

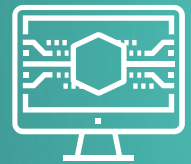
# Updating Your Commerce Offering

Bringing MACH to Your Business  
for Max Impact

**M**  
*Microservices*



**A**  
*API-First*



**C**  
*Cloud-Native*



**H**  
*Headless*



**valtech\_**

 **commercetools**  
*Next generation commerce*



## Make it MACH: The Future of Better Business Performance

Companies need to transform the way they do business. In some cases, they'll need to change their businesses altogether.

As long term partners and experts in business performance, Valtech and commercetools have worked for many years to help clients to achieve just that; to transform the way they operate, to shift mindsets and to navigate the complexities of the digital age to deliver exceptional customer experiences, time and time again. Today is no exception, and it's time for a gear shift.

In July the MACH Alliance was launched; a not-for-profit organisation that advocates for an open and best-of-breed enterprise technology ecosystem based on Microservices with, APIs, Cloud and Headless techs. As founding members of the alliance, we've put our combined weight behind what we believe to be the future direction for our industry. We wholeheartedly back the fact that there's a new way to go when it comes to intuitive modern architectures and delivering better business performance.

By challenging the status quo and relative 'security' of the existing enterprise suites, the MACH Alliance is showing global businesses that there are other options to choose from when it comes to your tech set up; options that have the power to drive better results, provide freedom and flexibility and help you be more responsive to changing conditions.


If the recent buzz has shown anything, it's that there are so many of us who believe it's time for change, and that more than ever, people are demanding alternatives. Whether it's Microservices, API-driven, Cloud-native or Headless technology that you're considering, it's time to get familiar with MACH and what it means for the future of your business.

Valtech and commercetools have proven that they can help you to future-proof your organisation. If you have any questions about what MACH means for you, then don't hesitate to reach out.

We're looking forward to shaping the future with you.

- Dirk Hoerig, Co-Founder and CEO at commercetools

- Anna Smedslett, Tech Manager at Valtech



Updating Your

## **Commerce Offering**

Bringing MACH to Your Business for Max Impact

Depending on your background, MACH is either a dimensionless quantity representing the ratio of flow velocity past a boundary to the local speed of sound, or perhaps the German word for “do.” In this context, MACH refers to a collection of modern architectural principals, that supports agility and enables a fast TTM. Standing for Microservices, API-First, Cloud Native and Headless, MACH technologies help brands build the digital commerce ecosystem that will allow them to achieve even the most ambitious goals.

commercetools brings all of these principles to the table. It is a platform for visionaries who seek for the right solution for their unique business.

When a new platform, service or set of architectural principles is presented, there’s always some consideration to be made about whether it’s best to change your established setup, or to stick with what’s worked all along. With this whitepaper, we hope to inform CIOs/CDOs and senior digital managers about the established trends we’re seeing in commerce to help them make

the best decision possible. We’ll also explain what’s possible with MACH technologies and why many brands have already switched, what you need to know about MACH to determine if making the change is right for your business, and the steps to take to integrate MACH technologies when you do decide to go that route.

# The Meteoric Rise of MACH

## Why Enterprise Companies Are Moving Towards Microservices, API-First, Cloud Native and Headless Technologies

In a time when companies need to be able to pivot quickly, MACH technologies are becoming the go-to options for building scalable solutions. The ability to decouple the front-end customer experience from the complexities of the back-end offers a mass of opportunities for businesses of all sizes and levels of technical maturity. Here are three sets of trends (and examples) that make the shift towards modern architecture principles interesting for brands today.

“As a decision maker, no one is going to fire you for considering the more monolithic and traditional platforms. On the other hand, **if you’re a challenger, it stops making sense to use only what your competition is using.**”

Anna Smedslett / Consultant Manager  
at Valtech

In situations where we need to be quicker at bringing new features to the market, the ability to decouple front and back-end systems is a big success factor. This is where the core principles of micro-services and headless technologies come to the fore.

Valtech took TUI Nordic from monolith to microservices and helped to accelerate both developer and editor productivity through a speed-oriented architecture, enabling them to deliver six times faster than before. That’s just another example of how impactful these architectures can be.

### 01 High Ambitions on Customer Experience

The customer experience domain is constantly evolving in line with shifting customer expectations, and that means we need to be really fast when it comes to delivering new solutions and experiences. Over the last few years, we have seen an explosion in the number of touchpoints used by the end-customers, and we know they demand a seamless experience at every single point of their journey. When there are so many competitors waiting to grab your customers, how do you make sure you’re giving them exactly what they need first time around?

### 02 Tech Trends That Elevate the Business

There are a few tech trends that seem to have caught our clients’ attention more than others:

The general **shift from on-premise to cloud and SaaS** as well as a growing demand for cloud-native enterprise software is something we have noticed in particular. Our clients understand that there’s much more you can do with cloud than just hosting or storage: auto-scaling, serverless, resources on demand, extensive calculations—the list goes on.

Another trend is the **shift towards more de-coupled architectures**. We get many

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“If you can’t use the benefits of a MACH-inspired solution, then you just get the drawbacks of complexity.”

Anna Smedslett / Consultant Manager  
at Valtech

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questions from clients on how they can make their systems less tightly integrated and experience the same benefits as experienced by TUI Nordic.

Scandic Hotels is another client who have successfully implemented an architecture inspired by MACH. Scandic had ambitions to become best-in-class in the digital customer experience space. We helped them design and implement an API-first architecture that supported their existing touchpoints but would also support any future channels with the same data.

And of course, as we see more and more connected things, the number of conversations about how our clients can best include and benefit from IoT and combinations of digital and physical solutions to their business has increased a lot over the last two years. We developed our own connected “Valtech Store” four years ago, which has been the start of many innovations for our clients. [Read more about our connected experiences offering.](#)

### 03 Ambitions to Modernise and Digitise the Organisation With Technology

Data-driven digital solutions are now at the core of many modern organisations, across all departments. Clients know that they need to be able to interpret and act on the data that’s becoming available to them within their organisation; gaining insights to deepen the customer relationship.

In order to get the most out of MACH-inspired solutions, technology and data need to be the priority for the organisation, and a successful implementation requires just as much organisational change as technology change. Senior management need to be aware that such an initiative is the start of a journey that will require new ways of working and an organisational shift. But successfully implemented, the results can be totally transformative.

#### [Cabonline Blocks Uber’s Penetration in the Nordics](#)

By iteratively rebuilding [Cabonline’s](#) existing technical infrastructure from the 80’s, we transformed a monolith into a modern



state-of-the-art microservice based solution. By reviving and uniting the business and technology functions, we were able to deliver a solution that kept the world's biggest taxi company out of the market.

If you are thinking of your own MACH project, but aren't sure if the transition is what's best for your brand, the following checklist will help you to better understand what questions to ask to find out if this move to MACH is right for you.

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## Does a Move to MACH Make Sense for Your Business?

Micro-services, API-first, Cloud native and Headless (MACH) technologies and principles are increasingly gaining precedence in the world of digital transformation. But how do you know if it's the right move for your business?

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Here are our recommendations on what to look out for when transforming your technical solution. The more of the following criteria you can tick off, the more likely it is that your transformation is a better fit for a MACH approach and more modern architecture patterns.

- ✔ **You've got multichannel ambitions**—you're anticipating increasing numbers of customer touchpoints and channels moving forward. More channels lead to a more interesting MACH approach.
- ✔ **You'd benefit from a scalable infrastructure**—your business requires you to respond to seasonal peaks (e.g. Black Friday Deals), but you want to be able to operate at, and pay for, standard levels for most of the time.
- ✔ **You rely on stability and uptime**—uptime is business critical. Regardless of traffic, updates or if one of the systems or micro-services goes down, the rest of the system and especially the core functionality need to stay up and running.

- ✔ **You want a modular strategy**—you want to gradually replace a legacy architecture by replacing one system/platform at a time. You might also be a challenger who needs to keep a best-of-breed solution but also use the modularity to support experimentation and innovation on new business models and offers.
- ✔ **You've got a multi system solution**—your existing solution already contains multiple systems, and therefore it's natural to create API's to integrate between the systems and make it part of your architecture.
- ✔ **You operate with multiple teams**—you need multiple teams to work on solutions (e.g. different business domains) in parallel.
- ✔ **You need speed**—you need the ability to quickly build, change and release new features or functionality to the market.

✔ **You want consumption-based costs**— your business model supports that if there are lots of transactions, you might have to pay more, but if the number of transactions goes down, you also expect the costs to go down.

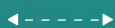
If you can tick off two-three or more of these criteria, then there's a good chance that a MACH architecture might make sense for your business. So, what next? If you're ready to get started with MACH technologies, the following five steps are the best place to begin your journey.

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**Successful implementation** requires just as much organisational change as technology change.

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M



**Microservices**

A modern architecture that makes your IT team agile, possibly even SUPERSONIC.

A



**API-First**

100% API-centric means you can incorporate any functionality.

C



**Cloud-Native**

Huge promotions, giant traffic spikes - no worries. Our multi-tenant, cloud-native platform is always there.

H



**Headless**

Choose your own frontend: build from scratch or buy a packaged DXP. Put your customer experience front and center - we've got both ends covered.

# 5 Steps to **Getting Started With MACH**

With so much discussion about the benefits of MACH technologies, it might be easy to assume that everyone is following the same route to modern architectures. Whilst many of our clients are indeed seeing the transformative power of this new commerce trend, many others are just starting out on the journey. We want to provide you with some simple advice on how to make the transition to this new way of working and how to make sure that you get the most value out of your tech decisions in the coming years.

## 01

### Define Your Goals

If you make the decision to commit to a MACH architecture, you need to set realistic goals. There are several approaches to follow based on your company's starting point, so you need to be clear on what lies behind your desire to transform. That way, you can build a solution that clearly meets those needs. Generally, there are three common business drivers:

- The need for speed
- The need for higher quality outcomes
- The need for better processes

It could be that you've already identified a key pain point, or that you know something in your current solution isn't delivering what it should be. Perhaps you are looking for full-scale business change from an organisational point of view and you want to start fighting back against the new market disruptors.

## 02

### Make the Decision

Whether you have a stack of legacy architecture and you are looking for increased

speed and flexibility, or you are a digitally-native company looking to boost your capabilities or improve the quality of your processes, a move to microservices/headless technology might be the silver bullet you've been looking for, or it might be the wrong decision entirely. It's important to define a target architecture that sits in harmony with your organisation. Remember that your architecture and ambitions should always go hand-in-hand and reflect each other in order to maximise the impact of your investment. Take the time to reflect on your goals and what you're trying to achieve—don't just follow the crowd.

You need to make sure you have all of the facts upfront when it comes to making changes on this scale. MACH is a term that relates to de facto technical architectural

Having a development team that can **successfully communicate the business benefits of modern architectural principles** like MACH to the senior management is a sure-fire way to increase the chances of successful commitment



principles that have been packaged together because they all make up a modern architectural solution. It will not be right for all businesses, but if it does fit your company's ambitions, these new architectures have been shown to bring lots of benefits. Use our guide to help you decide whether this is the right move for your business.

## 03 Get Commitment

If you decide to go ahead with a move to MACH, you'll need to seek engagement and commitment from across the organisation. With lots of upfront technical work, it can be easy to overlook the scale of organisational change that can come with changing your technical architecture. In our experience, a change like this requires the commitment of a tech-savvy business-orientated person with a mandate to make decisions at a senior level. Perhaps this could be the CIO/CDO, but it could also be a senior digital manager.

This person will need to advise their teams on the need for improved speed, quality and processes, each of which can be achieved thanks to the MACH technologies, (note: it may also be helpful for them to advise on the reality of not making these interventions). Additionally, having a development team that can successfully communicate the business benefits of modern architectural principles like MACH to the senior management is also a sure-fire way to increase the chances of successful commitment.

## 04 Analyse the Existing Solution

How much can you do with what you already have? Could you break the existing architecture down into smaller parts, and if so, can those smaller elements mirror the

organisational domains? There are lots of things that can affect the scope of a technical implementation—e.g. when you look at the original solution's architecture, you'll need to see how tightly connected or de-coupled it is.

The more integration points there are, the more complex the work is going to be, and usually the older the solution, the longer it takes to untangle the dependencies. Making sure you're starting with a crystal-clear understanding of what you're working with is the key to making sure you're making the right decisions and improvements from the start.

## 05 Small Steps and Prototypes

Taking small iterative steps and building quick prototypes will ensure that you can capture insights as early as possible and make better decisions going forward.

Build a team that includes people from across all competencies. As the people who will ultimately be using the solution, it's important that they have direct influence on the requirements set out at the start. Let them test early on and become 'super-users' right from the beginning.

We regularly work with clients who are just starting out on this journey. So why not [get in touch](#) with us to see how we can help you in your transformation from monolith to MACH? These five steps will help you to make the first move, but for more guidance on the best directions to take, contact our experts.

# About Valtech

At Valtech, we help customers to select the **right platform** for their needs. That includes **commerce consulting** where we deliver consulting services rooted in deep industry and technology know-how alongside an integrated way of working. **We deliver Proof Of Concepts (POC)**, help transition clients to MACH architecture, **build commerce platforms, and run commerce opportunities. And even that's not an exhaustive list of our commerce offerings. Contact us today to see how we can help your brand's commerce strategy.**

“Valtech leads with commerce and tech with a strong co-innovation strategy ... Clients like Valtech's can-do, get-it-done culture ... Valtech is a good fit for brands focused on commerce or complex branded experiences”

Forrester | The Forrester Wave™ : Midsize Digital Experience Agencies, Q4 2018

# About commercetools

commercetools is a next-generation software technology company that offers a true cloud commerce platform, providing the building blocks for the new digital commerce age. Our leading-edge API approach helps retailers create brand value by empowering commerce teams to design unique and engaging digital commerce experiences everywhere – today and in the future. Our agile, componentized architecture improves profitability by significantly reducing development time and resources required to migrate to modern commerce technology to meet new customer demands.

The innovative platform design enables commerce possibilities for the future by offering the option to either use the platform's entire set of features or deploy individual services, á la carte over time. This state-of-the-art architecture is the perfect starting point for customized microservices, enabling retailers to significantly reduce time-to-market for innovative commerce functionalities.

With offices in Germany and the United States, as well as presence across general Europe and Asia Pacific/Oceania, B2C and B2B companies from across the globe including well-known brands across many industries, including fashion, food and retail, trust commercetools to power their digital commerce business.

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