Unlocking Personalization with MACH Technology

PROJECT CUE: AGILE PERSONALIZATION IN JUST 12 WEEKS

Contents

Introduction

Today, companies want to implement personalization because it offers significant benefits, such as enhanced customer experience, increased customer loyalty and retention, improved brand reception and greater sales.

However, they fail to deploy personalization successfully — hurting their brand and hindering growth in the process — because they run into a range of technology hurdles and issues, including:

- The traditional technology in their stacks might support personalization, but it is probably constrained by doing so one channel at a time. At best, the tech stack still requires duplicate efforts across different channels.

- The teams don't understand how to use technology to enable personalization. Further, they don't implement and integrate available personalization technology correctly.

- The technology enterprises have in place forces their teams to work in silos.

- They need to tie together different data sources to enable personalization, but they can't because their technology doesn't enable the sources to speak to each other.

- The previous generation of personalization technology is very rule-heavy, and a person has to build the logic that determines the context, or intent, of a customer. Oftentimes, a second set of rules is also required to decide what content or call to action to present when that first rule is true.

To overcome these challenges and enable personalization, many companies are implementing

MACH TECHNOLOGY

(**M**) ICROSERVICES-BASED

(**A**) PI-FIRST

(**C**) LOUD-NATIVE *AND*

(**H**) EADLESS

How MACH Simplifies, Accelerates & Elevates Personalization

Before diving into how MACH empowers personalization, it's best to quickly explain what MACH is and its supporting components.

WHAT IS MACH?

MACH enables you to choose technologies to specifically meet the needs of your business and customers.

With MACH, microservices and their corresponding APIs can be added or replaced, so you can ensure you are always using the right features for your needs. With its flexibility, you can extend or augment your existing architecture or de-risk a transition from an older ecosystem to one that's more suitable for your business needs. Since the technology is also cloud native, it's scalable so you don't have to wait for updates before you can deploy your next feature. Most importantly, it's agile and designed to respond to change, allowing you to innovate quickly and inexpensively.

MACH also allows your business to open new lines of revenue quickly, rapidly prepare for future changes, leverage best-of-breed tools and create superior experiences for your customers across all touchpoints.

How MACH Simplifies, Accelerates
& Elevates Personalization (cont'd)

So, how does MACH technology enable personalization specifically?

MACH MAKES PERSONALIZATION FASTER & MORE FLEXIBLE

The pace at which you can start your personalization is drastically enhanced by MACH technology because it is so composable that you can plug it in your current tech stack without a major overhaul. Further, MACH's composable nature enables you to start small with personalization and expand as needed. For example, you can use MACH technology to add simple personalization like a standard smart search engine that gives customers recommendations based on content they've already viewed. Or, if you require more advanced MACH-based personalization, you can work with leading MACH vendors to implement it.

MACH also makes the roll-out of personalization very clinical. With MACH, you can decide where you want to use personalization and when you want to use it. If you don't want to use personalization, it's easy to turn it off with MACH.

MACH'S HEADLESS FRONT END ENABLES EXPERIMENTATION
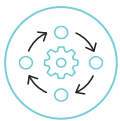
Historically, implementing personalization may have involved front-end changes or impacted the IT road map. With the arrival of MACH, cloud and continuous integration/continuous deployment (CI/CD), there is now a decoupling of the front end and back end that enables more experimentation at the front end – without expensive deployments. Decoupling also allows you to enact changes much more quickly and regularly, which empowers your marketing team to roll out content and campaigns efficiently.

# How MACH Simplifies, Accelerates & Elevates Personalization (cont'd)

MACH'S HEADLESS FRONT END HELPS BLEND THE DIGITAL & PHYSICAL WORLD
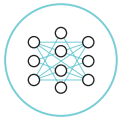
MACH technology helps companies blend personalization between the digital and physical world because its headless front end is open-ended and endless. The front end's open nature means it can change into almost anything you could think of in a physical or digital space, which creates more opportunities to personalize anywhere you want.

MACH's front end also allows you to apply personalization to more touchpoints to reach more customers. However, having more touchpoints necessitates a better content strategy that must define how your content can change from touchpoint to touchpoint, how it can be reused and become more modular.

MACH MAKES IT EASY TO MOVE ON FROM A MONOLITHIC APPROACH
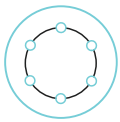
Companies often have problems making holistic changes to their existing technology and business landscape because they still take a monolithic approach to building products. They're so accustomed to product or platform silos that they still have an app team, a web team and so on. MACH makes it easy to break down organizational silos and enable personalization companywide because it's headless. The decoupled nature of MACH changes how you work and build web products and services because it enables your teams to do their jobs independently and come together as needed, which allows you to focus more on value streams and customer benefits.

MACH ENABLES DATA SOURCES TO SPEAK TO EACH OTHER

Companies need to tie together different data sources to enable personalization, but they often have difficulty doing it because the data sources can't speak to each other. In the past, companies had to use customer data platforms (CDPs) to bring different data sources together, and then they needed to hire data scientists to pull the information out of the CDPs and process it. Using CDPs and data scientists adds an additional layer of complexity to the data management flow.

MACH technology breaks down data silos because it's API first. APIs enable different systems to talk to one another automatically, and they make real-time system access much simpler. APIs also enable you to use CDPs more effectively and cost efficiently because they make data exchanges more unified and instantaneous.

MACH BOLSTERS PARTNERSHIPS ALONG THE VALUE CHAIN

MACH's ability to allow data sources to speak to each other can strengthen partnerships along the value chain. For example, in media and entertainment, a MACH solution could enable a TV network to send the ingredients a celebrity chef is using on a cooking show to a grocery delivery service so the viewer can get everything they need to make the same meal without leaving their couch. In travel, MACH can enable airlines to partner with car rental companies to help travelers minimize the items they have to take to a destination. For instance, a MACH solution could give the airline the ability to inform a car rental agency that a traveler needs a specific car seat installed in their rental car when they pick it up, so they don't have to take the seat with them on the flight and then configure it themselves.

MACH ENABLES UNIFIED COMMERCE

MACH is the driving force behind unified commerce, which is a strategy you can implement that centralizes all the information that's exchanged between your systems in one platform. With unified commerce, the data collected from your web channels, mobile channels and smart devices lives in one easily accessible place, where you can quickly gather insights. Having a centralized information center also makes managing personalization easier by removing all your data silos and enabling you to select what information you need, when you need it.

Project CUE: Agile Personalization in Just 12 Weeks

To show users what's possible with a modern personalization strategy and MACH, Contentstack, Uniform and EPAM (CUE) launched Project CUE, an agile personalization showcase.

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MACH APPROACH TO DIGITAL ARCHITECTURE AND PERSONALIZATION

CONTENTSTACK   <epam>   uniform

HEADLESS CMS	+	DESIGN & DEVELOPMENT	+	ORCHESTRATION & PERSONALIZATION

Partners Make MACH-Enabled Personalization Happen Faster

Even though MACH makes personalization simpler to implement, it's still smart to work with reputable partners in the space to ensure you're integrating MACH into your technology stack and personalization strategy correctly.

Partners get your MACH-enabled personalization strategy up and running much more quickly than if you try to tackle it alone – and they can help you create the best use cases for personalization. On top of that, many offer MACH-based products and solutions that you can leverage to roll out personalization much faster.

The work EPAM did on Project CUE is a great example of how MACH partners with their best-of-breed solutions and expertise in modern technology can help elevate your personalization strategy.

Project CUE: Agile Personalization in Just 12 Weeks (cont'd)

In 12 short weeks, we created a personalized booking experience for guests of a fictional Las Vegas resort that offers entertainment and dining packages alongside a visitor's stay.

As part of the personalized experience for the fictional resort, web and mobile content adapts to real-time visitor behavior, such as browsing events, clicking on marketing emails or taking quizzes. When booking tickets or a table, a guest list can be added to recommend additional events that match party size, schedule and guest preferences, as well as to ensure everyone has access to a personal itinerary of bookings and travel information.

Project CUE was made possible by Contentstack's headless CMS, Uniform experience orchestration and personalization, EPAM's design and development expertise and a MACH approach to digital architecture and personalization. The composability of Contentstack and Uniform allowed the joint teams to quickly develop a unified solution and get a functioning site up in the first week of sprints. **This ease of integration, made possible by MACH architecture, lets companies create proof-of-concept projects with minimal resources that can be quickly iterated on and scaled up as value is proven.**

Next Steps

If you're ready to begin your MACH-enabled personalization journey, you should follow these five steps:

1 | Pick an Implementation Approach
There are three different MACH implementation approaches you can take:

GREENFIELD
The greenfield approach is when you start everything from scratch because you don't have the technology you need for MACH-enabled personalization already deployed. For example, you don't have an eCommerce site or a strong content management system in place. You will need to implement these systems and everything else to get your MACH-enabled personalization up and running.

CHIP AWAY
The chip away approach is when you move key functionalities from your large monolithic system, or systems, to a composable stack. Teams can identify quick wins — while keeping a stable environment with the monolith — without any downtime. It will validate the ROI from the chip away approach while moving gradually to the next set of features or capabilities. This approach gradually weans enterprises off their dependency on monoliths incrementally. Clients have confidence that they are on the right path.

AUGMENT
The augment approach is when you add new functionality to your large, existing infrastructure stack. Two good examples of using an augmented approach are adding personalization on top of your existing content management web commerce infrastructure or adding an order management system to your eCommerce capabilities.

2 | Determine Where to Start

Once you've decided on your approach, you then need to determine where to start — whether that's with content management, personalization, search, commerce or something else. This will be different for every company depending on their business needs and list of priorities.

Next Steps (cont'd)

3 | ## Dream Big, But Set Realistic Goals

After you've determined where to start, you should dream big, but also set pragmatic personalization goals. To help guide your goals, walk the halls and learn what's already been done. Also look at which of your personalization efforts have been successful and which haven't and determine why.

4 | ## Deliver Often and Iterate

After you've created your strategy, don't be afraid to adjust the course. You should also consider a proof of concept as your first phase, as you introduce new MACH technology into your organization.

5 | ## Choose the Right Partner

Last, select a partner that can help you fully leverage MACH and create a winning personalization strategy, like EPAM. With our expertise, we can implement a MACH-enabled personalization strategy that can improve your customer experiences, customer loyalty and retention, brand reception and sales.

Contact our MACH experts at WFBMACH@epam.com or visit www.epam.com to learn how we can help you with your entire personalization journey.

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Contentstack® — Content Experience Platform (CXP) category leader — empowers marketers and developers to deliver composable digital experiences at the speed of their imagination. Companies such as Chase, Express, Holiday Inn, Icelandair, Mattel, McDonald's, Mitsubishi, Riot Games, Sephora and Shell trust Contentstack to power their most critical content experiences with uncompromising scale and dependability. Famous for its Care without Compromise™, Contentstack has achieved the industry's highest customer satisfaction rating. Contentstack is also a founder of the MACH Alliance, setting the industry agenda for open and composable technology that is Microservices-based, API-first, Cloud-native SaaS, and Headless. Learn more at www.contentstack.com

UNIFORM

Uniform experience orchestration turns headless and legacy stacks into a seamless end-to-end digital delivery pipeline. Transform your approach to composable delivery by empowering developers, content creators, and marketers to easily create and deliver omnichannel experiences that improve conversion and build engagement with blazing fast intent-based personalization and experimentation. And with Uniform, your experience architecture remains ready to incorporate new headless services regardless of how your tech stack evolves over time.

Several top brands use Uniform to power their digital experiences, including: Cirque du Soleil, Life Extension, Sunweb, and Trimble. Learn more at uniform.dev and follow us on LinkedIn and Twitter.

ABOUT EPAM SYSTEMS

Since 1993, EPAM Systems, Inc. (NYSE: EPAM) has leveraged its advanced software engineering heritage to become the foremost global digital transformation services provider – leading the industry in digital and physical product development and digital platform engineering services. Through its innovative strategy; integrated advisory, consulting, and design capabilities; and unique 'Engineering DNA,' EPAM's globally deployed hybrid teams help make the future real for clients and communities around the world by powering better enterprise, education and health platforms that connect people, optimize experiences, and improve people's lives. Selected by Newsweek as a 2021 Most Loved Workplace, EPAM's global multi-disciplinary teams serve customers in more than 40 countries across five continents. As a recognized leader, EPAM is listed among the top 15 companies in Information Technology Services on the Fortune 1000 and ranked as the top IT services company on Fortune's 100 Fastest-Growing Companies list for the last three consecutive years. EPAM is also listed among Ad Age's top 25 World's Largest Agency Companies and in 2020, Consulting Magazine named EPAM Continuum a top 20 Fastest-Growing Firm. Learn more at **www.epam.com** and follow EPAM on **Twitter** and **LinkedIn**.

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