

Power your E-commerce Store: Microservices Architecture

Inveon Insights
2021

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For a long time, monolithic structures were the only option for building a comprehensive e-commerce presence. However, like every innovation that comes to life, growing and renewed needs also reveal new solutions. The need for creating a seamless customer journey gave rise to an alternative to the monolithic structure, and the microservices structure emerged.

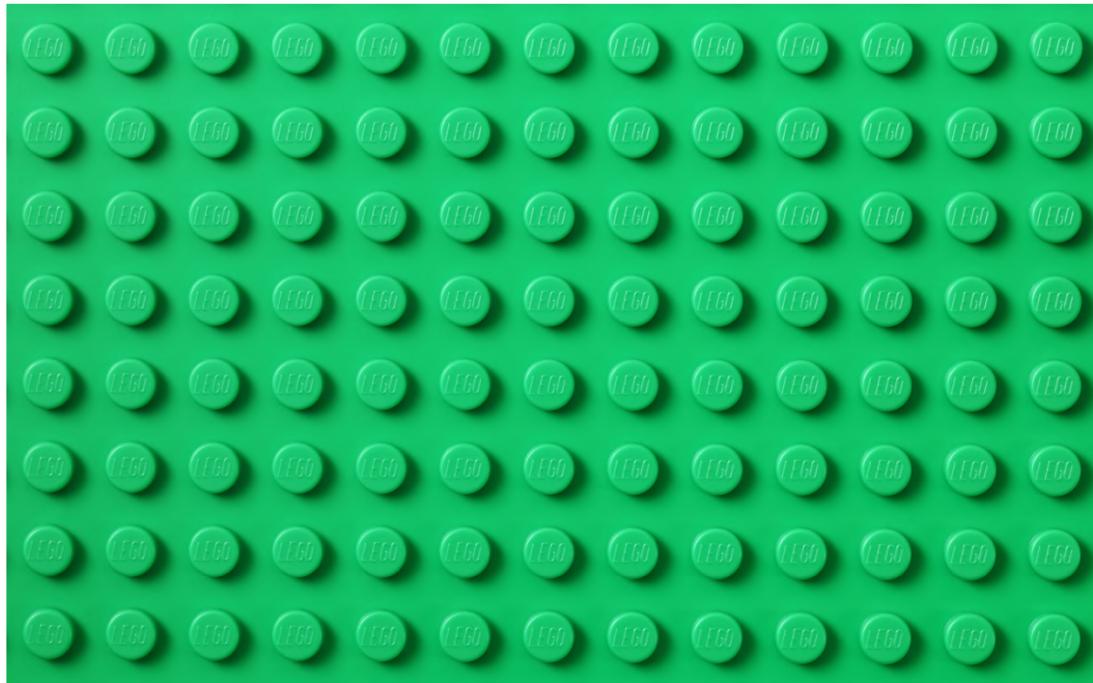
Microservices are the wave of today's development environment. Now you can create microservices-oriented, cloud-connected applications without reinventing the wheel. It brings huge benefits to companies including agility, scalability, reusability, organizational simplicity, and cost-efficiency.



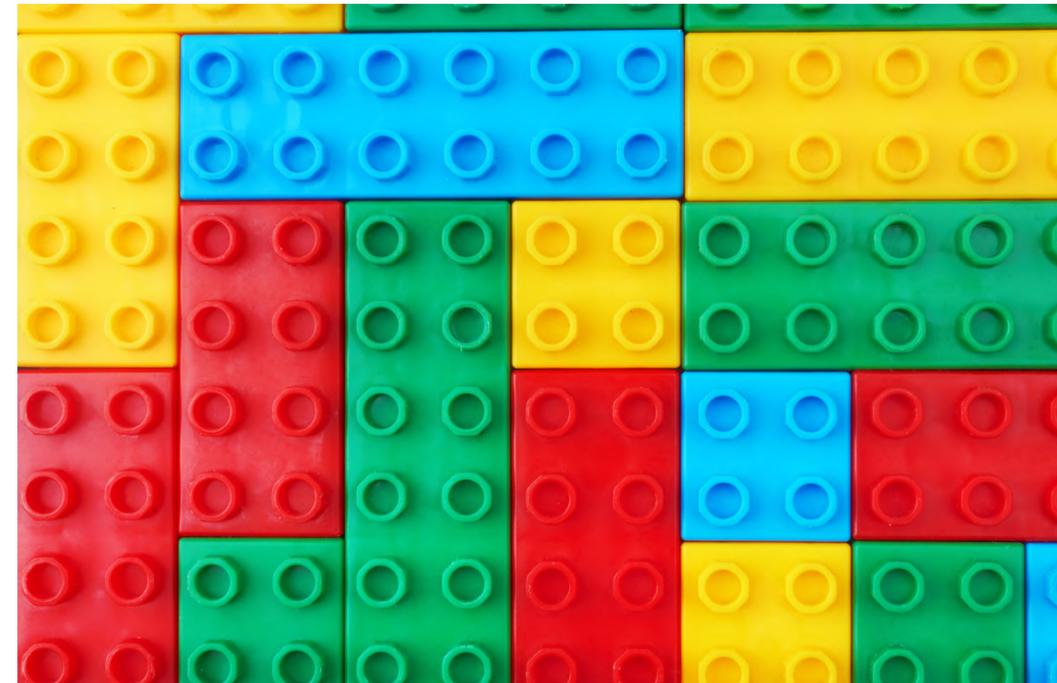
What are Microservices?

Microservices is a term that's becoming increasingly used in the software industry. So what are microservices anyway? And how are they different from other application architectures? (Spoiler alert: they're very different.)

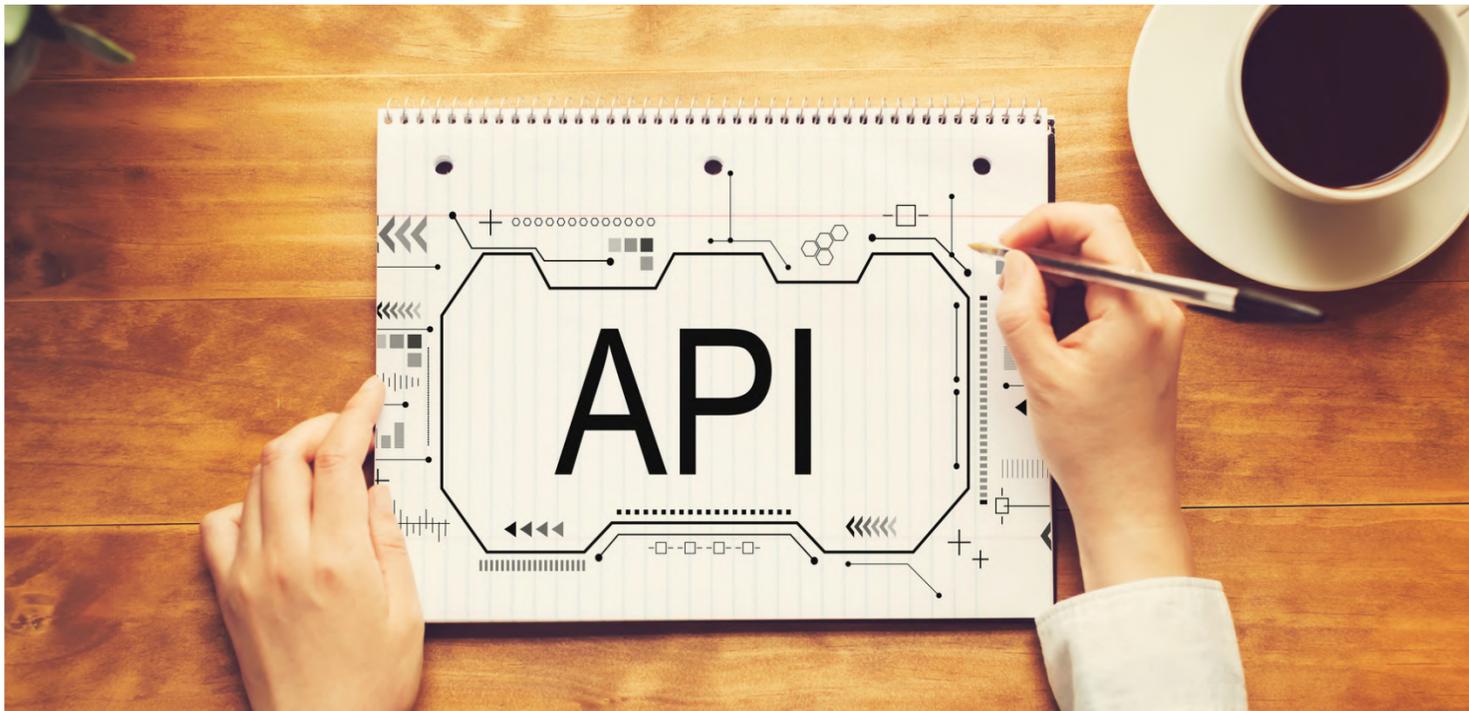
Monolithic Architecture



Microservices Architecture



Microservices are independent software modules that are loosely coupled and can be deployed independently without affecting the rest of the project. Unlike the monolithic structure, microservices have a cross-functional design that works together on a single module.



Microservices architecture is built as independent components that communicate with each other using APIs and can be deployed separately. Simply put, API keys are a bridge between all individual microservices focusing on different tasks and also your front end and the back end.

They allow you to make easy connections with different systems and applications which allows for seamless and automatic interfacing.

Through this structure, microservices make development more flexible and efficient.

Why Microservices?

Microservices brought refreshing freshness to the software development phase. It's a clear trend, but what are the real benefits? Are they really worth all the hype? Definitely, yes!

They improve modularity, simplify debugging, increases flexibility, and lessens the chance for introducing dependencies between modules, and much more.

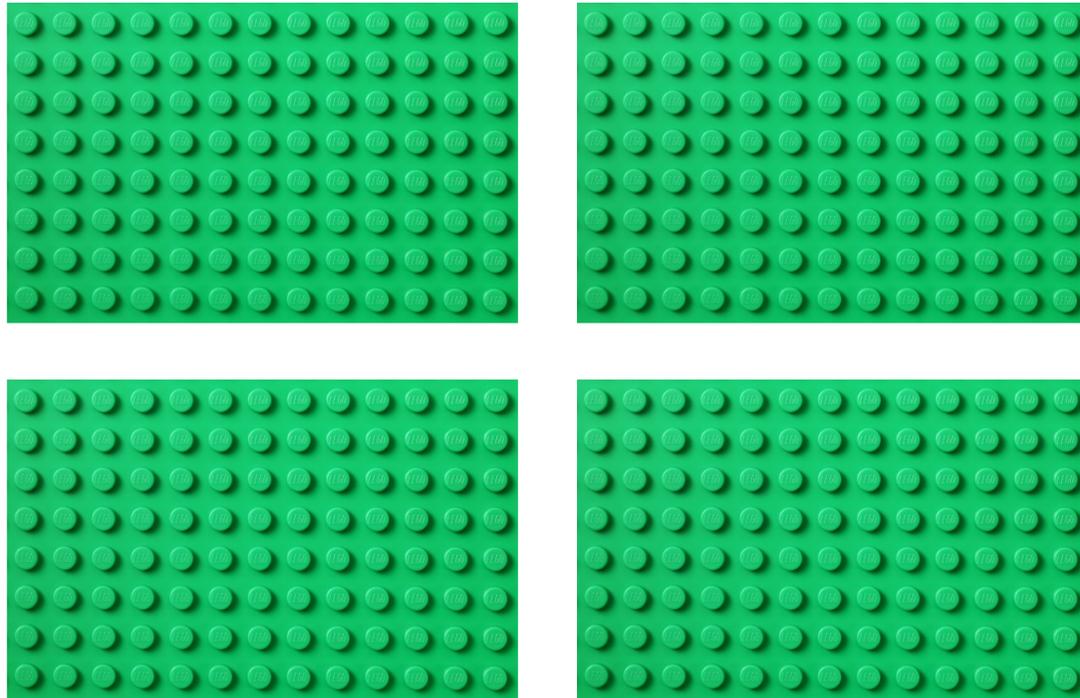


Scale Better, Increase Flexibility and Agility

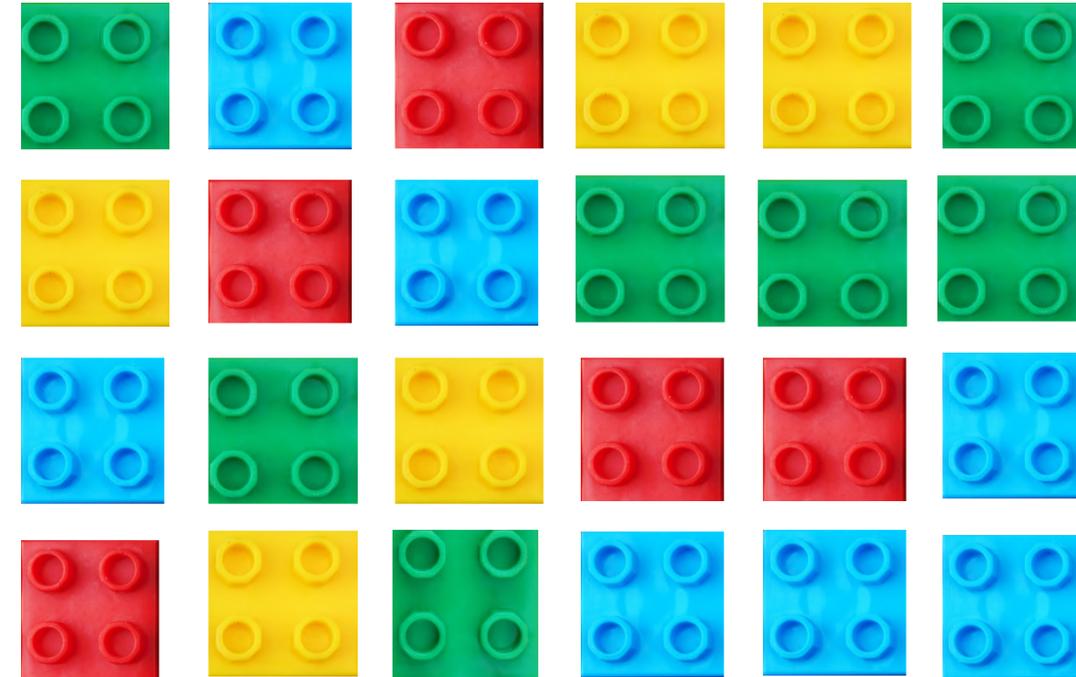
Microservices architectures enable the development of applications in a manner that is **scalable and flexible**. Its architecture is overlaid with scale-out characteristics that allow for faster infrastructural capacity as each service is designed and developed to provide a particular aspect of the application.

Microservices-based architectures make it easy to update or renew the product because a bug fix or new feature can be implemented in one small part of the system instead of trying to change the whole product. The application's scalability can be easily achieved by deploying only a particular service that needs the scale. This greatly reduces time to less than seconds as well as efforts in scaling the application and makes it flexible, resulting in a **more cost-effective** enterprise. Because, since microservice implementation scales, you can scale the resources as well – like a fluctuating workload or capacity of your entity – to avoid resource wastage.

Especially in campaign periods or holiday seasons, it is crucial to have a scalable infrastructure to handle increasing traffic. We all know that dealing with increased traffic is as important as attracting that traffic to your shopping website.



Scalability in Monolithic Architecture



Scalability in Microservices Architecture

Continuous Delivery Potential

You can deliver new features faster, reduce the time and cost of software changes, and enable the delivery of applications at scale.

Reducing costs is an important aspect of any business. Microservices help you to save time and money by having a quicker deployment, improved code reusability, and better efficiency. Fast time to market as well as the ability to add and remove features much faster resulting in a reduced cost of development. Allowing you to deploy components independently and obtain faster development cycles brings zero downtime during deployment, thus preventing any loss of revenue.





Using microservices can also allow organizations to break up large projects into smaller chunks that are more manageable and can be built, tested, and deployed independently and much faster than before.

In order to keep up with the changing world of e-commerce and the new features and technologies that are increasing in customer demand, you need an infrastructure that can keep up with your brand's needs. That's why it is beneficial to have the microservices architecture to gain the freedom of action that you crave.

Easy Troubleshooting

A major problem with monoliths is that any issue can cause downtime for the entire application. Microservices, on the other hand, are decentralized and decoupled into independent services that are far easier to maintain and build incrementally. Through microservices structure, the entire application will still work even if one of its components experiences an error.

It limits the impact of an issue to only the service experiencing it. Thus, decreases your operational overhead and provides having simpler troubleshooting. Faster troubleshooting reduces the downtime of systems and creates happier customers.

As we all know, a happy customer is the key to the success in e-commerce. So, microservices can save time and money for your business while increasing customer satisfaction.





More Secure than Monolithic Software Designs

Independent entities, that the microservices structure provides, prevent your entire system from a security attack, server crash, or leak if it happens in only one part of the application.

Monolithic architecture means that you have a single product. If one security problem occurs, it means that the entire system might be affected. However, the microservices architecture makes it easy to lock down a system. If a breach occurs, you can switch off the affected subsystems instead of having to fix the problem in every part of the system.

How can your brand benefit from all these?

All these features allow a competitive advantage in the rapidly changing market. A **microservices-based commerce platform, like Inveon inCommerce** offers, enables you to take the most agile actions in the rapidly and ever-changing nature of e-commerce, in making the necessary changes quickly, building the updates that meet the emerging needs, and providing a perfect customer journey.

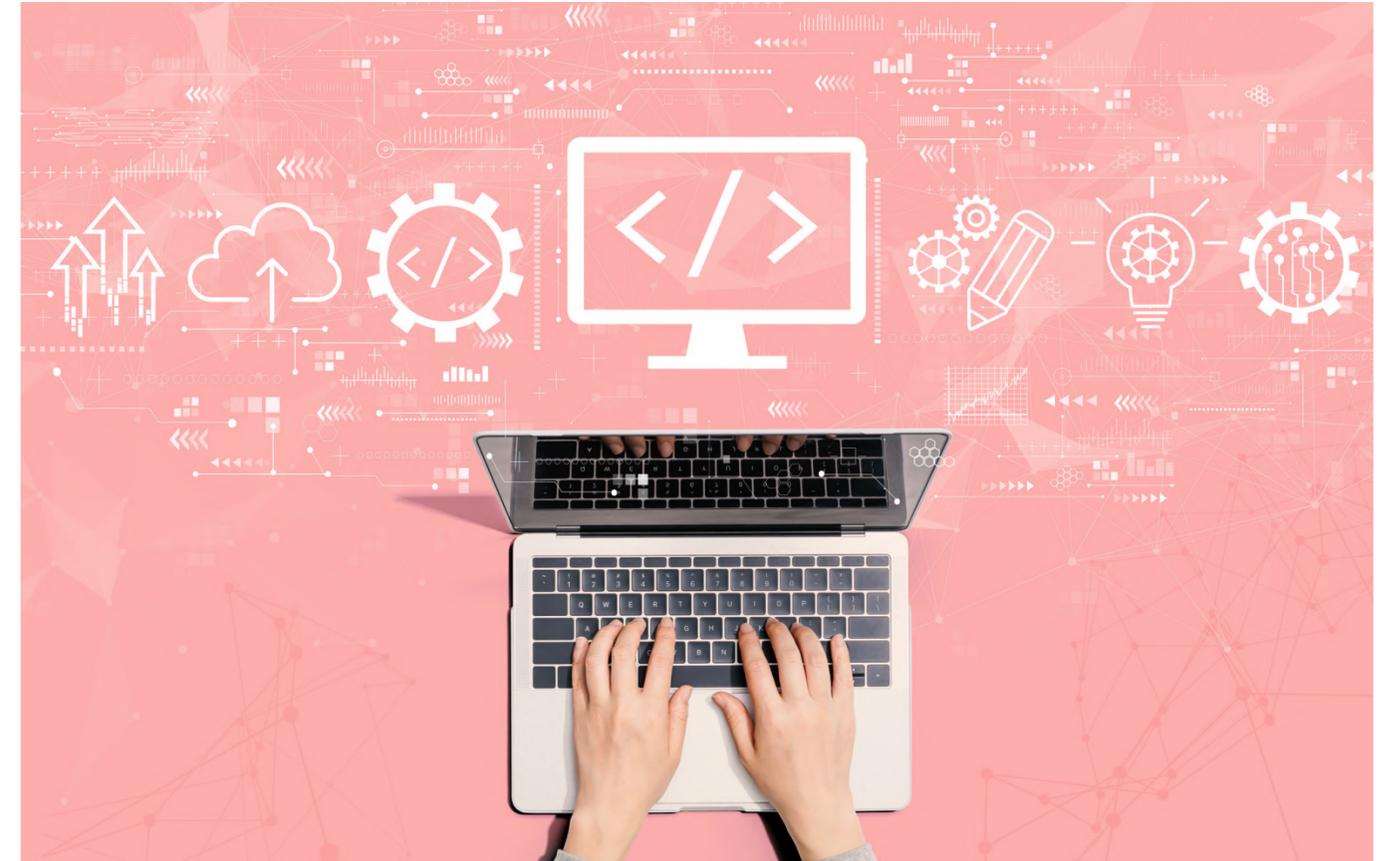
The logo for inCommerce, featuring the word "inCommerce" in a stylized, lowercase, sans-serif font. The "i" and "n" are in grey, while the "C" is in red. The "o" is a red square with a white dot in the center. The "m", "m", "e", "r", "c", and "e" are in grey. The logo is centered within a red rectangular border.

While working with **microservices architecture** at Inveon, we highlight domain expertise in our technical teams. Through working with a dedicated team organized around a specific domain for each microservice, we deepen both technical and business know-how in the relevant domain.

Whereas older monolithic approaches need to bundle everything as a single unit, a microservices architecture allows independent delivery of smaller pieces developed by different teams.

The structure creates fast, scalable, reliable, and agile commerce entities and It's also blazing fast for both loading and response times to deliver a seamless experience for your users. **Microservices architecture** is currently the hottest framework to power your e-commerce business, and if you're not on it yet you can be left behind.

If you don't intend to take the risk, let our consulting experts help you. **Contact us today**, and we can discuss how microservices architecture can help you to boost your business.





Inveon helps you to stay one step ahead of the competition.

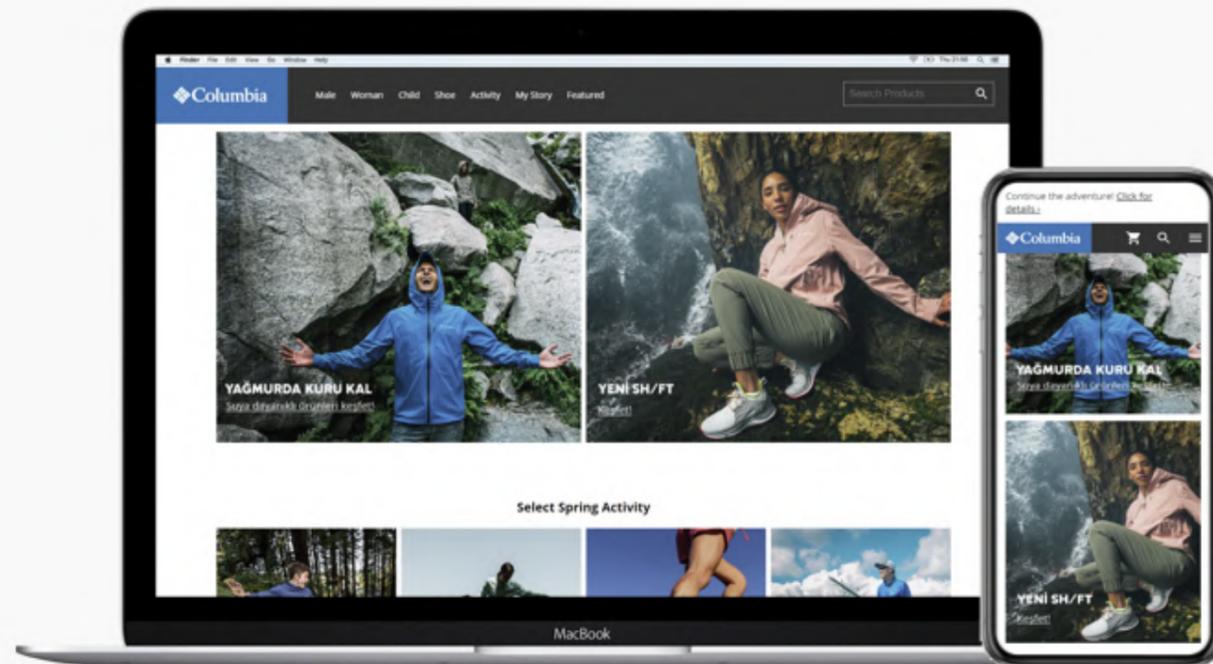
Schedule a call with one of our e-commerce experts today.

Get in touch!

A revolutionary digital commerce platform for those who always want more

Inveon inCommerce is the agile way to build, launch and expand your e-commerce business across channels, marketplaces and partners.

inCommerce



 Columbia

Let's take your business to the next level!

Microservice Architecture

Enjoy highly performed operations, ease of integrations and maximum speed through microservice architecture

Omnichannel Promotion Management

Take a deep-dive into the world of promotion and discount management with an advanced promotion management module

Headless Structure, Supreme Flexibility

Through inCommerce's headless structure, easily customize your platform and provide a seamless experience to your customers

Advanced OMS

Effectively manage your omnichannel operations and eliminate operational complexity with inCommerce's strong order fulfillment algorithms

Real-time Tracking & Insights

Master your data by tracking brand-specific consumer journeys and detailed data dashboards of the reporting module

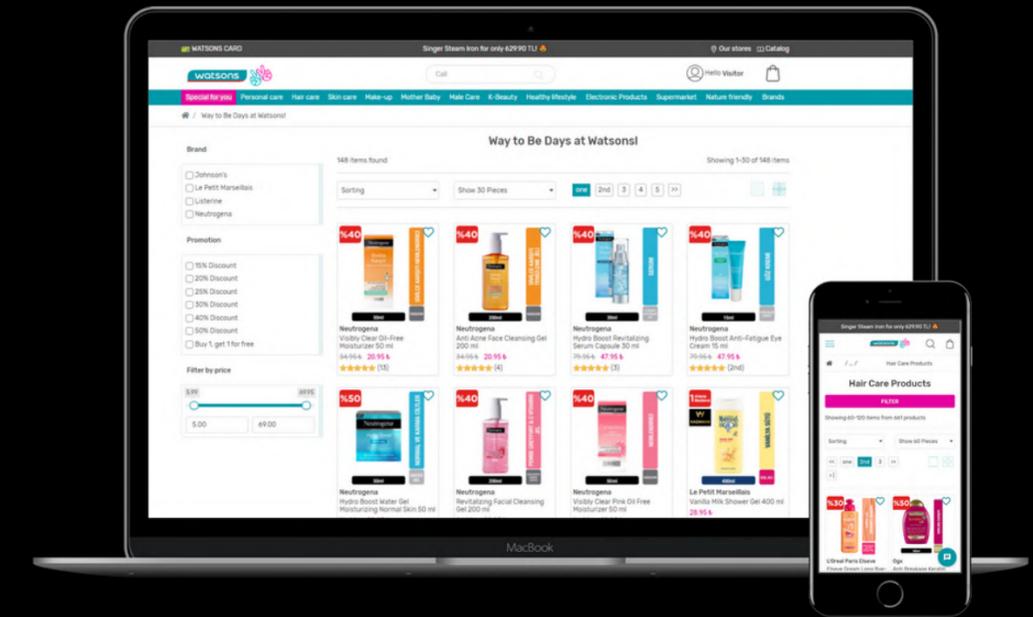
Mobile-first Operational Management

Utilize a comprehensive range of tools to excellently control your operations wherever you are with inCommerce's fully responsive and mobile-compatible admin panel

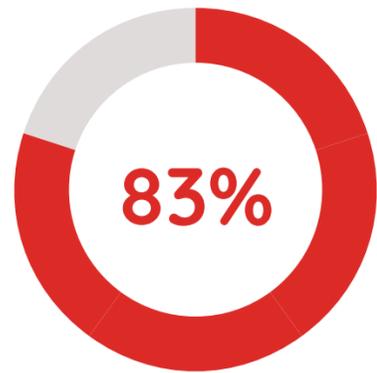
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Unlock growth potential & empower your brand: GrowthLab

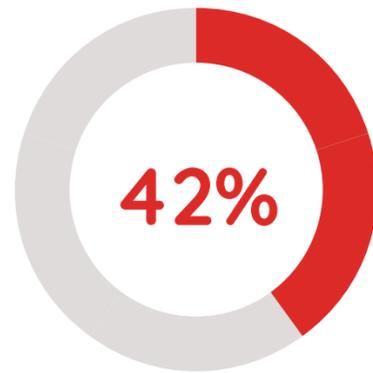
- Keep the pulse on your store with inCommerce's real-time data stream
- Uncover growth opportunities using behavioral segments
- Take the guesswork out of growth with our proprietary next-best-action methodology



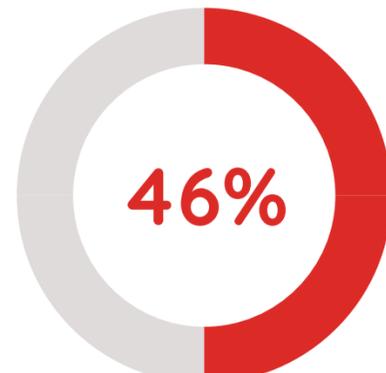
After 12 months of working with Inveon, our clients achieved:



An average increase in revenue



An average increase in traffic



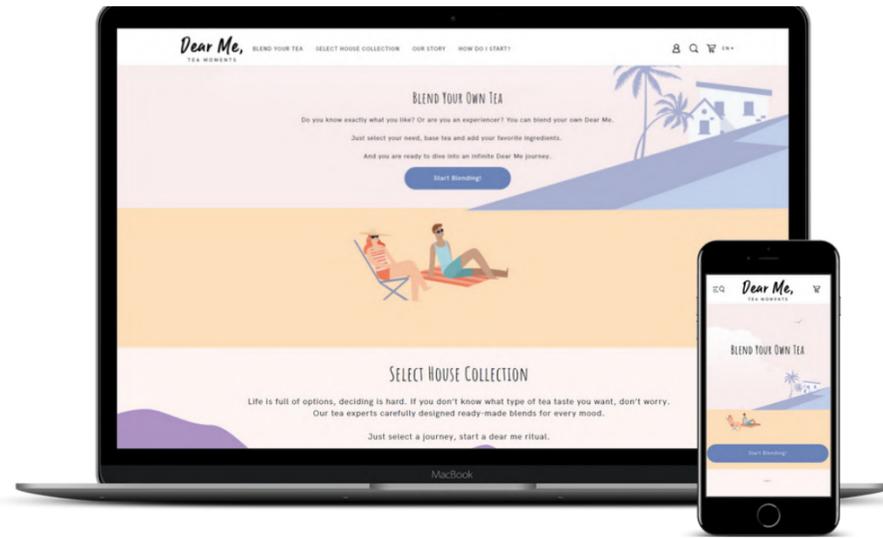
An average increase in conversion rates



Highlights from our clients

- Offering products in 90 countries under a single platform and increasing global revenue by 400%.
- 5x increase in the number of visitors during the Singles Day Campaign. (Gold Stevie Winner for Online Marketing Campaign of the Year)
- Omnichannel revenue reached 1.5 times higher than e-commerce site revenue within 6 months.

About Inveon



Inveon provides enterprise companies with a unified & scalable digital commerce platform that enables sustainable growth.



Our Offices

- Istanbul, Turkey
- London, UK
- Geneva, Switzerland
- Dubai, UAE



\$1B

annual e-commerce volume



60+

global customers



70M

online shoppers



15+

countries

For more information, get in touch with us

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