Transforming a global company’s culture to accelerate service providers’ move to the cloud

Who?
Amdocs wanted to deliver new functionality, features and capabilities to customers in rapid iterations so they could realize value quickly and react faster to market changes and digital-natives.

What?
Amdocs’ customers want to become digital service providers that can quickly respond, react and create new experiences for their customers by moving to the cloud. Amdocs met these needs by moving to a cloud native portfolio and services that can deliver new functionality and value to its customers in rapid iterations. This could only be realized by completely transforming its culture – from tools and processes, to development and delivery methods – which is hard for a global organization with 25,000 employees to achieve quickly.

How?
By changing its culture: including shifting its portfolio to a cloud native, microservices-based architecture; expanding expertise in new technologies; reskilling employees on a huge scale in a short time; and by leveraging TM Forum’s Open Digital Framework.

Results
- Increasing R&D velocity by more than 50% YoY.
- Rapid iterations – functionality now delivered in days, instead of months.
- Customers’ adoption time cut by more than 100% year on year due to new capabilities.
- Testing automation close to 100% of development and deployment efforts.
- More than 10,000 employees now DevOps qualified.
- DevOps working maturity achieved in over 75% of customer engagements.

Amdocs’ customers want to become digital service providers that can quickly respond, react and create new experiences for their customers by moving to the cloud. Amdocs met these needs by moving to a cloud native portfolio and services that can deliver new functionality and value to its customers in rapid iterations. This could only be realized by completely transforming its culture – from tools and processes, to development and delivery methods – which is hard for a global organization with 25,000 employees to achieve quickly.

Caroline Chappell of Analysys Mason noted, “Amdocs’ cloud native transformation story demonstrates the benefits that can be achieved and the best practices that are critical for success”.

Website www.tmforum.org  Phone +1 973 944 5100  Address 4 Century Drive Suite 100 Parsippany, NJ07054 USA
Driving mental agility

This transformation plan meant upskilling thousands of its employees and expanding their expertise in multiple technology domains. As Anthony Goonetilleke, CTO, Amdocs, said, "Our changes have been extensive, ranging from adopting open-source technology in our product development processes, to significantly contributing to industry open-source consortiums, and from leveraging AI in our global-support functions, to changing the way we work by adopting DevSecOps methodologies".

Amdocs trains and certifies in critical business and technology domains, such as microservices, public cloud infrastructure including Amazon Web Services and Microsoft Azure, 5G network architecture, user-interface and user-experience design, DevOps, Scaled Agile Framework (SAFe) and other agile methodologies, machine learning, blockchain, edge computing and more.

"Even the training tools we use are changing – in the past, a new skill would be obtained by attending a week-long course but today, we have partnerships with disruptive companies such as Udacity who provides Nanodegree programs. The ability of our people to continuously learn and adapt is the new currency for success," explained Goonetilleke.

More than 10,000 of the company’s employees are now DevOps-qualified and, in collaboration with its customers, Amdocs has achieved DevOps working maturity in over 75% of engagements. As John Abraham of Analysys Mason stated, "One of Amdocs’ strengths is its growing competence in cloud-based design, development and delivery principles including microservices, CI/CD and DevOps".

Focus areas to accelerate service providers’ move to the cloud

- Shift its portfolio to a cloud-native microservices-based architecture
- Expand expertise in new technologies
- Reskilling employees on a huge scale in a short time
- Leveraging TM Forum’s Open Digital Framework

Key Results

- Increased R&D velocity by more than 50% YoY
- Rapid iterations functionality now delivered in days, instead of months
- Customer adoption time cut by more than 100% Y-o-Y due to new capabilities
- Testing automation close to 100% of development and deployment efforts
- More than 10,000 employees now DevOps qualified
- DevOps working maturity achieved in over 75% of customer engagements

TM Forum 2020
The company has worked to build a diverse culture because it strongly believes diversity should be a core principle. Amdocs’ gender-equality and inclusion initiatives range from identifying and recruiting the next generation of employees from universities, through Amdocs’ Gen Z Lab, to attracting, retaining and progressing women in technology roles, although more than 40% of all Amdocs’ employees already have female senior managers.

Amdocs range of programs include: Inspire – a long-term organizational framework for closing the gender gap, inspired by the UN’s HeForShe movement; and focused talent-acquisition – such as, in India, a gender-diversity campaign for skills like Java, UI and C++, a women’s coding competition, and female-only hackathons.

Amdocs’ CEO, Shuky Shaffer, also announced a target of increasing female employees by 20% over the next three years.

Not just ticking a box

Moving to microservices and cloud native architecture

“The creation of Amdocs’ new Microservices360 platform and the re-engineering of the Amdocs product portfolio to become cloud native and microservices-based were key objectives of this transformation we have been going through for the past few years,” says Avishai Sharlin, President of Amdocs Technology.

“Amdocs is embracing DevOps across the lifecycle process from sandbox to full-scale deployment based on its Microservices360 platform,”

noted Francis Haysom from Appledore Research.

Built on the Microservices360 platform, with a DevOps environment, Amdocs CES20 is the only fully cloud native, 5G-ready, pre-integrated BSS-OSS suite – and enables service providers to go from code to production in minutes.

As CES20 is microservices-based with a cloud native architecture, it enables Amdocs to deliver new functionality, features and capabilities to customers in rapid iterations – days instead of months – enabling service providers to realize value more quickly and react faster to the market.

All Amdocs’ services are built on Microservices360, which allows any company to become cloud agnostic, and develop microservices themselves. In parallel, Amdocs announced strategic partnerships with Amazon AWS, Microsoft Azure and Google Cloud Platform, highlighting the agnostic nature of their microservices-based architecture and applications.

The big challenge for operators and vendors is moving to cloud native applications. While a ‘lift-and-shift’ approach – putting applications in a container – can deliver some benefits quickly, it does not deliver all cloud’s advantages. On the other hand, rewriting applications to make them cloud native takes a long time and serious investment. TM Forum’s Open Digital Architecture, part of the Open Digital Framework, helps companies migrate gradually to a cloud-native architecture. It is a component-based architecture, with the business services of each component exposed as a set of Open APIs which can be further decomposed into a set of services and microservices. The benefit of microservices is that they can be managed on scalable infrastructure using Agile development practices.
Amdocs’ cloud native solutions were designed using TM Forum’s Open APIs which define a consistent, simple to use resource model for the business entities needed for commerce and customer care. For example, the Product Offering Qualification API enables Amdocs DigitalONE to consume functionality from external systems that use the Forum’s Open APIs, such as the Resource Pool API for number reservation.

Amdocs’ extensive involvement in TM Forum’s Open API program, including participating in the Open-API Schema-ification program, working on the Application Framework (also called TAM) for microservices and the Open API standards program to speed and simplify integration helps it adopt APIs for its solutions and to contribute back to the Forum’s development community. Indeed, one Amdocs employee received a TM Forum Outstanding Contributor Award for his “massive contribution to the Open API program.”

The Forum’s Open APIs exposed by the microservices include Product Catalog for authoring and runtime exposure, (that is, the discovery of product offerings), and Amdocs leads the ongoing development of this API within the Forum. Another is the API for Shopping Cart Management and Amdocs is part of the development team.

Further, Amdocs’ new RevenueONE platform leverages TM Forum Open APIs, including usage management, update handler, balance management and others. The cloud native MarketONE and RevenueONE platforms were made possible by this focus on collaboration and investment in new technologies. Amdocs has improved time to production by 20% and being able to leverage new capabilities has cut customers’ adoption time from weeks to days; an improvement of more than 100% year on year.

Amdocs reduced the cycle time for defining to delivery of epics by testing earlier in development processes – ‘shift left’ testing – and better backlog management. Automated testing automation is used for nearly 100% of development and deployment, which with Agile methodologies helped Amdocs speed R&D by more than 50% year on year.

The company uses dedicated tools for software-risk evaluation, automating tasks that formerly would have needed software development skills. The frequency of software releases is up from three to seven times a year through closely-aligned product and project team collaboration.

Results for customers

Amdocs’ in-house transformation is delivering results for Amdocs’ customers too. For example, Amdocs’ Microservices360 platform enabled Amdocs and Sprint to adopt a joint DevOps approach to modernizing the operator’s application portfolio, moving it to a unified, simplified, cloud native architecture which generates incremental value as the project is deployed.

Sprint and Amdocs can develop, build, test, deploy, operate and upgrade applications for DevOps and its continuous integration and continuous delivery (CI/CD) practices quickly. Sprint is confident that the co-development model is agile enough to support future development and business models, providing it with tools to achieve development-autonomy, saving an anticipated 20% in the cost of ownership.

The cloud native architecture and microservices allow Sprint to adopt the technologies gradually, minimizing business risk and ensuring continuity. Sprint expects to cut time to market by 50% for new services and features, expects order fall-out rates to fall by 30%, and expects a 30% improvement in the efficiency of tele-sales and handling changes to customers’ services.

Commitment from the top

Changing the culture of the company to embrace new ways of working and thinking is arguably the hardest challenge for any organization to face – and it’s only possible with commitment from every level of the organization. As Amdocs CEO Shuky Sheffer said,

“\nInnovation will come from you guys, and this is the only way the company will be successful. So, I ask you to dare, I ask you to be innovative, and you have my promise that I will push it in any way I can.”