Headspring

Why microservices matter to CFOs

If your business is run on a monolithic system, you're probably feeling pressure to move towards microservices especially from developers and architects. Before you dismiss it as a trend or get caught up on how much it will cost, let's look at the actual financial implications that microservices have for your business. The benefits of building small, autonomous services extend beyond development teams to impact your bottom line. Here are five reasons why financial leaders should consider the shift to microservices.

The top 5 financial benefits

1. Tailored solutions support flexible spending

With a monolithic application, technology choices are usually static and application-wide, making it difficult to make tailored design decisions. Microservices enable development teams to choose the right tool for the right job. For example, perhaps a specific service is more suited for a document store rather than a relational database. When working with smaller, autonomous services, your development teams have the freedom to make the appropriate decision without affecting the rest of the system. The benefits that these tailored solutions provide extend beyond development teams and impact your bottom line. As you evaluate tools and services to support your microservice-based system, you'll have finer-grained control over licensing and decisions like build vs buy.

2. Faster development leads to swifter ROI

Developers can move faster when they have to reason about less. Microservices encapsulate the business functionality of a specific context, which typically have smaller, more cohesive codebases that are easier for developers to wrap their heads around. Additionally, changes within a microservice that don't affect its relationship with other services won't impact the overall system, requiring less coordination across the organization. Coupled with an efficient automated deployment pipeline, this all makes for a much faster development cycle, which means your organization will realize returns on investment quickly.

Money moves: Walmart

Save money. Live better.

In 2012, Walmart started to re-architect their platform to a microservices architecture, with the main goal of improving the overall performance. The results were quick and convincing: **conversions were up by 20%, mobile orders up by 98%, and zero downtimes**. Also, since they migrated from expensive hardware to commodity machines, they managed to cut their operational costs.

Source: Containerum via Medium

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3. Reduced downtime prevents profit loss

Nothing puts a halt on profitability like your production systems being down. A microservices architecture gives your business-critical systems more resiliency. If a single service goes down, it doesn't mean that your entire system goes offline—other business functions will continue operating. Additionally, systems designed to use tools like message brokers, that enable interservice communication, allow services experiencing downtime to pick up where they left off when they are back online. When downtime does occur, proper observability and monitoring allow ownership to quickly be identified so that the appropriate teams can restore functionality quickly and ensure that value-generating activities continue.

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4. Better experiences keep customers close

In today's fast-moving technological landscape, your customers will expect regular upgrades and improvements to the software they use. The development efficiency and flexibility gained with a microservices architecture allows your business to respond to customer feedback quickly, helping you build long-term brand loyalists. Customers also expect the applications they use to operate flawlessly and deliver seamlessly. When a bug does leak to production, you'll be able to respond quickly to implement and deploy fixes to the affected services. This leaves less chance for your customers to defect to the competition—and proves that you're in tune with their needs.

Downtime is money: Twitter

Twitter started out with a monolithic, vertically-integrated application, but as they gained more and more active users, the downsides of this approach became apparent: poor scaling (only vertical), all-or-nothing deployments, and long build times. To solve this, Twitter moved towards a microservices-based architecture, which allowed them to test and deploy components independently and to scale them separately, leading to much less disastrous downtime. When's the last time you've seen the "Fail Whale"?

Source: Containerum via Medium

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5. More efficient scaling frees up budget

A microservices architecture enables you to scale different services within your system according to their individual needs. This granularity allows you to focus your expensive infrastructure resources on just the services that are in high demand, instead of the entire monolithic application. Along with technologies like containers, microservices enable more efficient use of infrastructure resources by reducing idle CPU and memory. By scaling services granularly and reducing idle compute resources, you'll free up valuable infrastructure budget to be directed towards other projects that generate added business value.

So how can *you* profit from microservices?

In order to realize the full financial benefits of microservices, you want to make sure you prioritize intelligently, plan strategically, and develop efficiently. The first step is discovery: diving deep into your system and business capabilities in order to map the best path towards greater profitability.

Looking for partner that can offer an outside perspective and guide your microservices journey?

Get in touch

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