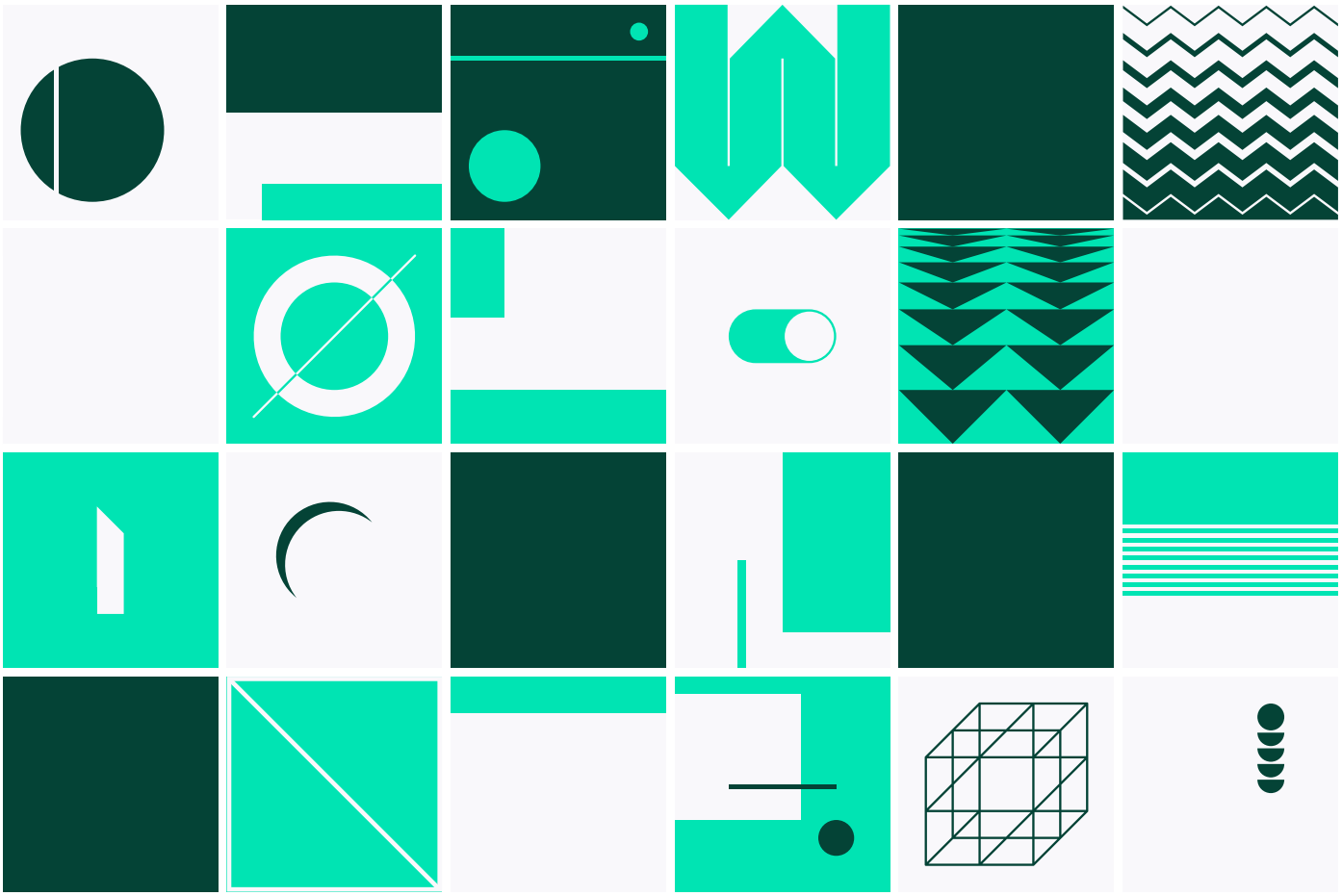
MongoDB. Amplience

Delivering Modern Commerce Experiences with MongoDB & Amplience



Content

The rise of customer-first experiences

Customers today are more sophisticated and have higher expectations than ever before. A ‘range-it and they will come’ philosophy will no longer cut it. Brands need to deliver digital-first personalized, localized and consistent experiences across all touchpoints to beat the competition.

These rising expectations are driven by multiple factors including;

- Digital natives are mobile-first and expect a first-class mobile experience.
- Social media has disrupted the purchase journey, unlocking new opportunities and gateways for brands to engage with their target audience.
- The rise of marketplaces offering excellent shopping and next-day delivery services have set the gold standard for customer trust.
- Leading search engines are constantly evolving their search algorithms to provide better search results. These algorithms have become incredibly advanced, where many variables are used to track the overall customer experience, from time on page and bounce rates to performance metrics and accessibility scores with Lighthouse and page speed insights.
- The Internet of Things (IoT) is increasingly becoming embedded into our daily lives, invisible but ever-present to provide better experiences. Mckinsey & Company predicts the number of connected devices will increase to over 43 billion by 2023 alone.
- The covid-19 pandemic accelerated generations that had largely avoided the digital world into becoming a necessity. Shoppers were and are increasingly looking to browse, research and purchase online.

There is no denying that leading consuming brands have capitalized on their ability to deliver customer-centric experiences that meet these demands. They are leaders in their given categories and have re-defined customer experiences in their market segments within the last decade. It’s not just these segments, every market is undergoing rapid transformation and becoming digital-first. This is reshaping commerce experiences forever. Isolated, generic websites are no longer sufficient. To beat the competition, brands need to be able to differentiate with compelling customer experiences that connect and engage with their customers.

The real-world destination-based linear shopping experience is dead, this has been replaced by a complex customer journey that dips in and out of brand touchpoints and the wider web. Customers are now in the driving seat and can easily take their business elsewhere if they are unsatisfied.

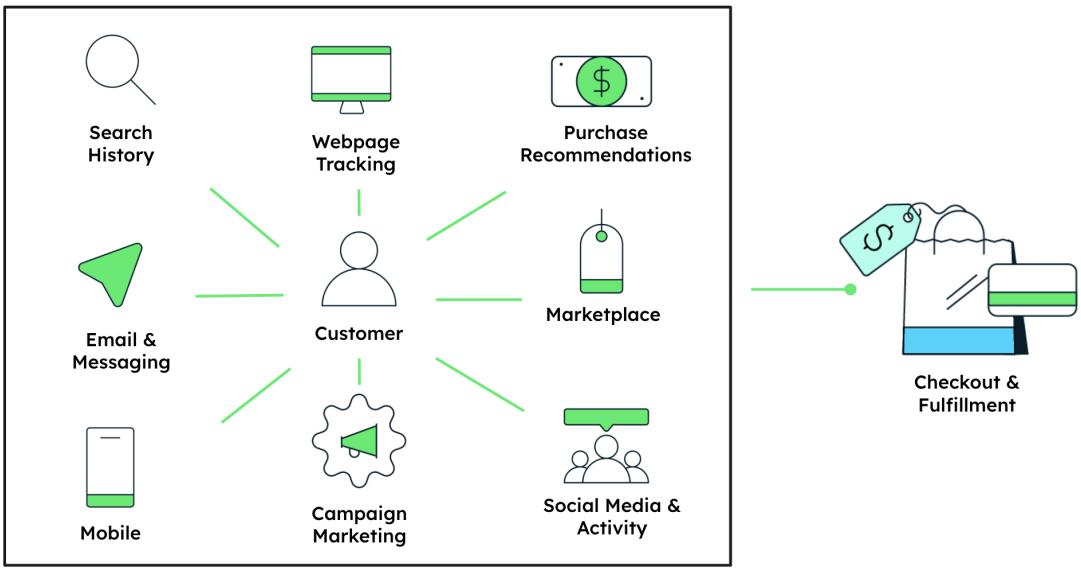


Figure 1: The multi-faceted customer experience

From a product-out to customer-in mindset

So how do brands compete in this customer-centric world? It requires a change in mindset, from “product-out” to “customer-in”. We can think of the shift that is required across five dimensions.

1. The scope shifts from ecommerce websites as a single destination to experiences that are baked into a customer's everyday life.
2. Personalisation goes from limited demographic targeting and recommendations to personalisation at scale where recommendations and communication happens on a one to one basis, unique and tailored to every single customer.

3. Experiences are no longer driven and restricted by web templates. Developers create solutions that enable business users, marketers and merchandisers to author experiences.
4. The culture shifts from command and control, heavily policed waterfall processes to non-stop, trusted and cross-functional agile teams.
5. Platform and solution stacks themselves switch from rigid legacy monoliths that entwine presentation layers with data and logic together to flexible architecture principles that separate presentation, data and logic into separate component parts.

From: Product-Out "Range It" And They Will Come	5 Dimensions	**To: Customer-In** Differentiated Brand Experiences
Linear 'storefront' commerce experience	SCOPE	Built into the customer's everyday experience
Limited targeting and recommendations	CONTEXT	Personalization-at-scale
Coded into complex 'fixed' web templates	EXPERIENCE	Managed by business users (in content, not code)
Command and control, waterfall, policied,...	CULTURE	Non-stop, agile execution, trusted!
Legacy, monolithic & costly to change	STACK	MACH, composable, agile, and best-of-breed

Figure 2: Transitioning to a customer-centric approach

Legacy platforms fail to deliver

So now that we understand market conditions and customer expectations of today and the shift in mindset required, we can begin to dig into that last point more closely and look at how brands have traditionally attempted to meet these demands.

Monolithic content management systems and eCommerce platforms were designed for a web-centric user experience and their code bases date back to before the iPhone launched in 2007. They have struggled to keep up with the pace of change and have remained relatively static from a product development standpoint. They create siloes and

disconnected commerce experiences due to their rigid template-driven approach that ensures brand experiences are generic and cookie-cutter. How do brands stand out in this "sea-of-sameness"?

We can plot these growing customer demands on a chart and compare this to legacy platform capabilities to highlight what Amplience & MongoDB have dubbed "The Commerce Execution Gap".

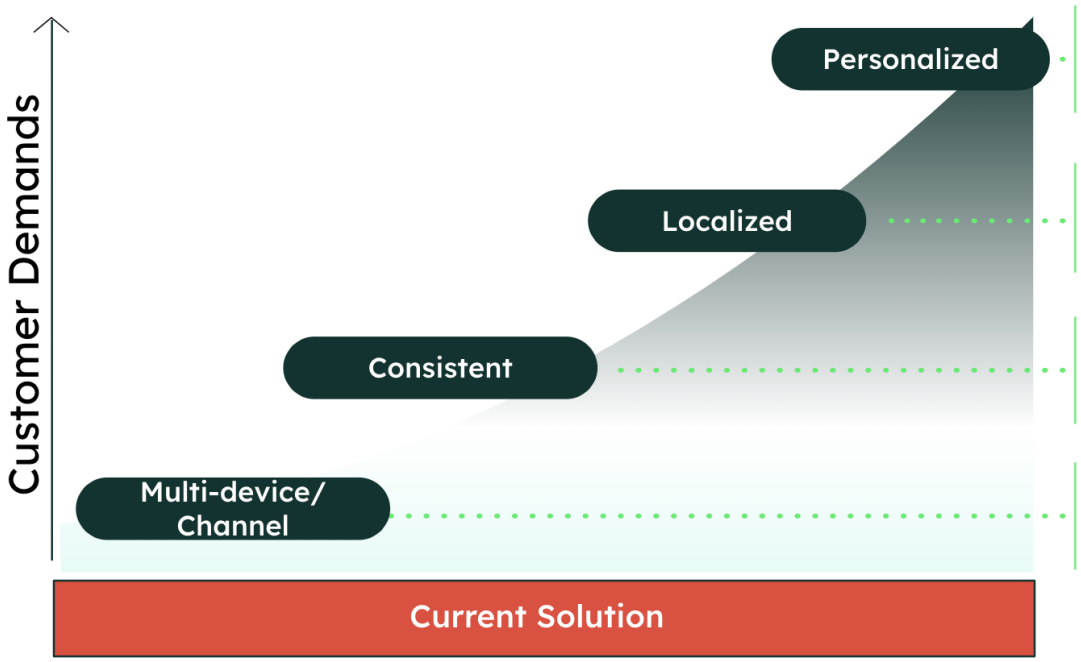


Figure 3: Monolithic systems fail to meet growing customer needs, leading to the "commerce execution gap"

MACH to the rescue

For the answer, we can look to the experienced leaders of customer-driven experiences. They all have one thing in common when it comes to their technology stacks - they are all built using the MACH (Microservices, API-first, Cloud-native and Headless) architecture principles.

You might be thinking that this approach seems complex and costly to build and maintain, and you'd be right. These experienced leaders have spent years developing their

home-grown architectures and best-practices. How can aspiring and future experience leaders in their given categories compete on a level playing field as we step into this new future given the daunting task ahead?

This is where vendors like MongoDB and Amplience come in - rentable microservices and packaged business capabilities that brands can rapidly implement to get value quickly without the complexity of building it all yourself.

If we take a step back to understand what matters in this new world, the answer is future proof agility to deliver customer-centric commerce experiences. Data is at the heart of experiences. Only by building a robust stack of backend microservices can teams stitch these together to create a separation of backend and frontend enabled shopping experiences to be optimized for speed and performance, driving additional traffic and increasing conversion rates.

However, alongside data, marketing and commerce teams need interfaces to create and orchestrate rich customer-first experiences at scale.

How to move fast in a data-driven world

Data is at the center of ecommerce. Historically, this data has been stored in relational databases and dispersed across thousands of tables. In a relational database, a customer's profile data might be held in one table and their loyalty points in a different table — or a different database entirely. As a result, data that is used together is not stored together, making queries lag and slowing real-time responses. Storing data in a relational database
also has a direct impact on the speed at which new applications and features can be developed and launched. The pace of development is hindered when development teams are reliant on database administrators and others to make changes to the data layer before they can deploy application code.

In a world where customers expect an integrated, omnichannel experience, relational databases hold back retailers from connecting their ecommerce customer data with store inventories and other relevant data insights.

This is where MongoDB's document model comes into play. Documents map to the objects in code, so they are much more natural to work with. There is no need to decompose data across tables, run expensive joins, or integrate a separate Object Relational Mapping (ORM) layer. Data that is accessed together is now stored together, so developers have less code to write and end users get higher performance. Its flexible schema gives them the possibility to iterate faster and more freely.

MongoDB Atlas brings the document model to the cloud, combining transactional processing, relevance-based search, real-time analytics, and mobile edge computing with cloud sync in an elegant and integrated data architecture. High availability and scalability are built-in via replication and sharding. It aligns with the MACH alliance by promoting microservice architectures and a lean and agile development environment.

It allows for real-time agility in e-commerce today, where retailers can pivot accordingly to consumer needs, trends, or global demands. Together, both MongoDB and Amplience enable businesses to curate experience and define the rules and processes from a centralized system.Amplience provides integrated content and asset management out of the box, but where the solution really shines is where it strikes the right balance between developer and business user needs.

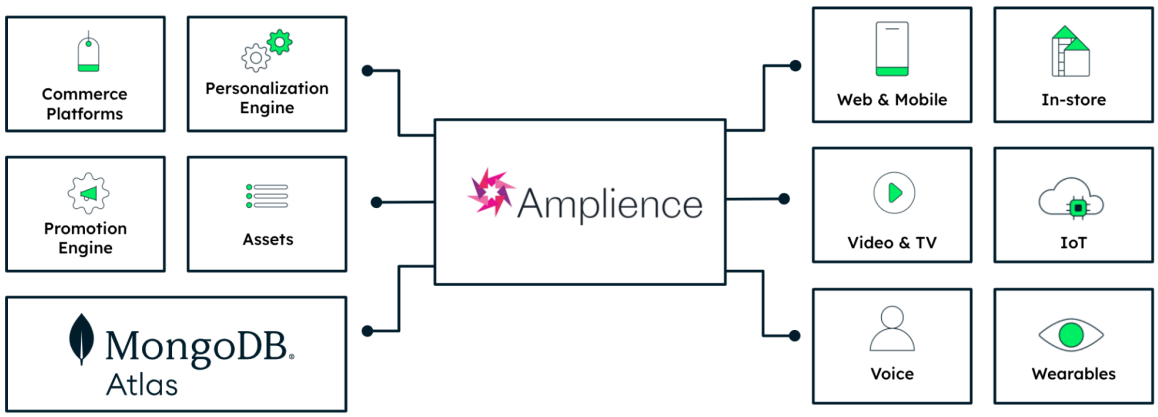


Figure 4: Amplience & MongoDB Together

For developers, Amplience provides tools to integrate data sources like MongoDB to enrich shopping experiences and deliver optimized shopping experiences at scale beyond content management- experience management. For business users, Amplience provides

the single interface to create, schedule, and preview these rich consistent experiences across all channels and devices.

> “Amplience and our customers have been using MongoDB for many years now. We believe in using the right tool for the job and when it comes to storing and querying complex JSON structures at scale, MongoDB is hard to beat.
>
> **-Darren Lee**
> **VP Engineering, Amplience**

Amplience & MongoDB drive data-driven customer experiences

MongoDB, a powerful application data platform, and Amplience, the world’s most powerful commerce experience platform, are the ideal partnership for today’s demanding retail environment. Amplience capabilities enable brands and retailers to curate customer shopping experiences, and MongoDB underpins the platform with a secure, agile data platform built for real time data, AI integration, rich product search and discovery, and other essential ecommerce and general retailing features.

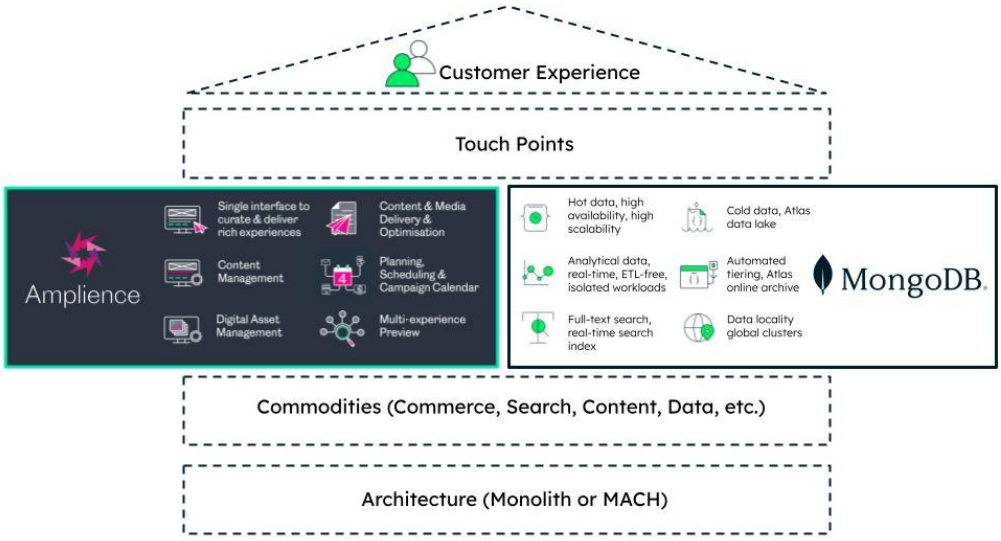


Figure 5: Amplience & MongoDB integrated in the customer experience

Together, MongoDB and Amplience are:

MACH Alliance Certified

Both Amplience and MongoDB are members of the MACH Alliance, Promoting flexibility and innovation in enterprise technologies, and certified by other vendors with strict entry requirements.

MongoDB Atlas, MongoDB's global multi- cloud database, promotes microservice-based architectures and a lean and agile development environment. Its data platform thus enables enterprise customers to build MACH aligned solutions. MongoDB Atlas holds multi-cloud capabilities, giving it an unmatched advantage over other data platform providers that only offer vendor lock-in.

Commerce Ready

MongoDB provides ecommerce businesses with a robust data platform that is ideal for retail solutions, including omnichannel product catalogs, real-time analytics, payments, inventory, and logistics. With MongoDB, you can make the most of your retail data.

Amplience is vertically focused on serving the needs of retailers and brands. Out-of-the-box platform capabilities are designed with commerce use cases and how ecommerce and marketing teams actually function in mind. This includes powerful planning, scheduling and calendar campaign management tools, inline real-time multi-device and multi-locale preview, integrated search, DAM. UI extensions allow data to be pulled from other systems into the experience management interface to curate rich and personalized digital experiences. The team at Amplience has hundreds of years of combined real-world experience working at and with the world's leading retailers and brands, we're on hand to share best practices and insights every step of the way.

Flexible & Scalable

Retailing today means ingesting many different types of data from multiple sources. Whereas yesterday's retailers built their infrastructure using relational databases, with a rigid schema defined by tables, tomorrow's retail leaders will choose a data platform based on a flexible data model, such as the document model, which can be particularly helpful for modeling data where structures can change between each record, while also making it easier to evolve an application during its life cycle. Amplience also enables developers to easily model their content graph to meet their exact requirements and use cases with an API-first approach.

Sales seasonality or special promotions can heavily impact retailers' systems by generating demand spikes over specific times of the year. If this aspect is not addressed properly, it can result in costly infrastructure overprovisioning or, even worse, in downtime. MongoDB brings peace of mind to organizations: Atlas can automatically scale up and down, always dynamically provisioning the optimal amount of resources needed to run applications.

Developer Friendly

MongoDB is consistently voted the most wanted database by developers, with its intuitive query language, performance visibility, and document model that approaches data as objects.

Amplience provides an easy solution for developers when it comes to integrating content and data sources to experience management and delivery. MongoDB is modular by

design, meaning developers can work on one piece of an application without impacting the entire thing.

To learn more about MongoDB and Amplience's partnership and how they are helping in growth and innovation of e-commerce today, connect with the MongoDB team here.

About the authors

Luca Napoli Financial Services Solutions Consultant at MongoDB, is a part of the Industry Solutions Team with a focus on blockchain technologies. With a background in energy, innovation, sustainability, data science and artificial intelligence, he has a passion for data thought leadership and technology.

Adam Sturrock. As a founder of Moltin, one of the first headless commerce platforms in 2013, Adam wore many hats over several years from sales and marketing through to customer success. Adam is now VP of Product Marketing at Amplience and operates across the entire customer journey, working with customers to bring their MACH-based solutions into reality.

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