

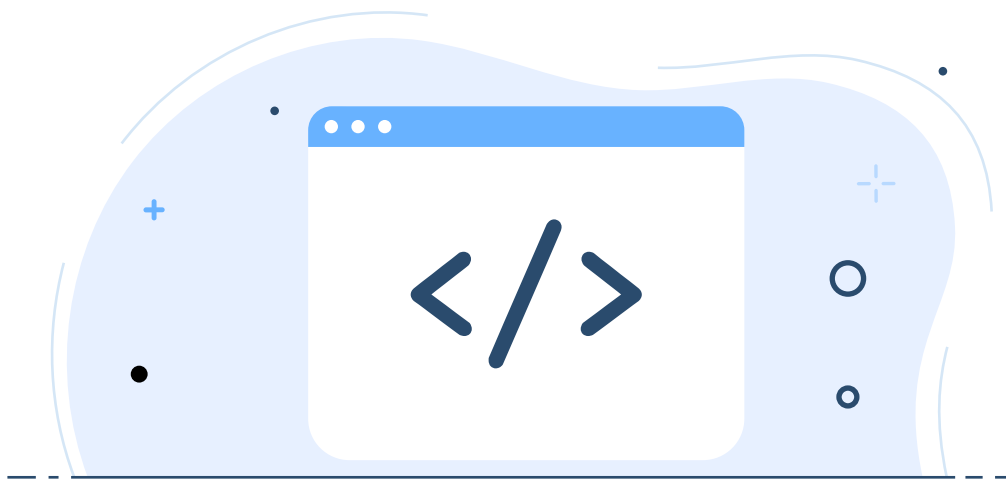


MARKETPLACE & DROPSHIP AUTOMATION

Unify your multi-vendor marketplace and in-house operations.

The Stale Legacy of Monolithic Architecture

The rise of MACH-oriented Enterprise systems.



Introduction

“If it ain’t broke, don’t fix it”. A classic adage we have all heard countless times. It is almost an ode to loyalty, the old reliable procedure, to maintaining the status quo of how things have always been done. The issue with loyalty is that it can distort, past successes can overshadow current events. New requirements can require new solutions.

When it comes to resisting digitalization, many think of large, public sector entities, with bustling bureaucracies, fixated on putting letters above emails, awkward face-to-face meetings rather than convenient video conferences. However, there are many companies, who even though they pride themselves on being immersed in the tech space, have allowed their digital transformation to **stagnate** and **become outdated**.

Legacy systems

One such example is the issue of continuing with a legacy software system - a long-standing software stack that has begun to show its age and conforms to performing operations in a predetermined manner, with no room for growth or 3rd party integrations. Essentially, an old **dog that cannot be taught new tricks**. While the system may have been more than capable of delivering the performance required when originally implemented, it may no longer be fit for purpose and instead requires constant maintenance and regular updates.

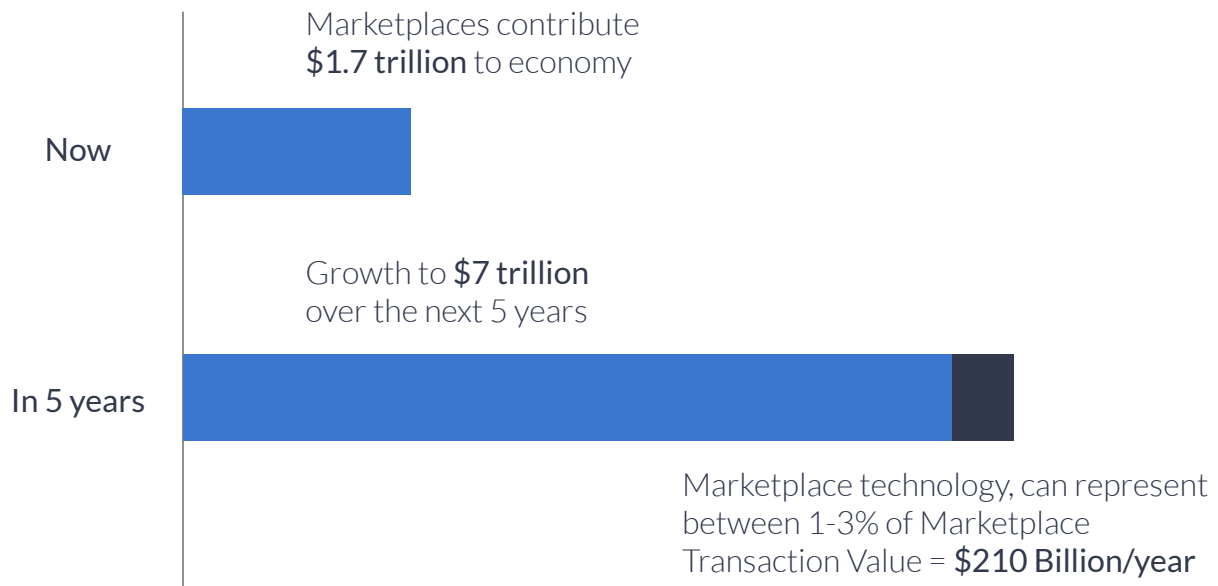
An entire company can be thoroughly ingrained in the belief that its long-reigning software stack is more than satisfactory and does not need to be revamped, updated, or replaced entirely. Inefficiencies, bugs, and restrictions simply become an accepted feature. Such companies can find themselves almost facing a form of **industrial inertia** where they fail to adapt or to react to changing market conditions. In today's competitive climate, it is simply not enough to rely on a system that "does the job" - a software system must allow its users to maintain **clear flexibility** to tackle the new threats and opportunities that arise.

Change can be daunting, and all too often, companies make the mistake of seeing the immediate cost of replacing their system, rather than the long-term benefit. Choosing to remain locked in, despite the high costs in terms of continual maintenance, lost efficiency, and the threat of losing market share.

Marketplace Environment

Over the past 10 years, the marketplace business model has grown exponentially. Currently, marketplaces contribute **\$1.7 trillion** to the economy each year, however, IBE predicts that sales driven from marketplaces are likely to exceed **\$7 trillion** in the next five years, hailing a new era in ecommerce.

This rise is driven by more and more companies embracing marketplaces as the best platform to facilitate online sales, expedite cross-border expansion, increase product range and improve logistics, costs, and operations. Growth is compounded by an estimated annual growth of 8% in global online sales.



COVID-19

As the COVID-19 pandemic has and continues to demonstrate, monumental market shocks can occur without warning and have expedited the need for organizations to fully evaluate their processes.

In regard to the marketplace model, the pandemic created an unprecedented opportunity for the industry. Due to national lockdowns, many brick-and-mortar stores were shut down and a large proportion of retail commerce moved online. Amazon recorded at the end of its fourth-quarter in 2020, “Net sales of \$125.56 billion, a 43.6% increase from \$87.44 billion in the same quarter in 2019.” (Davis, 2021) Don Davis

In January 2021, 35.2% of all UK retail sales were conducted online, the highest on record (ONS.Gov, 2021). Such a tectonic shift in consumer behavior should be a gift to many online marketplaces, but this isn’t necessarily the case as many companies found themselves **stretching their legacy-based systems to breaking point**, attempting to accommodate the sharp increase in traffic and orders.

Organizations found themselves inundated with new mounds of data to process and analyze, something which their current legacy architecture could simply not support.

One such example that potentially had dire consequences was with the official NHS Test and Trace system in the UK, where some 16,000 cases of COVID-19 were missed due to Microsoft Excel not being compatible with the reporting dashboards and large quantities of confirmed cases failed to be recorded properly. (Wakeford, 2020)

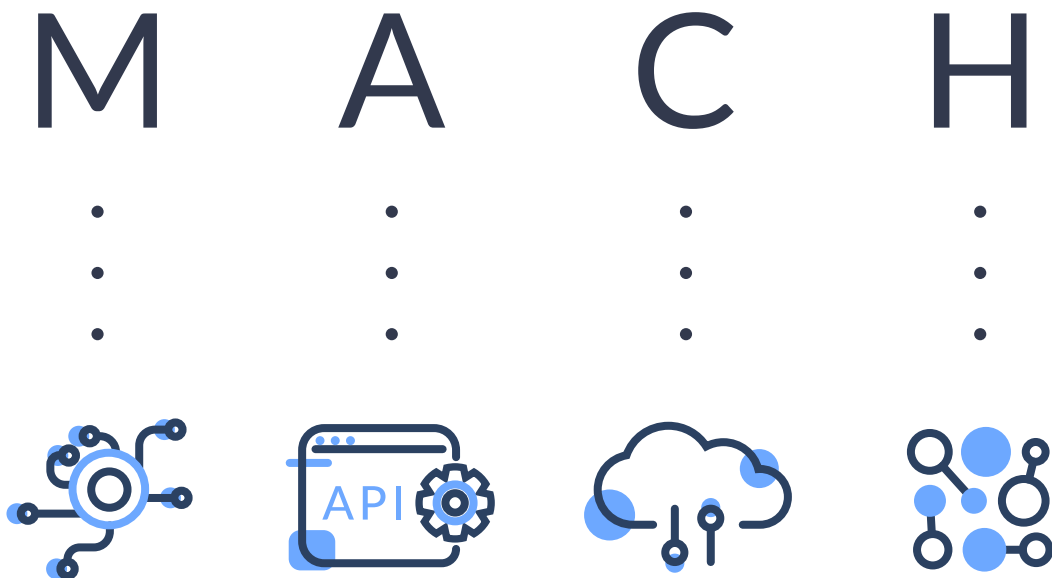
While this of course is an extreme example, it illustrates the limitations that are present among many long-standing solutions. The sheer number of clunky, moving parts means the ability to respond swiftly is diminished - companies find themselves stuck, have to discuss how to modify their software to minimize disruption and **accommodate extra capacity**. Often faced with having to extract their data from silos, restructured, reformatted, and **with crossed fingers**, hopefully, integrated with external platforms.

This is simply not an acceptable approach for large, **enterprise-level clients who face market dynamics far greater than those of their smaller counterparts**. In the case of another global financial crisis or another pandemic, these companies will need to have the resources at hand to respond effectively, and currently, many find themselves burdened with a lack of agility.

MACH Architecture

As the COVID pandemic has demonstrated, enterprise-level software must be agile enough to quickly respond in unison to any changes in the macro-environment in which they operate. Software that cannot do so will simply be usurped in the marketplace by solutions that can. As organizations grow, so do their requirements. As markets expand, so do the number of forces, both internal and external, that can affect them. Therefore, a more fluid approach is required if companies want to remain competitive.

One such approach is known as **MACH. Standing for Micro-service, API-first, Cloud-native, and Headless.** This is a concept predicated on the idea of composable commerce, using pre-existing infrastructure components to further facilitate faster development but doing so without ever imposing preconditions and functionality restrictions upon users. Which components they choose to integrate into their stack is entirely dependent on their particular goals and requirements. Such a modular approach emphasizes flexibility in the development process and replaces rigid, over-complex elements which hamper innovation.



By utilizing a MACH approach, organizations can find the best tool on the market for their specific needs. They can pick and choose which particular tools they want to incorporate and which they don't, preventing the formation of a bloated stack that doesn't aid in achieving the organizational vision.

Jetti & MACH

Since Jetti was founded by a developer, the transition to embracing the MACH philosophy was not only seamless but always a clear destination. All too aware of the cumbersome, mercurial nature of many of the multi-vendor marketplace solutions, Jetti was designed to avoid the common pitfalls of overcomplexity, rigidity, and a lack of experimentation that signal the end of the monolithic architecture age.

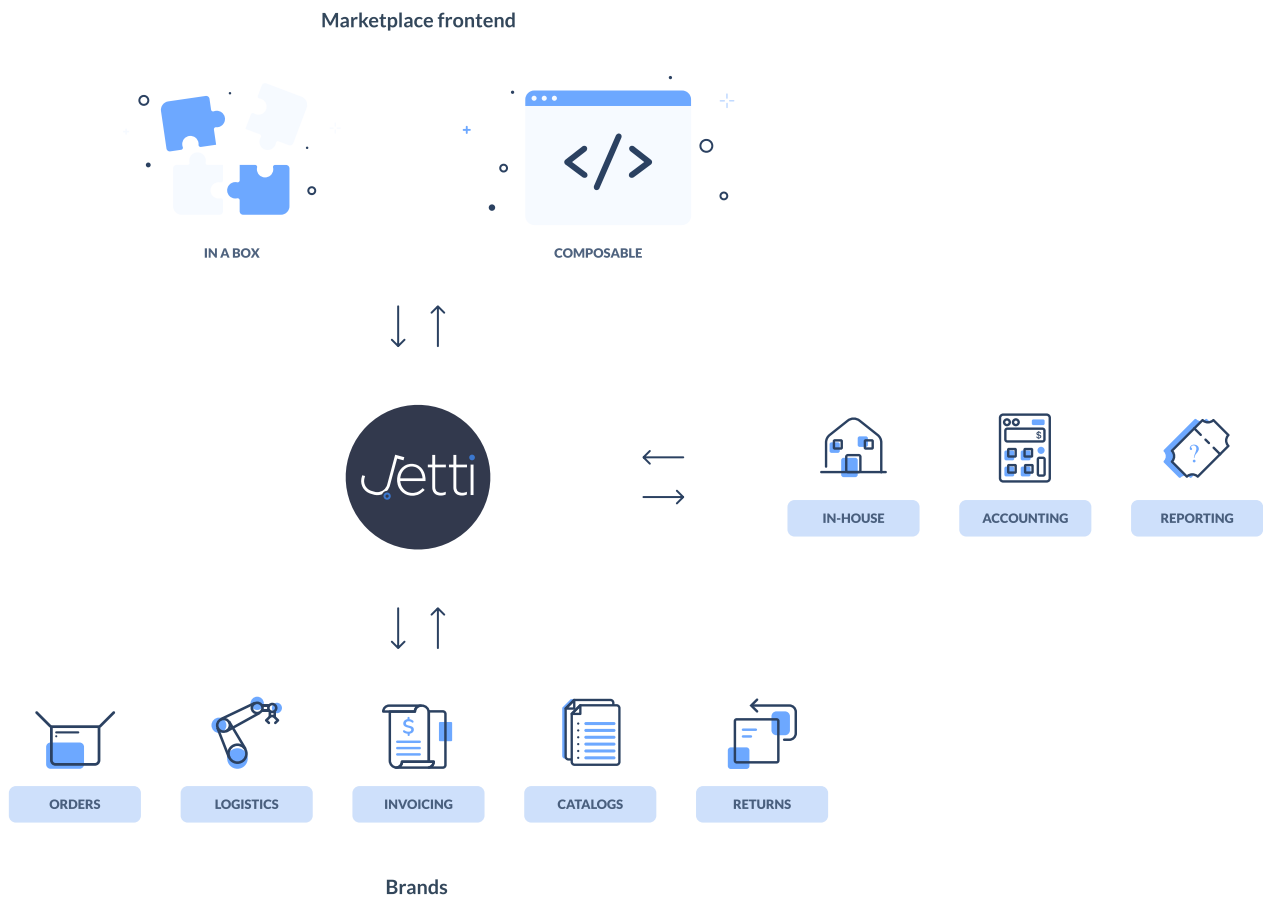
Instead of prescribing a view of what developers should be doing, **Jetti gives them a number of pre-existing infrastructure components. These range from SDKs and our command-line interface (CLI) to extensive API documentation and webhooks.** For instance, our CLI module allows Jetti to be run from the command line without having to use the web interface. This ensures a more granular system management approach, such as for custom reporting.

Our **software development kits** are designed for those who wish to rapidly develop composable marketplace architecture, allowing for faster launch time and the ability to be uncompromising in bringing their brand vision to life.

Our **real-time logs** give a detailed feed of your shipping, transfers, transactions, returns, inventory feeds, accounting, and tracking. Providing valuable oversight into the flow of data between Jetti and external systems, browsing status requests, inspecting API calls, and accelerating development.

Our **channel management** grants access to API keys and the ability to view the status of orders, inventories, and reports in real-time. Using Semver, we ensure that users have the ability to manage our releases in a predictable manner, ensuring their integrations are always compatible with our updates, reducing launch time and possible friction between components.

Our **software development kits** are designed for those who wish to rapidly develop composable marketplace architecture, allowing for faster launch time and the ability to be uncompromising in bringing their brand vision to life. Each individual element of MACH is designed to help developers in creating flexible and customized solutions with minimal disruption - it is this core value that Jetti seeks to embody at every stage of its enterprise offering.



Conclusion

In a realm as rapidly evolving as the online marketplace ecosystem, opting for legacy software can place a company at a distinct disadvantage. Data flows can be labored and unreliable and the ability to scale can be reduced significantly. **If companies are to take full control of their on-going digitalization**, they need to focus on solutions that embrace innovation, instead of stifling it.

A MACH-based approach to product development also addresses the modern reality of building systems at scale - no single component is an island. Business systems should assume they are part of dynamic, composable architecture and provide the flexibility to adjust to the demands of modern commerce and operations.

Jetty seeks to provide a software solution that gives complete freedom to its user base and one that does not seek to lock in them, forcing them to choose development options that do not fit their needs. Clients are equipped with an array of microservice-based architecture tools and solutions for them to use and customize as per their individual requirements.

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