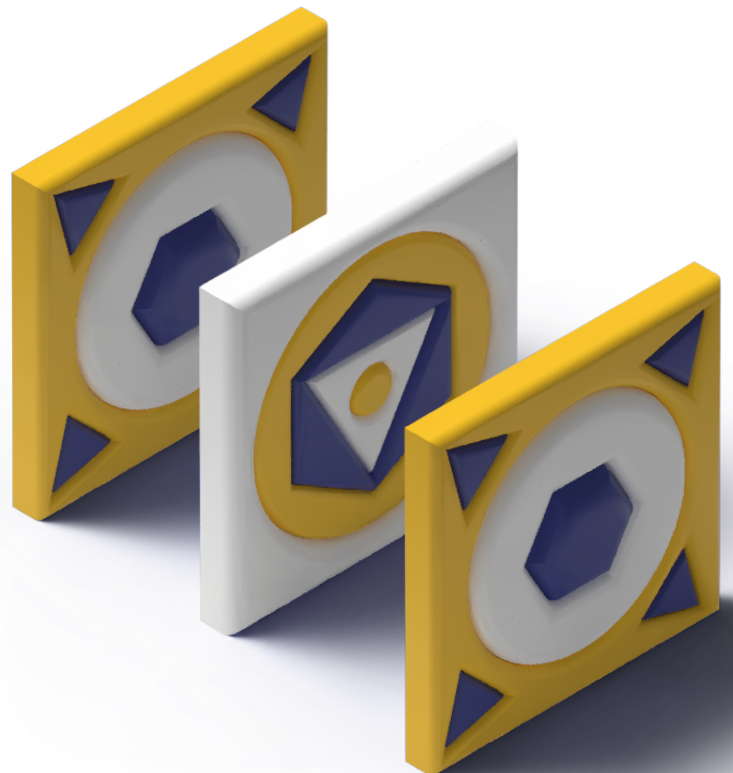


MACH Alliance Maturity Assessment.

Are you ready to build for change?



A DISCOVERY-STAGE ORIENTATION FOR
ENTERPRISE TECHNOLOGY LEADERS

OPEN · COMPOSABLE · CONNECTED
FOUNDATIONS & THE AGENT ECOSYSTEM

THE CASE FOR ARCHITECTURE

Architecture is the common denominator.

Enterprise technology leaders today face a crowded agenda: cost discipline, channel and experience velocity, innovation speed, talent retention, resilience, and the question of how to make AI deliver measurable returns at enterprise scale.

Architecture is the common denominator behind all of those. Each goal depends, to a significant degree, on the foundational architecture choices an organization makes.

The MACH Alliance is the industry body advocating for **open, composable, and connected** enterprise technology, the foundation that gives organizations meaningful choice about what they build with, how they evolve it, and which directions they pursue. The three principles that follow describe properties of the *system*, not specific products or vendors.

“Architecture was once a topic for the back office. It is now a board-level concern. The questions that dominate enterprise conversations today, AI ROI, cost discipline, speed to market, keep pointing to the same underlying issue: whether the systems involved are open, composable, and connected enough to support what comes next.”



Jason Cottrell

President, MACH Alliance

A NOTE ON SCOPE

This whitepaper is a discovery-stage orientation: what to look for in modern enterprise architecture, where your organization stands today, and how to begin. Organizations that have already decided to transform and need the operating playbook should refer to the companion [Build to Move](#).

PROPERTIES OF THE SYSTEM

Open, composable, connected.

Each principle reads two ways at once, what it means to the business, and what it means to the architect who builds it.

 Open The components, behavior, and integration paths of the system are visible and documented, with clear data portability and exit. TO THE BUSINESS Visibility and trust. TO THE ARCHITECT Transparency and an unambiguous exit strategy.	 Composable Discrete capabilities can be assembled, replaced, and evolved on their own. TO THE BUSINESS The freedom to rearrange the stack as the operating model changes. TO THE ARCHITECT Modularity, independent deployment, and safe rollback.	 Connected The system is designed for participation in an ecosystem rather than as an island. TO THE BUSINESS Real-time operation alongside surrounding systems. TO THE ARCHITECT API completeness, standardized interoperability, observable behavior.
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Together, these three principles describe a system that can adapt, expand, and change direction without disrupting what already works. The MACH Alliance refers to this as **build to move**.

THE ALLIANCE'S WORK

Foundations and the Agent Ecosystem.

The Alliance's work spans two distinct but related areas, and both are worth naming.

THE FOCUS OF THIS PAPER

Foundations

The open, composable, connected systems that already underpin modern digital experiences and operations. This is the work most enterprises are still partway through, and the focus of this whitepaper and its assessment. Without sound foundations, the work that follows is significantly harder.

THE EMERGING FRONTIER

Agent Ecosystem

Many agents, from many vendors, coordinating across the enterprise to do useful work. Without solid foundations, agents have nothing reliable to participate in. A pointer to the Alliance's initiative appears at the end of this paper.

WHY NOW

The conversation has moved up the executive agenda.

Several forces are converging. Each makes architecture matter today; together they explain why architecture is no longer a back-office topic. The clearest signal is in the numbers.

AI ROI • THE HEADLINE FINDING

6×

Composable organizations are six times more likely to report clear AI ROI.

MACH Alliance Enterprise Technology Report 2026, 600 senior decision-makers across seven global markets. The correlation between architecture and AI outcomes is too consistent to ignore.

78%

of composable organizations report clear AI ROI

98%

can support AI at scale

94%

report faster AI deployment

FORCE 01

Cost discipline

Composable stacks let an organization replace what underperforms without rebuilding what works. Total cost of ownership becomes a function of architectural choice rather than vendor leverage, and the hidden costs traditional stacks accumulate (version overhead, manual deployments, brittle integrations) become visible and easier to address.

FORCE 02

Channel & experience velocity

Customers expect to be reached across every channel they use, in close to real time. Headless and API-first architectures remain the fastest way to keep up, and the most resilient to whatever new channels emerge next.

FORCE 03

Talent & resilience

Modern, modular stacks keep engineers engaged and reduce key-person risk. Teams working on open foundations tend to deliver more quickly and have lower turnover than those maintaining legacy estates.

WHAT BENEFITS CAN YOU EXPECT?

Four returns on open foundations.

01

Growth enablement

Improve agility by breaking large, complex systems into smaller, independently evolvable components. Unlock advanced business paradigms, dynamic pricing, inventory sourcing optimization, personalized journeys, that legacy stacks cannot reach. Knowledge sharing improves when teams focus on specific domains and services.

02

Cost optimization

Optimize spend through a deliberate blend of SaaS for commodity capabilities and in-house build for unique differentiation. Reduce the overhead and hidden cost of technical debt, restrictive procurement, and manual development and deployment processes.

03

Risk reduction

Increase consistency through automation in software deployment and infrastructure provisioning. Move from “big bang” deliveries with long timelines to incremental delivery at a higher cadence. Avoid the attrition that follows when technology and processes stagnate.

04

AI & agent readiness

Composable architecture is the strongest predictor of AI ROI in the most recent enterprise research. Open systems give AI agents the inputs they need, documented sources, real-time integration, standardized protocols, observable outcomes, without requiring a wholesale replacement of existing systems.

OBJECTIVES

Where your organization stands today.

The objective is to evaluate an organization's readiness to build, run, and scale on open, composable, and connected technology. It is designed to be high-level and quick, focused on the business as a whole, not only the technical landscape. Across all six pillars, the assessment measures readiness against the three architectural principles championed by the MACH Alliance: **Open, Composable, and Connected.**

01	Strategy & Transformation Strategy designed to evolve	BUILD TO MOVE
02	Organization & Governance Decision-making for rapid change	COMPOSABLE BY DESIGN
03	Process & Metrics Continuous, measured delivery	DEFINED & CONNECTED
04	People & Culture Autonomy and independent delivery	DIGITAL HEARTS
05	Technology & Architecture Modular, cloud-native, API-first	BY DESIGN
06	Business Intelligence Data as a governed, observable asset	READY FOR AGENTS

THE FORMAT

Twenty questions and a few minutes produce an indication of where the organization stands, along with insights into areas to improve. The six pillars were identified by a team of MACH Alliance members and updated by the 2026 working group.



01 PILLAR ONE Strategy & Transformation

A clear idea of what success looks like, across both business ambition and digital capability, is the starting point. Business and technology are intrinsically linked, and understanding how they enable each other is a primary expectation of a mature architectural approach.

An organization considering transformation should have a clear view of its business objectives and the key areas of transformation required to achieve them.

To maximize the value enabled by open, composable, connected technology, highly mature companies follow these best practices.

OPEN

COMPOSABLE

CONNECTED

Build to move: strategy designed to evolve

- Transformation treats **architecture as a strategic capability**, the freedom to adapt without rebuilding.
- A cross-functional, C-suite-sponsored roadmap toward open, composable, connected technology exists, with explicit milestones for AI and agent readiness.
- Digital-first thinking, recognizing that all revenue now passes through digital channels, and that agent-driven interactions are becoming part of that mix.
- Investments justified by **Rate of Innovation** alongside Return on Investment, with TCO modeled across the architecture lifetime, not only initial deployment.
- Pragmatic incrementalism: the right partner can move an organization from a working monolith toward a composable foundation without a stop-the-world replatform. Encapsulate existing capabilities, replace them one at a time, and treat each new procurement as part of the transition.

02 PILLAR TWO Organization & Governance



A transition toward modern architecture surfaces how the organization actually takes technology decisions. The question is whether the current decision-making process can support rapid change cycles and integrate with multiple external suppliers.

Operating models may need to adapt or augment to be more focused around digital products. Governance and decision-making need to be delegated, underpinned by an agreed set of principles, and, with a solution-first mindset, these practices are foundational to an effective transition.

OPEN

COMPOSABLE

CONNECTED

Customer-centric and composable by design

- A **customer-centric operating model** throughout the enterprise.
- Teams organized around the customer journey, converging online and offline, from P&L to operations.
- Centralized governance with localized autonomy, **freedom within a framework**, extended to govern both human and agentic actors.
- Procurement and vendor management built for multi-vendor stacks: contracts, security reviews, and renewal cycles assume components will be swapped.
- Partners and agencies measured on business outcomes and on the agent-readiness they bring, published protocol commitments, clear non-human identity approaches, real-time event interfaces.



03

PILLAR THREE Process & Metrics

Adopting open, composable, connected technology has direct knock-on effects to process and metrics. The fundamentals include:

- An agile project management framework to support the software development lifecycle.
- Metrics and reporting that expose the health and performance of processes spanning business domains.
- DORA (DevOps) metrics tracked so the organization knows how it compares.
- Business processes for the procurement, provisioning, and onboarding of a variety of external systems.

Organizations that benefit most from this architectural shift have consistently been able to use agile planning and development tooling to reduce cycle times and move to a continuous delivery model. Reporting on the delivery process itself, velocity, burndown, value delivered, throughput, helps optimize the benefits delivered.

OPEN

COMPOSABLE

CONNECTED

Defined, measured, and connected end-to-end

- **Continuous integration and continuous delivery (CI/CD) is the default** for both human-authored code and AI-generated change, with rollback as a first-class capability, safe evolution.
- Shared KPIs and OKRs span teams and business units, exposed through real-time dashboards that humans and agents can read.
- DORA metrics tracked publicly; teams know how they compare and where to improve.
- Data-driven decision-making is the norm, the same telemetry that runs the business is what lets AI agents operate reliably within it.
- Buy commodity SaaS, build your unique differentiation, with the SaaS chosen open enough to participate in agent workflows.



04

PILLAR FOUR People & Culture

People are the key to any organization's success, and so is the leadership and structure surrounding them. Team distribution, alignment to business goals, and clear cross-team communication matter as architecture changes. Culture and expertise should support autonomy and independent delivery aligned to business objectives and key results.

Consider whether your culture establishes personal ownership within domain context, paired with shared objectives that drive collaboration, and whether an appetite for change, a desire to develop new digital skills, and a passion for innovation exist in your people.

OPEN

COMPOSABLE

CONNECTED

🔹 Digital hearts, open minds

- 🔹 **Digital leadership at every level**, including a C-suite that understands architecture as a strategic lever.
- 🔹 An adaptive, collaborative mindset: change is the only constant, teamwork makes the dream work, and teams are comfortable working alongside AI agents in their workflows.
- 🔹 A culture that grants freedom to innovate, experiment, fail fast, and grow, extended to safe experimentation with agentic systems under defined human oversight.
- 🔹 The ability to attract and retain builders who want to work on modern, open systems, and to develop in-house literacy on API design, composable patterns, and agent operations.
- 🔹 Active knowledge sharing through internal academies, communities of practice, and contribution to the broader ecosystem.

05

PILLAR FIVE Technology & Architecture



Technology is central to a modern digital platform. The paradigm shift from larger multi-functional systems into more granular components inside bounded contexts drives a need to reconsider several aspects of the technical and architectural landscape.

Engineers and architects need to be comfortable with the principles in practice: modular design, cloud-native operation, API and event-based integration. The discovery, usage, and management of APIs and event-based integrations that allow effective decoupling and composition of internal and externally hosted services will play a key role in the speed of adoption and the future agility of the solution.

Modern architecture can sit alongside more traditional components. Understanding how to integrate efficiently and evolve over time is central to a successful transition.

OPEN

COMPOSABLE

CONNECTED

Open, composable, connected, by design

- **Open.** Documented sources and behavior, performance metrics exposed via API, data portability and clear exit paths, published integration patterns. No vendor lock-in disguised as integration.
- **Composable.** SaaS delivery with non-disruptive updates, modular and third-party integration, customer-controlled data and AI configuration, working inside multi-vendor stacks.
- **Connected.** API-first by default, real-time integration, standardized protocols for cross-system communication (including MCP and emerging agent protocols), externally observed and governed.
- Technical debt and version overhead are **actively managed rather than deferred**, predictable, cost-effective spend with clear cost-to-evolve metrics.



06

PILLAR SIX Business Intelligence

A mature organization has a clear understanding of its data, the processes around its management, and how it serves decision-making. Mapping data across domains and into actionable insights is central to unlocking value from a modern architecture.

Tools for analysis and visualization that enable data-driven decisions are central to mature digital capability. A good understanding of data across technical, operational, and business metrics is important when delivering a successful transition.

A mature organization uses data-driven decisioning across teams and systems, reviewing performance metrics, trends over time, and aggregation across business lines. The questions in this section examine your relationship with your data: how it is collected, how it is distributed, and how insights are derived.

OPEN

COMPOSABLE

CONNECTED

Intelligent enterprise, ready for agents

- Data is a **governed, observable asset** that humans and agents can both find, trust, and act on.
- Analytics, ML, and agentic AI generate actionable insights, and take action where appropriate, under defined guardrails.
- Customer experience powered by near-real-time data, segmentation, and agent-orchestrated next-best-action.
- Data interfaces are programmatic and standards-based, not UI-only, so agents and downstream systems can participate.

A STARTING POINT

Where you go from here.

This assessment is a starting point for understanding an organization's readiness to build, run, and scale on open, composable, and connected technology. It runs across the six pillars described above. Twenty questions and a few minutes will produce an indication of where the organization stands, along with insights into areas to improve.

FOR READERS READY TO GO FURTHER

Build to Move Game Plan

The operating playbook for transforming the stack, the contracts, and the team for continuous change.

Enterprise Technology Report 2026

The 600-decision-maker research on how infrastructure determines AI success.

Agent Ecosystem Initiative

The Alliance program turning the agent frontier into shared standards, patterns, and reference architectures.

Start your assessment now.

Take the MACH Alliance Maturity Assessment, twenty questions, a few minutes, and a clear read on where you stand.

Take the assessment →

ACKNOWLEDGEMENTS

2026 REVISION

Everett Zufelt

Program Lead, Agent Ecosystem · MACH Alliance

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