

ARTICLES

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Using BizDevOps and Microsoft Tools to Develop Cloud Solutions More Efficiently



The emergence of the BizDevOps method has truly changed the way software development projects are led. Businesses and IT departments no longer have to work in silos; instead, projects are achieved in continued collaboration. In this article, we will discuss how AZUR Group was able to evolve from Agile to DevOps and then to BizDevOps. We also explain how we developed our own approach: the Optimized Agile Solution, which now serves as the cornerstone of AZUR Group's Cloud Solutions Development Center: AZUR Innova.

As a Cloud Solution Provider, we have made it our goal to always enable business stakeholders, product owners, software developers, quality assurance (QA) agents and IT experts to work together consistently to deliver software that can improve the organization's operational efficiency. More specifically, we work with our customers to fast track the road from the development of a software feature to deployment in production where the feature can be tested and evaluated. This process involves maintaining high standards for software stability, reliability, availability and security.

Adding DevOps to our Agile Process

During its 18 years of existence, AZUR Group has witnessed and taken part in the rise of the Agile development methodology. This methodology represents a set of values, principles and processes enabling iterative software development. By fully embracing it, we managed to deliver numerous successful client projects. However, we felt like we could reduce project time, risks and costs by adding an important factor: automation. DevOps is a set of practices and tools which emphasize the collaboration between Development and Operations teams. In DevOps, one of the goals is to automate and therefore accelerate the process in which software is delivered in production environments. With technology giants like Amazon, Google and Microsoft performing thousands of software deployments in production environments every day, it became apparent that we needed to adapt our methods. To obtain such performance, we needed to implement a high-paced, high-quality software development machine that would limit manual operations to the development of “intelligent or business rule code.” Hence, the new DevOps techniques would meet the need to automate most other task. As a Microsoft Gold Software Development partner, we use the Microsoft Visual Studio DevOps and Agile tools to automate software development, integration, testing and deployment as much as possible. We are also following a five-step maturity model to maximize both the quality and productivity of our processes.

Developing Our Own Approach: Optimized Agile Solution (OAS)

With time, we took stock of the progress that we had made. We had established an efficient agile process and had added DevOps automation techniques and tools. However, we still felt like an essential part could be improved: the involvement of business stakeholders. Based on our experience, business stakeholders had trouble

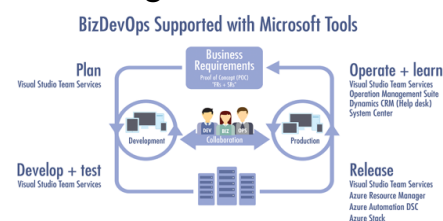
Developing Our Own Approach: Optimized Agile Solution (OAS)

AZUR Innova’s Optimized Agile Solution (OAS) combines the best of Agile and BizDevOps. With OAS, our customer business experts work closely with our IT experts using a Design Thinking approach. A powerful BizDevOps practice shifts Agile product thinking from the success of the ‘software feature’ to the

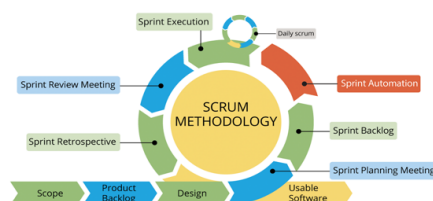
Un regard approfondi sur l’Automatisation Sprint

OAS’ Sprint Automation involves the creation and configuration of code templates adjusted to FRs and SRs. These code templates have been thoroughly tested and built from years of prerequisite R&D and customer project efforts. Our IT analysts can rapidly configure templates; our developers can add

having their needs understood by their IT departments. We came up with a solution to involve them as early as possible in the software development process using quick prototyping of Proof of Concepts (POC). This way, there would be opportunity for Business (Biz), Development (Dev) and Operations (Ops) to collaborate in front of a working software prototype (instead of arid design representations) in order to maximize efficiency. Fundamentally, a BizDevOps methodology changes the way software is developed. With this approach, the business team sets requirements and works directly with developers to establish priorities for Agile software development product backlogs. Business, QA, development and operations teams become partners and work together to solve problems and achieve business goals.



success of the entire system. We use our approach to add another set of system requirements (SRs) on top of the list of software feature requirements (FRs). The objective is to automatically provide everything needed to handle a new feature in a production system. We try to mix both FRs and SRs through quick software prototyping with a highly automated software development approach. **The main innovation featured in Optimized Agile Solutions is the automatic combination of software FRs with SRs into a working custom cloud solution** that business users can try, test and validate online in a matter of days.



business-specific codes, run various automatic tests and quickly deploy the Cloud solution in production environments to meet customer demands. OAS helps to quickly create and configure high-quality N-Tier code templates built with Microsoft and Google technologies for the following software and architecture layers:

UI Layer: Angular 2
Responsive JavaScript Framework

Business Layer: .NET
objects, business rules

Data and BI Layer: Azure
SQL, Power BI

Infrastructure Layer (IaaS
and PaaS): MS Azure,
AWS, Salesforce

Security Layer: Azure
Active Directory, two-
factor authentication,
role-based access

Our prefabricated code templates support major UI/UX Design patterns like Master/Details, Dashboard, Search/Results, Forms, Wizard, Workflow, and so on, using some 25+ Essential

Controls required by Rich Internet Application (RIA) design and development.

UI/UX Design Patterns



When a Cloud software is deployed in production environments, the Canary testing method can be used to test programming code functionality with a subset of customers. This is done to make sure that new feature and system requirements are performing as designed and that problems are identified by only a fraction of potential users.

