Getting to MACH Speed

How to build a composable, MACH-based architecture & never have to replatform again

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Accomodating change in your tech stack

REPLATFORMING

Your tech stack is static like a traditional model plane. The parts are glued together permanently. When it no longer meets your needs you must create a new one by starting from scratch.

COMPOSABILITY

Your tech stack is dynamic like a plane built from Legos. You can make changes as needed. New requirements can be handled by changing what you already have in place, as much or as little as needed.

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THE END OF REPLATFORMING

Brands have become used to replacing their digital marketing and commerce stacks every 3 to 5 years. That's about how long it takes for the technology in those stacks to become outdated and to stop addressing business needs.

Replacing these systems is called "replatforming," and it's a dreaded process. Replatforming is costly, time-consuming, & provides no business value.

But what if you didn't have to replatform? What if you could add new systems to your tech stack whenever you needed to? Or replace outdated systems with something more appropriate—without a major overhaul? What if your tech stack could evolve at the pace of your business?

Composability is the key to a future without perpetual replatforming. And building an architecture with MACH-based systems can set you on the path to composability. Learn how the Uniform digital experience hub can be the foundation for an adaptable, agile & sustainable digital marketing technology stack.

Understanding common architectures in digital marketing & commerce

MONOLITH

Swiss Army knife does a lot of things but none of them particularly well.

PRODUCT SUITE

100-piece tool kit gives you a lot of tools, most of which you will never use. If you want to add a tool it's not going to fit in the box.

COMPOSABLE

Empty toobox lets you select the tools you want. You buy or replace the tools you want, when you want.

WHY COMPOSABILITY MATTERS

Brands often use a variety of systems to support their digital marketing and commerce initiatives, including content management systems, commerce engines, analytics services, content delivery networks, customer data platforms, & more. Composability is the ability to assemble the best systems for your requirements from your preferred vendors into a single system.

The need for composability is growing. Brands are implementing an increasing number of systems to build, deliver, & maintain their tailored digital experiences. These systems must work together.

Businesses also need the agility to modify their tech stack quickly. The COVID-19 pandemic showed us all what happens when organizations are—and aren't—able to adjust to changing conditions. A composable architecture is critical for enabling organizations to keep up with rapidly changing business conditions.

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MACH

ALLIANCE

The MACH Alliance is a non-profit organization created to promote and advocate for a new, open and best-of-breed enterprise technology ecosystem.

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Composability is just a concept. To put the concept into practice, you need a technical architecture designed for composability. MACH can help bring that architecture to life.
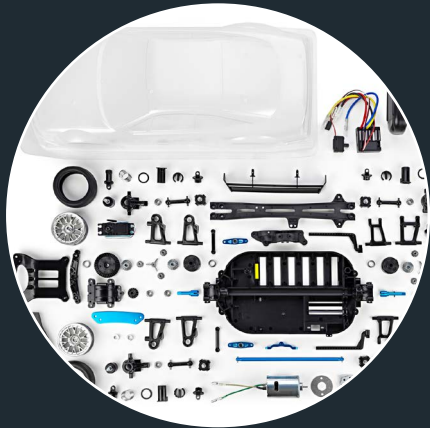
Systems built using MACH principles (microservices-enabled, API-first, cloud-native, headless) make composability possible. These products are built to be frequently updated. They can be connected to one another with APIs. They are delivered as cloud services. And they maintain a strict separation between back-end and front-end systems.

Do your expectations match reality?

EXPECTATION
All the parts of a composable system to work together without much work on your part.

REALITY
You need to connect all the parts of a composable system
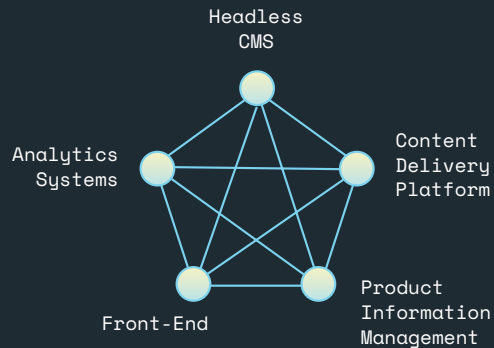
CHALLENGES OF GOING MACH: INTEGRATION

By selecting MACH-based systems for your composable architecture, you are committing to using products that are designed to work together. But these products do not work together automatically. They need to be integrated. And while integration is much simpler than replatforming, it's not easy.

Integration is essentially custom development. You need to connect a variety of systems. It's not enough to just connect systems. These systems need to work together as one. And they need to work together in a way that preserves all the benefits of composability. This kind of integration takes time, money, & expertise.

You need a way to simplify integration – a means of connecting these MACH-based systems using pre-built connectors instead of undertaking complex, customized development work.

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MACH MONOLITH

Systems are connected directly. Adding a new system requires a new connection to each of the existing systems.

MACH MONOLITH diagram: Headless CMS, Content Delivery Platform, Product Information Management, Front-End, Analytics Systems — all interconnected.

COMPOSABLE ARCHITECTURE diagram: Digital Experience Hub connected to Headless CMS, Analytics Systems, Front-End, Content Delivery Platform, Product Information Management.

COMPOSABLE ARCHITECTURE

Systems are connected to a hub. Adding a new system requires adding a single new connection.
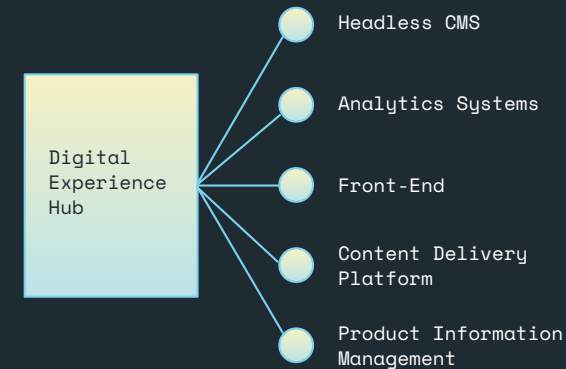

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CHALLENGES OF GOING MACH: BUILDING A NEW MONOLITH

Is an architecture made up of composable systems a composable architecture? No.

The most important quality of a composable architecture is that you can easily add & remove systems. The ease with which you can do this depends on how those systems are connected.

Custom integration is time-consuming, expensive, & difficult. But the bigger risk of doing it yourself is that you end up connecting systems directly to one another. When you do this, you can no longer easily add & remove systems. This is exactly what a monolithic architecture is: an architecture where a bunch of systems are tightly coupled.

With a digital experience hub, all systems are connected to the hub, not each other. This eliminates the point-to-point integration that undermines a composable architecture.

REASONS TO RETAIN A LEGACY SYSTEM

Unique functionality

Difficult transition

Skill investment

Internal politics

Cautious approach

Adopting a MACH approach means using systems that have been built for composability according to MACH principles. But many organizations depend on essential systems that predate MACH and cannot be easily integrated with MACH–based systems. What do you do with these legacy systems?
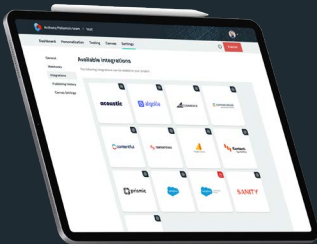
Migrating away from a legacy system is often not an option, especially if it means losing capabilities. Waiting for a vendor to introduce a sufficient level of composability into a legacy system is also a poor option. Vendors are opting to start from scratch with new products rather than make their monoliths or suites fit into a composable world. From their point of view, replatforming will be the only option.

So, how do you incorporate legacy systems into a composable architecture? If you could decouple functionality from the legacy system, you could preserve capabilities that still deliver value while gaining the freedom to adopt new systems.

UNIFORM MESH

The "Smart Grid" that provides content federation & orchestration across modern headless systems & legacy tools.

UNIFORM CANVAS

A no-code tool for marketers, merchandisers, & other users to visually compose engaging experiences that draw from content & data from any system connected to Mesh.

UNIFORM CONTEXT

Real time intent-based tracking, testing & personalization on any digital channel, integrated with Canvas.

WHAT IS UNIFORM?

Uniform is a composable, vendor-agnostic digital experience hub that helps you make the most of MACH. A member of the MACH Alliance with a fast-growing ecosystem of partners, Uniform enables you to choose systems that best meet your needs.

Uniform can connect a wide array of MACH-based systems - as well as legacy platforms - quickly and easily. It also provides simple ways to construct engaging & personalized experiences across multiple channels. Uniform offers:

- **Maximum flexibility.** Empower your teams to assemble the right stack & maintain control over how data flows among systems.

- **Fastest time to market.** Gain the agility to implement systems quickly, as business requirements change, without the cost or complexity of DIY integration or replatforming.

- **Fast experiences delivered.** Create the fastest possible digital experiences by leveraging content delivery network (CDN) & edge networking capabilities.

Benefits today & tomorrow

FAST TIME TO VALUE

Individual components can be rolled out when they are ready, instead of waiting until all components are implemented and rolling out a large complex release.

FLEXIBILITY FOR CHANGE

You might find that the first new system you implement results in changes to the requirements for the next system. A gradual approach enables you to delay making some technology decisions until you are ready to act on them, which means your decisions can be guided by the most up to date information.

INCREMENTAL, VALUE-DRIVEN TECHNOLOGY ADOPTION

For most businesses, progressing to a composable architecture with MACH-based systems should be an incremental, multi-phase process. Moving incrementally lets you achieve the first benefits quickly. It also gives you the flexibility to adjust your course as you progress.

By integrating Uniform into your process, you can switch from a technology-first approach to a value-first approach: Your desired business outcomes will guide your technology choices, instead of the other way around.

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Current state
YOUR ROADMAP TO A VALUE-FIRST, OPEN PLATFORM

PHASE 1
0-4 MONTHS

- Retail legacy platform
- Address pain points.

PHASE 2
4-12 MONTHS

- Reduce legacy dependency
- Add new systems

PHASE 3
12+ MONTHS

- Optimize environment
- Add new capabilities

Future state
A TECH STACK THAT CAN GROW WITH YOUR REQUIREMENTS.

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YOUR ROADMAP TO MACH

Taking the road to MACH and composability might be daunting. But you don't have to figure out how to get to your destination on your own. Uniform offers a three-phased approach to help you chart your unique course to delivering better digital experiences.

Before you get started, a little planning is in order:

- Prioritize technical and organizational goals.
- Identify the most important pain points.
- Start to consider which components you might want to add or replace.

One note: This roadmap describes steps you can take if you have at least one legacy system currently in place—a system that you need to preserve, at least in the short term. If you don't have a legacy system, you can still follow this roadmap for a gradual implementation of new MACH-based systems in a composable architecture.

Identify pain points and how to resolve them

Advocate for MACH within your organization

Hold a hackathon to gain hands-on experience

Begin MACH adoption with a small number of systems

PHASE 1:
RETAIN LEGACY PLATFORM & ADDRESS PAIN POINTS

In this first phase, draft a roadmap from your current state to your composable, flexible future. Then take the first steps by focusing on the highest-priority issues & introducing your team to MACH concepts.
You can leave your legacy platform in place, but you might start to decouple functionality from it to address your high-priority issues.

Expected benefits:
- Improved ability to deliver on business goals by addressing long standing problems quickly.
- Minimized disruption to existing systems.
- Increased confidence with a decoupled architecture.

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More decoupling

Implement new systems

PHASE 2:
REDUCE LEGACY DEPENDENCE & ADD NEW SYSTEMS

If you have a legacy platform, decouple more of the functionality from that platform and begin to implement more MACH-based systems so you can start realizing short-term value gains. Implementing Uniform expedites & simplifies this process, helping you decouple functions & enabling you to connect your legacy platform with new systems.

Uniform's pre-built connectors help you streamline integration of new systems. If the right connector doesn't exist, your developers can use the Uniform integration framework to easily build connectors that hook into the Uniform smart grid. Once connected to the grid, you're connected to all systems on the grid.

Expected benefits:
- Reduced TCO as you minimize legacy spend.
- Improved ability to adopt modern digital tools.

PHASE 3 ACTIVITIES

Experiment with adding new systems to your composable tech stack
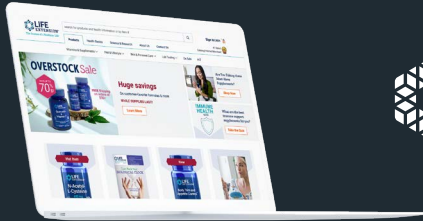
Replace systems in your composable tech stack

By phase 3, you have the freedom and flexibility to customize & optimize your stack, easily adding (or removing) capabilities to address emerging business requirements at your own pace—all while avoiding a major overhaul.

At this phase you have the foundation in place for achieving long-term business objectives plus the flexibility to address goals you've yet to identify.

Expected benefits:
- Increased productivity through the elimination of barriers that prevent the adoption of new technology.
- Increased innovation by enabling teams to try new tools and approaches without fear of technology lock-in.

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LIFE EXTENSION®

- Incremental adoption of composable architecture
- Legacy CMS integration
- 2 months for internal team to implement

READ CASE STUDY

HILDING® ANDERS

- Greenfield composable architecture
- 17 brands with different architectures
- Uniform as the technology enabler
- Solid foundation for future growth

WATCH THE WEBINAR

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ACHIEVING REAL-WORLD BENEFITS WITH MACH & UNIFORM

Using Uniform as the foundation for a composable, MACH-based architecture can help your brand deliver better digital experiences, whether you need to overcome the limitations of a legacy platform or are building a completely new tech stack.

The organizations that are most successful with MACH and Uniform follow some key best practices throughout their journey to build & maintain a composable technology stack.

Put value first. Don't get stuck evaluating monolithic digital experience platforms (DXPs). Start building now. Focus on the value that new systems can deliver right away.

Bring technical and business teams together early. Make sure technical teams understand primary business goals so they can select the best combination of tools for your organization.

Don't be afraid of new approaches. New technologies aren't necessarily riskier than older ones. A MACH-based architecture helps reduce the risks of traditional platforms by giving you the agility to shift gears when requirements change.

REV UP FOR YOUR MACH JOURNEY NOW

A composable architecture built with MACH-based systems can help you overcome the limitations of legacy platforms. But assembling a composable architecture can be difficult.

Uniform enables you to make the most of MACH by simplifying the integration of MACH-based systems, seamlessly connecting best-of-breed components while also offering advanced tracking, testing, & personalization capabilities. Avoiding a MACH monolith has never been easier.

You can progress on your MACH journey at your own pace. Continue to use legacy systems as long as they provide value – and migrate away when it makes sense to do so. It's all incremental. No replatforming required. Start exploring Uniform today with a free Uniform Community project.

https://uniform.dev/free

![uniform logo]

Uniform's digital orchestration hub turns your headless and legacy stack into a seamless end-to-end digital delivery pipeline. Transform your approach to digital delivery by empowering developers, content creators, and marketers to easily create and deliver amazing experiences while allowing your tech stack to evolve with your brand.

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.**