



congstar

congstar: Agile developed sales and customer self-care portal

Microservices architecture fulfills complex requirements



Scalable and Flexible

The scalable and flexible architecture ensures the sustainability of the solution and optimizes the benefits for congstar and the end customers alike.



Distributed Agile Teams

congstar is currently supported by dedicated AOE Scrum teams. Product Owners and Scrum Masters are located in Cologne - developers in Wiesbaden.



Customer Service

Flexible, web-based structures simplify the maintenance of the customer self-care portal.

More than ten years of continuous collaboration. Nearly 450,000 lines of code. Just some of the key data of the long-standing partnership between congstar and AOE. But how does a successful cooperation emerge from which both sides benefit equally? How can an enterprise online sales and self-care portal be set up step by step and adapted to constantly changing circumstances? And how can self-organized teams be scaled in large, agile organizations? We provide insights into the history of the partnership, describe the evolution of the architecture and explain the change from a monolithic application to a microservices approach.

The Challenge

For more than ten years, congstar and AOE have been working together to develop the Enterprise Telco solution for the "Mobile Service Provider of the Year" from 2012 to 2018 (awarded by the trade magazine [Connect](#)). During this time, the solution was continuously expanded, adapted to the continuously changing circumstances and at the same time set up in an agile manner. The resulting challenges were extensive. On the technical side, the original platform increasingly evolved into a complex enterprise application to meet all requirements - an application we call the E-Commerce Framework for Telecommunication Providers (EFT) Suite.

E-Commerce Framework for Telecommunication Providers (EFT)



The EFT Suite is a customizable E-Commerce- and sales platform developed specifically for large telecommunications providers (telcos) and mobile virtual network operators (MVNOs). The Enterprise Suite enables flexible

control of personalized campaigns, automates and digitalizes business processes and offers simple customer and product data maintenance as well as customer self-care for end customers.



AOE is clearly at the forefront of change when it comes to deploying technology in a way that will deliver significant benefits to our customers.

*Dr. Peter Opdemom
Managing Director Marketing, Service and Sales
Congstar*

EFT as a Suite of Individual Microservices

Approximately two years ago, AOE began migrating the existing suite to Microservices. The complexity of the enterprise solution presented the Scrum teams with a number of challenges. The resulting pain points required a redesigned software architecture, which oriented itself toward the structure of the Scrum teams. The decision was made to redevelop the platform. The

original EFT suite was successively expanded with numerous microservices. The focus during the process was on the webshop and on the customer self-care area. As the solution became more comprehensive over the years, the teams had to be continuously expanded and their structures adapted. Since then, we have continuously refactored our globally unique

EFT Suite from a monolithic application into a microservices-based architecture and broken it down to some 25 microservices for the new congstar application. Programming was done with Spring Boot and Java/Groovy. The long-term goal is to be able to offer the EFT Suite as a completely microservices-oriented suite in the enterprise sector.

Microservices approach = clean functional divisions between the individual teams

At AOE, the individual teams work along agile guidelines, mostly in Scrum teams. The microservices approach for congstar automatically led to the question of how the new teams should be divided functionally. The decision was made to set up the Scrum teams based on the different business processes (e.g. check-out, tariff change, SIM card exchange, etc.).

The teams are cross-functional and, like most Scrum teams, are filled with different roles. In addition to the traditional roles, the Scrum teams have created three additional cross-team roles to meet the extensive requirements regarding the solution and processes. These roles are referred to as "individuals", a term that is kept neutral deliberately to avoid hier-

archical levels. These individuals are responsible for the areas of budget, human resources (including applicant management and communication with the AOE management team) as well as for the technical overview provided to the client. The philosophy behind this concept also reflects the Servant Leadership approach.



The ten-year partnership with congstar is a prime example of agile cooperation that is second to none. Characterized by genuine cooperation, respect and high cultural compatibility.

*Kian Gould
CEO and Founder
AOE*

The Result

Due to size and complexity, the transition to a microservices architecture presented congstar and AOE with a number of challenges. During the course of the collaboration, the AOE team also evolved, both in size and in terms of agile work processes. The decision to take a microservices approach to development provides the scalability and flexibility necessary to continue developing the solution optimally in the future.



AOE and its global team of over 250 people in five countries is a leading provider for Digital Transformation and Omnichannel E-Commerce implementations based on Enterprise Open Source technologies. It has established a name as a leading provider for airport E-Commerce solutions. AOE is responsible for the world's leading Omnichannel Travel E-Commerce platform at Frankfurt Airport.

With its headquarters in Frankfurt and offices in Miami, San Francisco, Zurich, Dubai and Hong Kong, AOE has handled hundreds of implementations for major global corporations, such as Frankfurt Airport, Lufthansa, Cisco Systems, Deutsche Telekom, Bosch, Sony and Commerzbank.