



Sprint: transformation of care and commerce functions has reduced costs and improved customer experience

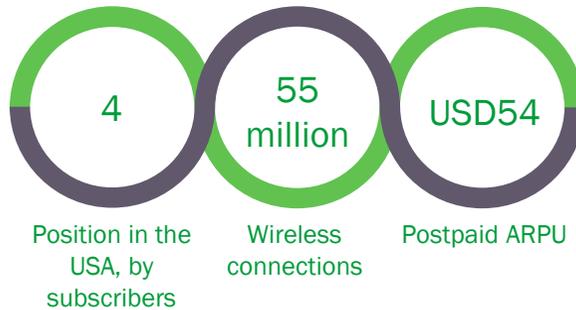


John Abraham

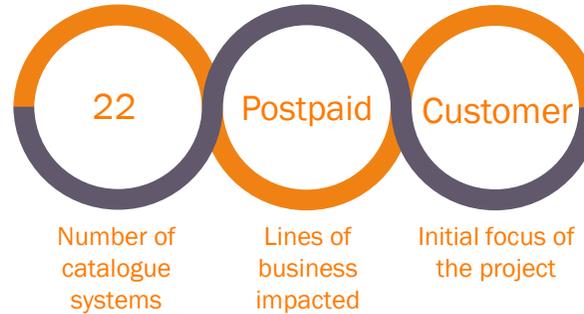


Sprint's transformation of commerce and care functions has improved customer experience and architectural agility, while significantly reducing support costs

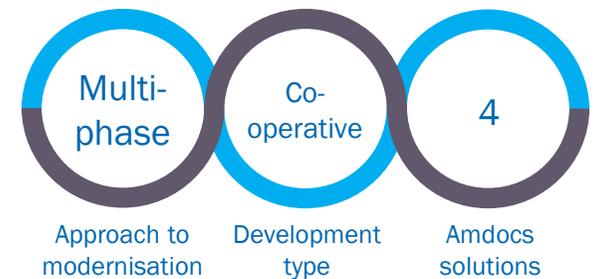
STATE OF THE BUSINESS¹



FOCUS OF THIS EFFORT



PROJECT APPROACH



BUSINESS DRIVERS

- Incumbent systems were nearing the end of life and were expensive to support. There were too many architectural silos, which was limiting operations efficiency.
- Sprint's customer experience was limiting its channel engagement.
- Sprint wanted to improve systems agility and time to market to better address new opportunities.

STRATEGY

- Modernise application portfolio beginning with commerce and catalogue systems.
- Adopt microservices-based architecture framework with a centralised catalogue and unified integrations.
- Embrace co-development with partner Amdocs following TMF standards. Customisations, if any, to be done by the Sprint team.

ANALYSIS

- Sprint has been fairly successful in reducing costs and improving customer experiences.
- Sprint selected Amdocs as its transformation partner due to its broad portfolio, exposure to cloud technologies and earlier success with Sprint.
- The cost savings through retiring legacy applications will be significant.

BENEFITS

Time to market for new offerings down by up to 50%

At least 20% improvement in the total cost of ownership thanks to co-operative development

At least 30% reduction in order fall-outs

Source: Analysys Mason

¹ Before the T-Mobile-Sprint merger

Business challenges and key drivers of the project

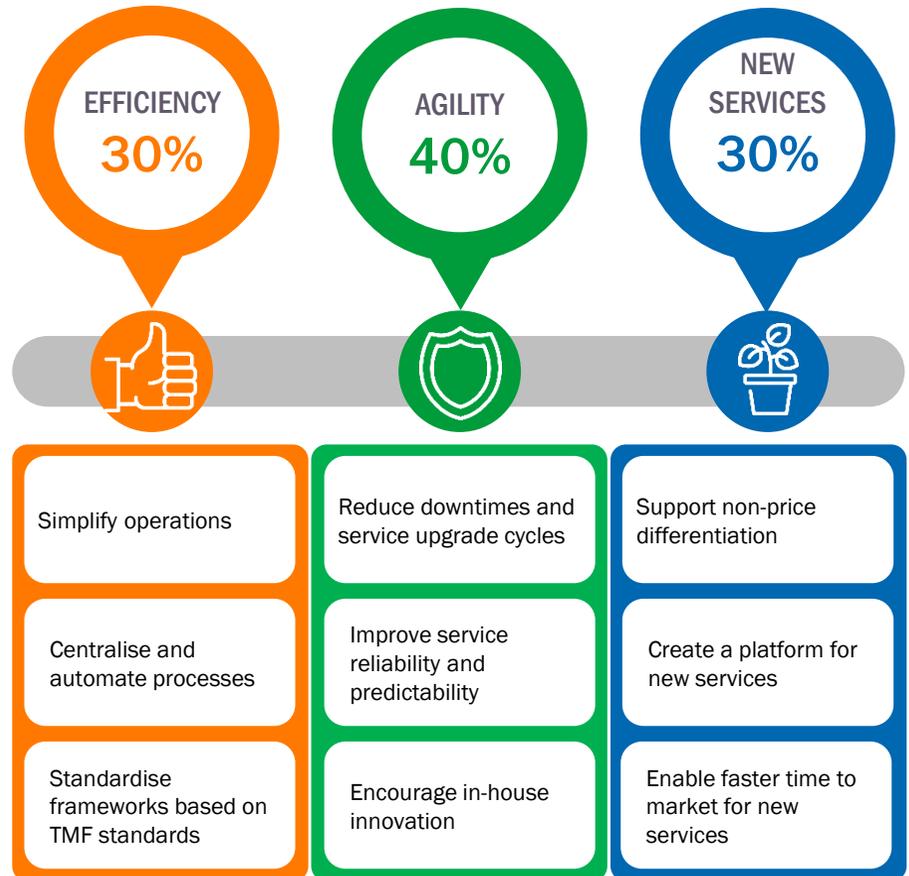
Sprint (the fourth largest CSP in the USA) was under pressure to improve its customer experience and reduce the cost of operations.

Sprint had several legacy systems across its operations framework, many of which were built or bought over a number of decades and were therefore nearing the end of life. These systems were often disparate and resided as silos with limited interactions with adjacent systems. In addition, many of these were systems from multiple vendors and were heavily customised for Sprint's requirements. Most were not running the latest software versions.

The resultant architecture framework was very complex and quite expensive to support and maintain. Moreover, the addition of any new service or functionality required further customisation, which was expensive and often delayed Sprint's time to market for new products and services. These factors also had a detrimental impact on the end customer experience due to factors such as delayed orders and limited self-service capability, which was further exacerbated due to changing customer preferences, thanks to their experiences with OTT service providers.

Sprint wanted to shift to a more-agile architecture framework that would position the company to be more-responsive to emerging use cases and new business models.

Figure 1: Business factors that are driving the transformation project



Source: Analysys Mason

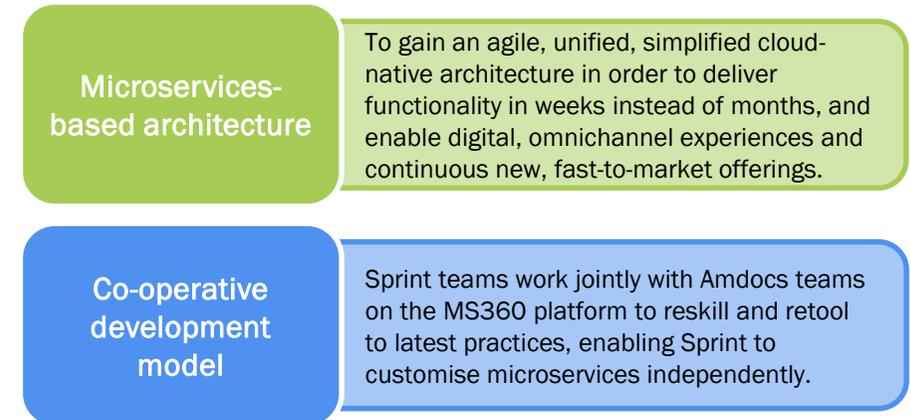
Strategy

Sprint was aware of the market changes and initiated a detailed assessment to explore the best strategies to transform its systems infrastructure in order to reduce costs and provide a long-term technology foundation for the future.

Sprint explored multiple strategies to assess what would be most beneficial, both in terms of cost and keeping up with market changes in the long term. As part of the assessment, Sprint created a detailed business case that comprehensively examined the current cost of operations and the potential opportunities for savings, and arrived at a pricing affordability figure. Sprint decided that a single vendor stack was the best option to swiftly overcome the complexity of multiple integrations and to ensure the timely completion of the transformation. Sprint selected Amdocs as the lead vendor for the transformation because of the company's broad portfolio and experience in managing large scale transformation projects and also because of Amdocs's extensive presence in Sprint's operations.

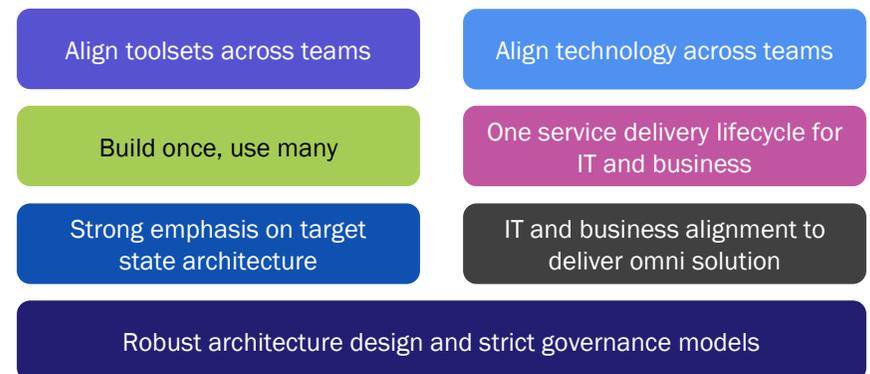
Sprint wanted to embrace open-source applications wherever possible in order to further reduce the cost of operations. All new systems were expected to be cloud-native-compliant and should be deployed using CI/CD pipelines within a DevOps framework. This was part of a broader strategy to shift the entire architecture from a monolithic model to a microservices framework.

Figure 2: Key reasons why Sprint selected Amdocs



Source: Analysys Mason

Figure 3: Sprint's strategy for the future



Source: Analysys Mason

Co-development with Amdocs was an important aspect of the deployment strategy

Sprint's approach to digital transformation is centred on four concepts: the adoption of cloud-native architecture, the creation of a co-development environment, the deployment of a federated catalogue and phased modernisation.

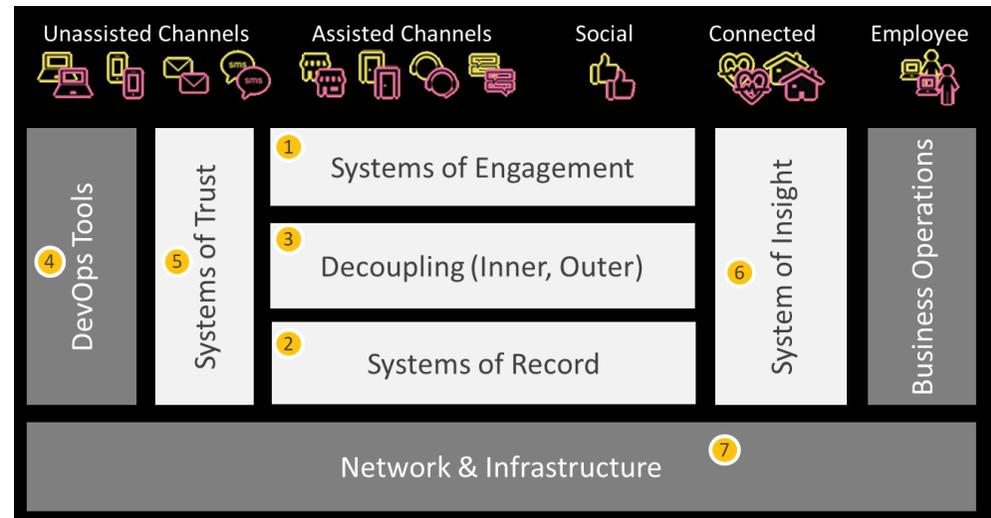
Sprint began its transformation programme with its commerce functions because these had a much broader impact on pricing, the number of systems involved and cost of support, and had the potential for the fastest returns on investment. The project was divided into multiple phases. A key goal was the retirement of legacy, expensive-to-maintain applications in a phased manner without disrupting ongoing operations.

Sprint was keen to embrace the 'build once, use anywhere' approach in order to accelerate time to market, lower costs and eliminate manual errors. Sprint embarked on a co-development approach, whereby Sprint's engineers would work with Amdocs during the development and deployment of the project. This was expected to give Sprint greater control and visibility into the deployment while also exposing Sprint's team to next-generation software development and delivery models. This team is expected to lead the way for any customisations that are required on top of the core Amdocs offering.

"To maximise what we need from a business perspective, we are constantly looking ahead and working together with Amdocs on the roadmap."

Meg Knauth, VP Application Development, Sprint

Figure 4: Architecture overview



- 1 Systems of Engagement are built for rapid & frequent change to address emerging requirements or opportunities
- 2 Core enterprise services implement business capabilities with a focus on operational efficiency and stability
- 3 Modern decoupling (API and microservices) layer, enable an agile multi-speed architecture
- 4 DevOps Tooling provide consistent, secure, low touch build and deployments
- 5 Security and Trust enforced across the Enterprise
- 6 Data powered insights to improve customer experience and operations
- 7 Cloud capabilities to provide consistent low touch builds, auto scaling and improved Business Continuity

Source: Sprint

The Amdocs solution deployed by Sprint was formed of three major products built on a cloud-native platform

The transformation started with the deployment of DigitalONE Commerce and CatalogONE, followed by DigitalONE care and billing and charging functions in the later stages.

The primary solution components involved in the transformation were as follows.

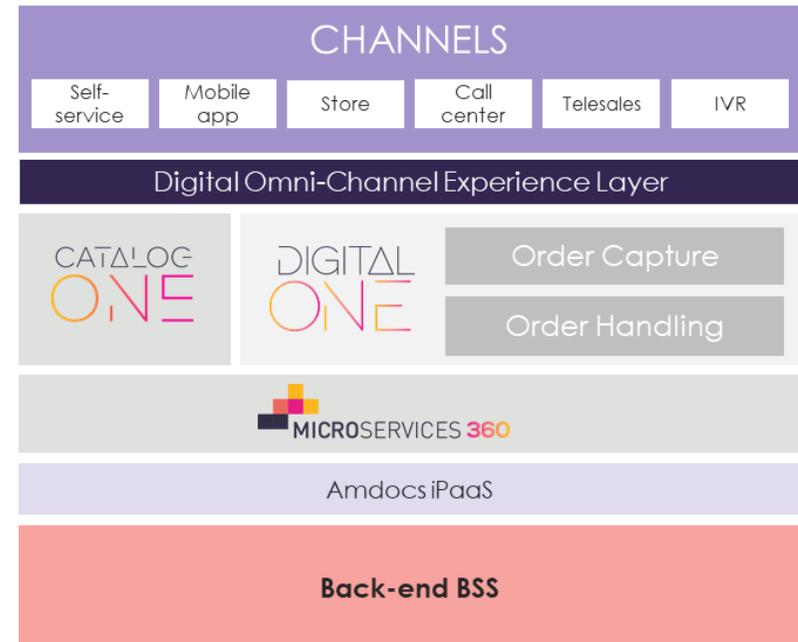
DigitalONE Experience Layer includes the Amdocs DigitalONE Experience APIs and the Amdocs Client SDK to simplify channel application development. Client SDK is used by Sprint scrum teams for customisation tasks.

CatalogONE provides centralised catalogue capabilities. It served as the anchor component of the solution and was instrumental in Sprint reducing the number of active catalogue systems from 22 to 1. CatalogONE supports family plans and unique business models (such as leasing), which was important for Sprint. New offerings can be launched in 1–2 weeks, down from 6–9 months.

DigitalONE commerce (order capture and order handling) includes complete coverage of commerce functions, from discovery to fulfilment. The solution, which is pre-integrated with CatalogONE, enables an omni-channel experience and presents a unified and persistent shopping cart.

Microservices 360 is Amdocs's DevOps framework for developing, customising, deploying and operating DigitalONE and CatalogONE microservices. It is used by Sprint scrum teams for customisation tasks.

Figure 5: Amdocs's solution deployed by Sprint



Source: Amdocs

Amdocs iPaaS enables the rapid modernisation from legacy BSS to a cloud-based digital platform. It allows the two environments to co-exist and enables seamless switching between them, thereby maintaining business operability, continuity and data integrity as well as allowing the reuse of needed legacy functions.

Analysis – Sprint has made steady progress on its digital transformation ambitions and has avoided common pitfalls

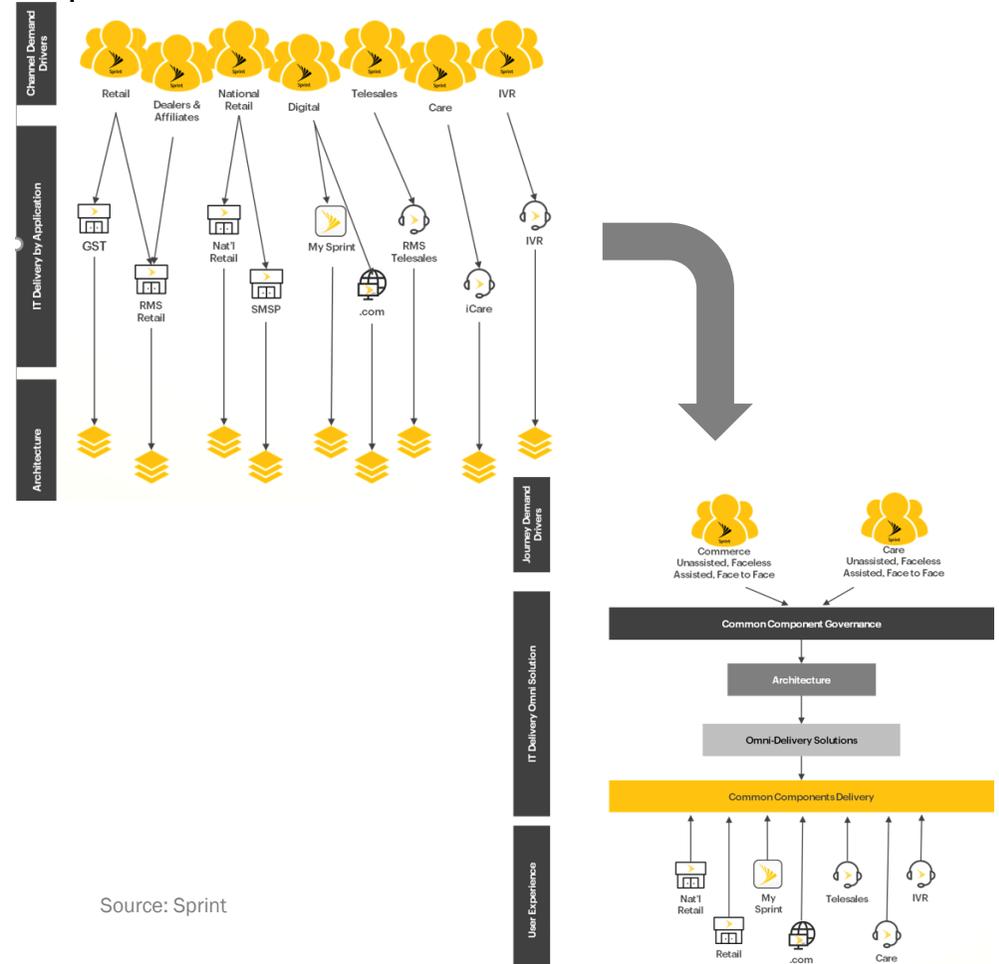
Sprint’s strategy of adopting a measured and phased approach to transformation has helped it to avoid common pitfalls.

Sprint was under pressure from its rivals in a highly competitive market going into the transformation. It started with some inherent disadvantages such as poor customer engagement and a complex and expensive-to-maintain system infrastructure.

However, Sprint put its ability to learn from other CSPs’ experiences to good use. From the beginning, the project had the buy-in and support of the senior management, which is crucial to success. Sprint was also willing to adopt a slower but less risky phased approach to the modernisation of its support systems. This gave it time to familiarise its staff with the change. Sprint’s decision to adopt a co-development model, embrace cloud-native compliant architecture and select a single stack vendor was also crucial to the overall success of the programme. The impact is already visible both in terms of costs and customer experience.

Sprint acknowledges the challenges involved in such a large-scale change management programme, where the greater impact lies beyond technology, such as retraining personnel and finding the right talent. This continues to be a challenge across the industry. The digitisation programme has helped Sprint to improve its operations and customer perception as it integrates with T-Mobile, but there is still work to be done.

Figure 6: Current and future state of Sprint’s omni-channel process flow



Source: Sprint

Sprint anticipates important benefits from the transformation, both in terms of costs and customer experience

1

Time to market for new offerings down by up to 50%

It previously took Sprint up to 9 months to launch new products, which affected the company's ability to respond swiftly to market changes. There has been a dramatic improvement in the time to market following the transformation, and some new offerings can now be launched as soon as 1-2 weeks after inception.

2

At least 20% improvement in the total cost of ownership thanks to co-operative development

The co-operative development approach to deployment has provided Sprint with greater control and visibility into the deployment while also exposing Sprint's teams to next-generation software development and delivery models. This has led to a considerable reduction in the costs associated with customisations of more than 20%.

3

At least 30% reduction in order fall-outs

Order fall-outs were an issue for Sprint, mainly because of the manual process involved in the order management process chain. This at times resulted in lost revenue, poor customer experience and siloed order management systems. The new catalogue and order management systems give greater visibility of the order flow and also automate much of the activity to enable faster processing and fewer fall-outs.

About the author



John Abraham (Principal Analyst) leads our digital transformation research, including three research programmes: *Customer Engagement*, *Monetisation Platforms* and *Digital Experience*. His areas of focus include customer journeys and experience, the impact of 5G on BSS systems, telecoms enterprise opportunities, cost transformation, ecosystems and value chains, and micro-services-based architecture models. John has over a decade of experience in the telecoms industry. At Analysys Mason, he has worked on a range of telecoms projects for operators in Africa, Europe, India and the Middle East. Before joining Analysys Mason, he worked for Subex, a BSS vendor, and before that for Dell in India. John holds a bachelor's degree in computer science from Anna University (India) and an MBA from Bradford University School of Management (UK).



PUBLISHED BY ANALYSYS MASON LIMITED IN JUNE 2020

Bush House • North West Wing • Aldwych • London • WC2B 4PJ • UK

Tel: +44 (0)20 7395 9000 • Email: research@analysismason.com • www.analysismason.com/research • Registered in England and Wales No. 5177472

© Analysys Mason Limited 2020. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, mechanical, photocopying, recording or otherwise – without the prior written permission of the publisher.

Figures and projections contained in this report are based on publicly available information only and are produced by the Research Division of Analysys Mason Limited independently of any client-specific work within Analysys Mason Limited. The opinions expressed are those of the stated authors only.

Analysys Mason Limited recognises that many terms appearing in this report are proprietary; all such trademarks are acknowledged and every effort has been made to indicate them by the normal UK publishing practice of capitalisation. However, the presence of a term, in whatever form, does not affect its legal status as a trademark.

Analysys Mason Limited maintains that all reasonable care and skill have been used in the compilation of this publication. However, Analysys Mason Limited shall not be under any liability for loss or damage (including consequential loss) whatsoever or howsoever arising as a result of the use of this publication by the customer, his servants, agents or any third party.