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# Microservices for Modern Commerce

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**Kelly Goetsch**



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*Dramatically Increase  
Development Velocity by Applying  
Microservices to Commerce*

*Kelly Goetsch*

Beijing • Boston • Farnham • Sebastopol • Tokyo

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## Microservices for Modern Commerce

by Kelly Goetsch

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# Foreword

We at Rewe Group, a 90-year-old international retailer with €52 billion in revenue across 40 brands with more than 12,000 physical stores, are in the midst of an end-to-end digital transformation of our entire business. Our competitors today are technology companies—not other retailers. Innovation through technology is now at the very core of our business. Technology is what gets the right product to the right person, at the right time.

I have long believed that the role of the Chief Executive Officer and Chief Product Officer would merge, as organizations shift focus to a product-oriented mindset. Most CEOs agreed with me but have found it impossible to accomplish because of the legacy enterprise technology that powers business, particularly retail. It is not possible to run an agile business in today's world while running technology that was developed in the 1990's for a different era. Quarterly releases to production are no longer acceptable. Instead, releases to production must occur multiple times a day. It's taken 15 years for a new approach to surface; that new approach is microservices.

Microservices are central to our new approach to commerce. We now draw from an infinite pool of engineering talent across Europe to build hundreds of microservices, all in parallel. The value of microservices to us is innovation. We can quickly assemble teams. Once established, each team can then iterate on a new feature in production over the course of hours rather than the months or even years it would have taken us using the traditional approach. Today's infrastructure is all public cloud-based, which offers limitless elasticity. Teams are now owners of products, with all of the tools required to autonomously innovate.

We now have a large catalog with hundreds of completely reusable “Lego block”-like commerce APIs that can be used to build innovative experiences for our customers. We must be able to adapt quickly to changes in consumer technology. Just 10 years ago, smartphones barely existed. Now they’re crucial to our everyday lives. Microservices allows us to quickly adapt to changes in consumer technology. We can have a new app running in just a few days.

Microservices has been transformational to our business in many ways and we will continue to make deep investments as we transform to be the market leader.

— *Jean-Jacques van Oosten*  
*Chief Digital Officer, Rewe Group*  
*October 2016*

# A New Commerce Landscape

## Changing Consumer Demands

We are entering a new era in commerce. Consumers demand to seamlessly transact anywhere, anytime, on any client. Every sale is the culmination of potentially dozens of interactions with a consumer. Today, **smartphones alone influence 84% of millennials' purchases**. Digital touchpoints influence **56% of all purchases**. Selling something to an end consumer is far more complicated than it used to be, even just 10 years ago. Consumers are firmly in charge and expect to make purchases on their terms.

What do today's consumers want?

## A Brand Experience—Not Simply a Transaction

Those engaged in commerce are surviving and thriving in today's era of commoditized goods by creating *experiences*, often through the use of content. Consumers want a story behind the product they're buying. A product is never just a product—it's a reflection of the consumer. It's a statement. Today's brands are successful because they are able to de-commoditize the products they sell. This requires the extensive use of content—text, video, audio, and so on.

## Consistency of Experience Across Channels

Consumers no longer see divisions between channels (point of sale, web, mobile, kiosk, etc.). Consumers expect to see the same inventory levels, product assortment, pricing, and other aspects, regard-