In 2018, Quebec-based Videotron began an ambitious plan to transform itself: to become a digital-based company, transforming from a complex legacy, multi-system operating environment to an agile, open, standards-based architecture. The first milestone of that plan was Fizz, an independent all-digital mobile brand that describes its operations as a social media platform that just happens to offer mobile services.

One of the key elements powering the Fizz brand was its hybrid cloud environment, in which it used Amazon Web Services (AWS) as the operational platform for its business support systems (BSS) and part of its core network, and a private cloud for the mobile and fixed Videotron networks. This model proved to be so successful that Videotron used it as an inspiration for another new service called Helix.

Launched in August 2019, Helix is a multi-device TV and Internet platform service that replaces Videotron’s legacy TV and Internet service. Helix allows users to use voice commands to search an integrated TV content catalog from multiple sources, like regulated TV and premium channels, YouTube, Netflix, and Club Illico (Videotron’s streaming service). Like Fizz before it, Helix uses a hybrid cloud architecture that includes a 100% digital BSS supplied by Etiya that runs on AWS.

Initially Helix was to be supported using the legacy systems. To test this approach, Videotron executed a major enterprise architecture (EA) project to validate whether using the legacy systems could help the transformation become digital and agile. The result of the EA exercise showed that rather than simply modifying its legacy systems, it could only achieve its transformation using a brand-new digital BSS platform that leverages the cloud, open APIs, and open architecture based on several TM Forum assets.

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**Part 1: Helix BSS**

For the Helix BSS, Videotron saw the opportunity to leverage the investment made in Fizz, although Michel Boudrias, General Manager of Architecture and Planning, Videotron, notes that while the Fizz and Helix BSSs started from the same code base, they evolved quite differently.

“The Fizz stack is completely digital, meaning there are no customer service representatives (CSRs) and you cannot buy Fizz products (Internet and mobile) in other channels – only web and mobile channels are supported,” he explains. “The Helix stack is designed for omnichannel from the ground-up, meaning there are CSR services and brick-and-mortar stores as well as the web and mobile to sell, buy, and support Helix products (Internet and TV).”

Both BSS stacks are hosted in the public cloud on AWS, which offers several advantages, such as better scalability, support, and operations; simplification of deployment, maintenance; on-demand resources for simplified capacity planning; and a shift from capital costs to operational costs (which also means infrastructure cost savings of 20% over a comparable on-premise deployment).

At the heart of this is the Etiya Digital Business Platform, a cloud-native full stack that is pre-integrated into partner solutions. All Etiya’s customer relationship management (CRM), product catalog, order management, billing, customer management and API gateway are on AWS for Helix. The service also incorporates components of Etiya’s AI (Fizz only for the moment) and data analytics capabilities (for both).

**Part 2: The enterprise architecture**

For the EA project, the key challenge was having the right tools for a job of this magnitude, says Boudrias.

“Past EA work was done mostly through MS Office tools and could not easily scale to support and maintain the pace of change,” he says.

“This new EA work had to be based on industry standards. Working with Sparx AE EA tool provider ensured we could leverage all the available TM Forum documentation as a reusable asset inside the EA tool.”

The tool allowed assets to be linked together, from elements of TM Forum’s Open Digital Framework to IT assets, which enabled Videotron to segment its three-year digital roadmap for Helix into multiple manageable implementations. Other tools like Jira and Confluence served as a base for defining requirements and the solution for each implementation.

For example, TM Forum’s Business Process (eTOM), Application (TAM) and Information (SID) Frameworks were linked to Videotron’s IT assets like Business Capabilities, Applications, and Corporate Data model.
“Through these links Videotron made sure that its ‘North Star’ aligned with best practices and industry standards,” says Boudrias.

Videotron used a business capability map (BCM) as part of the EA work to make sure the architecture was aligned with the business objectives of the Helix project, he adds.

As part of the work done in Helix, Videotron is working with other groups at TM Forum on cross-mapping of the Business Process Framework, Application Framework, Information Framework and Open Digital Architecture ecosystem to the BCM, that would place the BCM as the anchor point between these standards.

TM Forum Open APIs were also essential to both the Helix BSS and the EA project, says Boudrias. “Open APIs are key to the encapsulation of functionality and its combination with the overall IT architecture and networks. It enables the Helix Architecture to be more open, adaptable, and easier to maintain in the long run.”

Boudrias adds that Videotron collaborated with TM Forum’s Open API Project during the EA project to select 26 Open APIs from the current catalog, and even defined some Open APIs that were not part of the existing catalog. Videotron will be giving 10 new Open APIs back to the industry in April 2020.

Open APIs were used across domains, not only within the BSS and other components of the solution, but also with more than 50 existing Videotron IT systems, such as enterprise resource planning (ERP) for logistics, as well as engineering systems using Videotron’s existing enterprise service bus (ESB) and AWS API gateway.

“So once an API operation has been implemented in one BSS module, it can easily be reused by other applications in successive phases,” says Boudrias.
Bell Canada says the digital platform and new BSS for Helix were implemented in nine months (from a blank page to complete implementation), which not only took far less time than if it had gone the route of modifying its legacy systems but took one month less than the Fizz deployment. This would not have been possible without industry standards and open APIs. Helix’ success is a role model for Videotron’s digital transformation plans.

Helix is off to a great start – with over 190,000 revenue generating Helix users and 3.0 million website visits in eight months and generated 230,000 bills (all of them electronic).

“It demonstrates how open standards and APIs and the cloud can result in rapid time-to-value, dramatically reduced capital costs, and a complete digital experience,” Boudrias says.

“Helix’s goal is to be 100% omni-channel and to ‘channel shift’ customers from CSRs to the web.”

This will save tens of millions of dollars per year in operating expenditure costs.

Looking ahead, Videotron plans to complete the last piece of the architecture (mid 2021) by migrating its online charging system to AWS to support both Helix and Fizz. Having the rating and charging engine in the cloud provides scalability, support, and simplified operations.

“Looking back on this journey, I think that Videotron made the right choice by taking the bull by the horns and implementing a new BSS platform,” Boudrias says. “Pursuing the standards and Open API route positions Videotron for the future.”

“We are still at the beginning of our journey, but we have great expectations for the future…”