



CUSTOMER STORY

Delivering the Entertainment
Platform of the Future
for Liberty Global

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As one of the world's leading converged video, broadband and communications companies, Liberty Global is constantly looking for ways to deliver cutting-edge entertainment services to meet growing customer expectations. The latest chapter in Liberty Global's innovation journey focused on aggregating all TV channels, movies and series to deliver on the promise of 'any content, any device, anywhere, anytime'.

Liberty Global turned to longstanding partner EPAM for its integrated consulting, design and engineering capabilities to build this next-generation entertainment platform – known as Horizon 4. A set-top box (STB) with 4K Ultra HD picture quality and a voice-controlled remote, combined with the innovative Liberty Global 'GO' mobile app, was rolled out across seven European markets. Liberty Global's customers gave the new viewing platform the highest NPS scores and praised the new features like the personalized viewing recommendations, cross-platform continuation of programs and the simplicity of the new interface.

BREAKING ENTERTAINMENT PLATFORM SILOS TO BRING COST CONTROL & SCALE

Today's consumers are no longer solely watching video content sitting in front of their television. Content viewing on tablets and mobile is now just as popular as set-top boxes (STB) and TVs. As one of the world's leading media and entertainment companies, Liberty Global recognized the need to deliver on their customers' expectation of viewing personalized content at any location and any time with the ability to synchronize streaming between various devices.

Previously, Liberty Global built one-off projects for each country and brand that were difficult and costly to scale. Liberty Global turned to EPAM to evaluate its larger technology and business ecosystem to determine the best approach for solving this challenge. Liberty Global wanted to leverage a 'one platform' strategy by creating a scalable, multi-country and multi-brand video product that could be rolled out across local operating companies. The goal was to achieve significant scale, to enhance the UX, to leverage operating synergies across markets and to bring innovation faster to the end customer.

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ENTERTAINMENT EVERYWHERE: A NEW UX FOR THE MOBILE APP, WEB & STB

Faced with challenges in user experience, technology and processes, Liberty Global and EPAM partnered to develop the new Horizon 4 platform. A multi-disciplined team of Liberty Global and EPAM's consultants, designers, engineers and data scientists embarked on a journey to identify customer needs, develop a product roadmap and bring them to life on Horizon 4. It quickly became clear that customers wanted to continue their viewing as they jumped from their television to their tablet or mobile devices. This sparked the need to develop a cloud-based 'one platform' strategy, which included:

- A STB with 4K Ultra HD picture quality that provides access to linear TV, Replay, Video on Demand content, as well as applications like Netflix and YouTube
- An enhanced version of the 'GO' mobile app, developed by EPAM a few years prior, allowing customers to not only watch content on-the-go but also download content to a local device while abroad or view content in an area without Wi-Fi or mobile coverage
- A new remote for the STB with voice recognition capabilities, developed by EPAM's innovation team, to offer an easier and more intuitive way of accessing features and content



Liberty Global's Horizon 4 platform provides a cohesive multi-channel experience.

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CLOUD INTEGRATION FOR A 360-DEGREE VIEWING EXPERIENCE

To make all of these components work together to deliver a seamless 360° viewing experience, Liberty Global needed a single back-office system to support the core technologies and functionality. With its design team and software engineers, EPAM created a cloud-native microservices architecture built on AWS that was accessible across all platforms, devices and countries.

In looking at the greater ecosystem and intersection of business, technology and design, EPAM determined that a complete transformation of core systems was needed to effectively solve Liberty Global's business goals. By leveraging EPAM's expertise in integrating design and engineering with a DevOps approach, the project resulted in a re-architecture of Liberty Global's core platform that featured:

- A design system that creates an efficient way for both Liberty Global and external design agencies to deliver fully interoperable assets for all of the video platforms
- A shift from Waterfall to a modern, fast and effective SAFe Agile development process for faster releases
- A microservices architecture that provides one "back office" for any device – STB and over-the-top (OTT) services for cross-device customer journeys
- A data lake that utilizes artificial intelligence and machine learning to better inform decisions around product design, customer satisfaction and potential new revenue sources
- An environment ripe for self-disruption, continuous innovation and optimization by instituting rapid design, build, test and deploy programs

This digital transformation journey helped Liberty Global enable agile processes, regular production releases and speed up time-to-market. With this foundation in place, customers have continuous access to new enhancements like tailored recommendations and individual watchlists.

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CUTTING-EDGE NEXT-GEN PLATFORM DELIVERS THE PERSONALIZED VIEWING EXPERIENCE CUSTOMERS WANT

Liberty Global wanted to ensure Horizon 4 continued to meet growing expectations of consumers by using data to deliver a unique viewing experience for every customer. The new data lake leverages insights from individual viewing behaviors and greater audience trends to make each interaction more personal with anonymized data. The new agile delivery processes continue to make these interactions more relevant as new features are released every day.

Since Horizon's 4's launch, Liberty Global has achieved the following results:

- More than three million consumers are using the Horizon GO app. In the Netherlands, Horizon GO is the third most downloaded video app after Netflix and YouTube.
- There have been over 300,000 deployments of Horizon 4 on the STB.
- Horizon 4 received the highest NPS score to-date for a product launched by Liberty Global.
- Liberty Global saw the lowest video attrition in the company's history since Q1 2018, as more and more customers have enjoyed the cross-channel viewing experience.

WORKING WITH LIBERTY GLOBAL'S DIGITAL TRANSFORMATION TEAM, EPAM COMBINED ITS INTEGRATED BUSINESS, DESIGN AND INNOVATION CONSULTING CAPABILITIES WITH ITS SOFTWARE ENGINEERING EXPERTISE TO DELIVER INNOVATIVE BREAKTHROUGH IDEAS AT SPEED AND SCALE.

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EPAM AND LIBERTY GLOBAL: COMMITTED TO INNOVATION

From the start of their partnership together in 2012, EPAM has been Liberty Global's partner for innovation, helping Liberty Global's Horizon platform become a definitive market-leading solution. Liberty Global and EPAM continue to experiment and innovate with a continuous production funnel of innovative products to improve the platform. Recent deliveries include a 'swipe channel surfing' interface, a 'push to TV' tablet functionality, as well as a crowd-sourced mechanism for sharing and tagging popular short-form content on social media. Since their collaboration began, Liberty Global has awarded EPAM with the following accolades:

- 2012 Global Vendor Award for Innovation and Breakthrough
- 2014 Global Vendor Award for Best Product and Service Quality
- 2016 Global Vendor Award for Innovation and Breakthrough
- 2017 Global Appathon: Best IoT Solution
- 2017 Global Vendor Award for Innovation and Breakthrough
- 2019 Global Vendor Award for Best Product and Service Quality

EPAM continues to work alongside Liberty Global to create a business focused on the future at the forefront of digital disruption in the industry.

"We found working with EPAM has been a true partnership, where they've proven themselves to be a reliable, trustworthy and hardworking team that has really helped us push the boundary of customer-centric innovation. With programs like Horizon 4, what we need in our development partners is their ability to stay the course as there are often multi-year projects and within that time, there are many short, demanding development cycles. We need a partner who can inspire us, be disruptive and push the envelope. EPAM has really helped us deliver on all of these fronts, so it's been an amazing journey together and we're really happy with our partnership."

— Mark Giesbers, Managing Director Products, Liberty Global

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TECH STACK AT A GLANCE

- Amazon Web Services
- RDK
- Adobe AEM
- Apache Spark
- Prometheus
- Elasticsearch
- Metrological
- Kubernetes
- Kafka

ABOUT EPAM

Since 1993, EPAM Systems, Inc. (NYSE: EPAM) has leveraged its software engineering expertise to become a leading global product development, digital platform engineering, and top digital and product design agency. From telecom service providers to television networks and game developers, EPAM helps its media and telecommunications customers envision and develop innovative, next-gen digital solutions that deliver subscriber satisfaction and forecast future consumer needs. EPAM's global teams serve customers in over 25 countries across North America, Europe, Asia and Australia.

ABOUT LIBERTY GLOBAL

Liberty Global (NASDAQ: LBTYA, LBTYB and LBTYK) is one of the world's leading converged video, broadband and communications companies, with operations in six European countries under the consumer brands Virgin Media, Telenet and UPC. Liberty Global invests in the infrastructure and digital platforms that empower its customers to make the most of the digital revolution. Liberty Global's substantial scale and commitment to innovation enables the company to develop market-leading products delivered through next-generation networks that connect 11 million customers subscribing to 25 million TV, broadband internet and telephony services. Liberty Global also serves 6 million mobile subscribers and offers WiFi service through millions of access points across our footprint. In addition, The company owns 50% of VodafoneZiggo, a joint venture in the Netherlands with 4 million customers subscribing to 10 million fixed-line and 5 million mobile services, as well as significant investments in ITV, All3Media, ITI Neovision, LionsGate, the Formula E racing series and several regional sports networks.

QUESTIONS?

Contact us at Sales@EPAM.com or visit us at EPAM.com.

