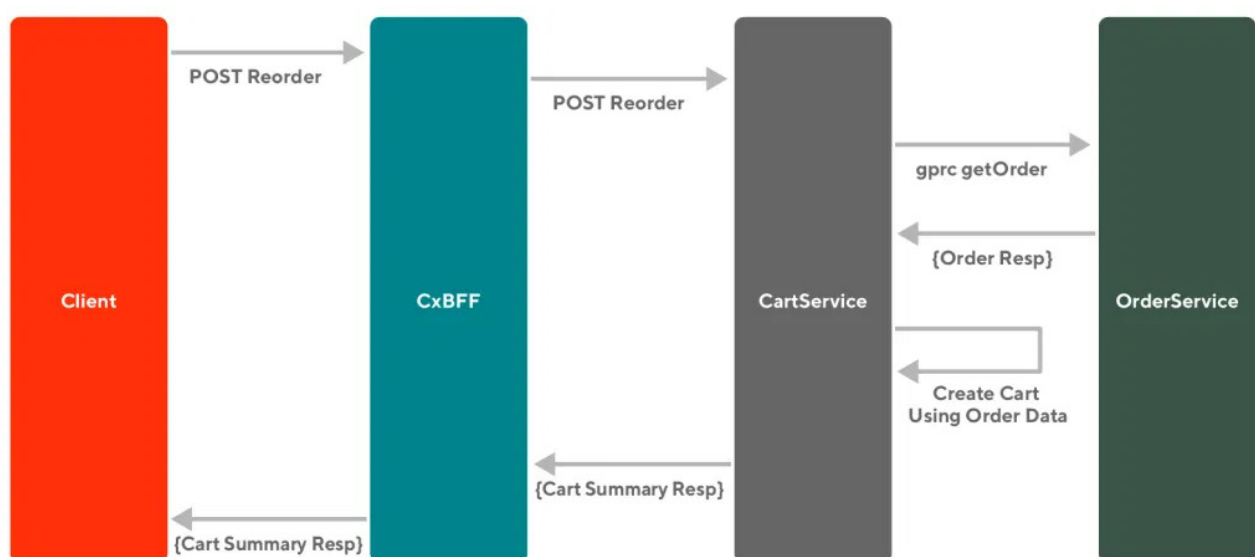
*"Highlights from this year include work on our microservices architecture and migrating business logic, a process begun in 2019, improving our reliability metrics on a platform facilitating millions of deliveries per day. To support the many data-driven aspects of our business, we built new pipelines and found other ways to improve our data infrastructure's speed, reliability, and usability." – Wayne Cunningham, DoorDash*



DoorDash' microservices architecture and communication with microservices:



Redesigned order flow in the new microservices-based architecture of DoorDash:



## Benefits of opening online sales for food retailers

### Easier international expansion

Online businesses have opened the doors 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. 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.

### Reaching new customers

Offering home delivery services, grocery retailers may reach more customers than would otherwise come to their establishments due to distance and possible competitor stores located nearby. Online grocery stores may attract completely different types of customers than the physical locations, for example, those who cannot go personally to brick and mortar stores like the disabled, the elderly or infant mothers.

### Cheaper operational costs

Selling online is often cheaper in the long term than selling through brick and mortar establishments because of the savings on work force, venue and other venue-related costs. Selling online has also higher economies of scale than selling via physical locations.

## The key to the successful transformation

To sum up, there are a couple of key tactics to a successful online business opening or a business model pivot during the crisis. What we have learned from our clients and case studies we have read are:

## Focus on the customer needs

Focusing on what customers need at that exact moment and delivering the MVP for that is critical. UX and seamless, omnichannel customer experience should be in the center of your business at all times, also in crisis situations. Constantly delivering on your customers' needs, even in small increments, is what brings businesses forward.

## Flexible technology stack

If you need to change how you operate your business quickly, you need flexibility. You need to be able to add new features or microservices quickly, remove others, change the front-end platforms you are using or connect new data sources. MACH software (Microservices-based architecture, API-first, Cloud-native and Headless) helps you do exactly that – to quickly adapt and change, without having to code a new solution for months.

## Resilient technology

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.

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.

Having MACH architecture helps with resiliency as the response time tends to be faster and the API requests are lighter than in monolith approach.

*“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.*

## Scalable technology

Having MACH architecture in place enables quick scalability. Systems and services networks connected via standard interfaces (APIs) can be adapted to new requirements at any time. For example, if the number of orders suddenly peaks, 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.

Online grocery is in constant motion, so digital sales technology must be able to follow new developments at any time. Service-based system architectures can be easily 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. Events with international impact, such as the outbreak of the 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.

## 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.

Product data has far more roles in online business than just presenting products. As per 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 to 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 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.

API-based platforms help data quality as they are able to populate the same data from single source to all the platforms, automatically and quickly, ensuring the data is the same on all used software platforms.

## Automation of processes and workflows

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. 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.

There are other areas that should be automated to make online sales management easier:

- Data quality management.
- Data processing and sharing across platforms and applications.
- Promotion and Loyalty management.
- Pricing.

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

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

## Strong digital team

You need not only a strong developer team but also skilled Product Managers who stay on top of technology trends that can guide you through the crisis and advise which platforms to integrate into your existing architecture to reach your goals.

## Fast decision-making

Unfortunately, lengthy sourcing processes is where many enterprises suffer. If you need months to close an RFP, it is difficult to pivot quickly. Investing early in streamlining and digitizing purchasing activities will benefit you the most when you need speed.

## Start-up approach

Funnily enough, what start-ups do well is failing. Fail fast, pivot and try something new. When a challenge is there, you need to approach it in various ways to see what works for you. If something unexpected happens, you may not have enough data to make the right decision. You will need to start small, build POCs or test your concepts on small customer segments. You need the right technological infrastructure to do that. MACH technology enables you to do exactly that – start small and iterate.

## Summary

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. Restaurants are heavily investing in home delivery options, QR menus and touchless ordering and takeaway. Even though we may see the end of COVID-19 pandemic soon, the digital transformation is ongoing and the earlier enterprises invest in technology and innovation, the better position they will have on the market. MACH software is best-of-breed technology out there that can help enterprises prepare for the uncertain future and quickly adapt to new market conditions, connect new features and services, change distribution and communication channels and more. It is more resilient and scalable than legacy, monolith software and helps companies to react quickly to challenges and opportunities.

*“Food retailers can’t afford not to take e-commerce seriously in the long run.”* – Christian Wanner, online grocery pioneer, CEO at LeShop.