myBBC
Accenture helps BBC’s digital revolution get personal.
The BBC’s mission is to ‘inform, educate and entertain’. Fulfilling that remit requires the BBC to remain relevant for its broad audience, serving both specific niche tastes and delivering more populist content.

In a speech BBC Director-General, Tony Hall gave on “the BBC in the internet era” on 2nd March 2015, the broadcaster was declared at “the start of a real transformation – the myBBC revolution”. One key challenge and opportunity for the BBC, he noted, was “How to reinvent public service broadcasting through data.” To support this vision, myBBC formed the foundation that would enable the organization to harness the power of data to deliver true personalization for virtually every online user, provide advanced tools and capabilities to drive a two-way relationship with its audience, and leverage the power of analytics to support and inform decision-making for editorial and creative teams throughout the organization. It’s a bold strategy.
myBBC is a significant and substantial strategic leap for the BBC. In an age when audiences are becoming more fragmented across multiple forms of digital media, the BBC set out to drive a more personalized relationship with its audience. To achieve this, it is looking to big data analytics to build a truly one-to-one personal relationship across its online product portfolio including BBC iPlayer, BBC News and BBC Sport that is radically different from a traditional broadcaster.

Asking users to sign-in enables the BBC to coordinate experiences across every audience touchpoint. And by learning from audience behaviors and preferences, the BBC is able to continuously increase the relevance of what it offers. It can help the BBC learn about its users as individuals, understand their likes and dislikes, and make suggestions about other digital products and content they would find interesting and appealing. This helps promote a high level of engagement and repeat visits, both essential KPIs for BBC’s suite of digital products.
Delivering personalization requires a strong value proposition that offers previously anonymous audience members a strong incentive to sign-in. Achieving that lies in ensuring a compelling set of features, whose benefits far outweigh the “hurdle” of registration and sign-in.

Becoming a data-driven media organization that constantly uses the information it receives from users across all its content and services to innovate and develop new services is core to the myBBC experience-led transformation.

A common platform accessible to all of BBC’s digital products was therefore essential to allow the BBC to make data-driven decisions based on what audiences love and why. It requires tools that help online products to build loyalty and a true sense that the experience is tailored to audience-specific needs.

And that’s the goal that informed all of Accenture’s work with the BBC.

To help the BBC reach its goal, Accenture and the myBBC teams worked to deliver:

Identity management
A simplified, flexible, web-scale identity platform was critical to achieve the goals of myBBC – without a fully featured and highly reliable solution, personalization would be impossible. Accenture helped to address challenges arising from an ageing identity system with custom integration into more than 30 products and apps across the BBC estate. The initial roadmap focused on bolstering capacity to support high-volume events (such as online voting for programs like Strictly Come Dancing) and introducing token-based OpenID connect authentication. The latter opened BBC ID to native mobile applications for the first time; providing a major step in cross-device personalization for the 6.4 million signed-in users since May 2015.
Seamless Sign-in across Public Service and Commercial Products

Working with BBC user experience, product management and technology staff, Accenture enabled seamless single sign-on across all BBC’s public service and commercial digital products, enabling such initiatives as the launch of BBC Store, a key strategic initiative to make full use of the BBC’s rich history of premium content. Following on from this, Accenture continued to work with the BBC to develop and operate the new BBC Account; rolling out a leading-edge Forge Rock based solution to support BBC’s broader capabilities around audience identity management.

User Activity

Creating a relationship with every myBBC user depends on knowing what they do across all services and associated content. This means not only what people watch or read, but their other interactions, such as commenting and ‘favouriting’ particular services or even individual pieces of content. Amassing data about an individual’s activities creates the possibility of making relevant recommendations and suggesting other items of interest - such as forthcoming events or programs. It enables the BBC to transform from an anonymous service to a trusted, informative and valued companion.

Accenture helped to create a User Activity Service that provides a common repository for the storage of audience interactions while simultaneously providing a number of digital capabilities to BBC Products, wherever they are within the BBC’s online estate. BBC Products can make use of functionality from User Activity Service like pause/resume across devices, voting, commenting, bookmarking, and favouriting - while myBBC explicitly and implicitly learns more about its audience. This ‘symbiotic’ data store provides a cloud-based record of activities and enables BBC services to offer personalized recommendations, notifications and lists of favored content.

User Notifications

A platform that allows audiences to know when content they’re likely to be interested in becomes available is critical to deliver an ongoing, engaging digital experience. The notification service provides a pan-BBC solution to send users an alert when new content is available. As the service expands, making more and more content types from across the BBC available, experiences across the web, mobile and other devices will seamlessly join together to help users get the latest updates on their favorites wherever they are - creating a stronger relationship with the audience regardless of device or BBC Product they are interacting with.

Single Customer View

Being able to build one-to-one relationships with every user rests on the ability to gather comprehensive data about every audience member’s activity. To that end, Accenture helped create Single Customer View, a next-generation data supply chain and data lake built entirely in the cloud.

The platform ingests over one billion events on a daily basis from real behavioral data in the user activity service, sign-ins and registration information and other BBC analytics services, to provide a wealth of information on the BBC’s audience. Bringing all data together in one place enables the BBC to start asking more complex questions to which the previously siloed data stores could provide only partial answers. Additional sources of data can be rapidly added to enrich views and further refine the BBC’s understanding of its audience, promoting curation and production of increasingly relevant and inspiring content informed by the resulting segments they are able to devise.

Accenture leveraged resource and experience from its Video Marketing and Monetization Services offering to provide expertise in selecting the best technology solution, constructing the infrastructure, and integrating the data sources.
Accenture began working with the BBC in mid 2013 and was tasked to support mobilizing the overall program at speed and to support the design and implementation of the myBBC engineering delivery organization. This involved key Accenture personnel being seconded into senior program roles in the short-term, fulfilling three main objectives:

- To mobilize the engineering function
- To define and shape the solution and technical architecture
- To support the core program office by designing and implementing the programme’s underlying delivery approach, governance and processes.

In early 2015, the BBC wanted to accelerate the technical delivery of the myBBC products and services. Accenture built upon the experience of helping myBBC to mobilize and proceeded to provide digital engineering support in some of these key strategic areas, helping the BBC to establish its delivery operating model, leveraging Accenture’s Digital Delivery Factory framework.

**Program Mobilization**

**Program Management and Methodology**

Accenture supported the BBC with the skillsets and experience to drive an effective approach to program management and execution. In a highly creative environment like the BBC, it was essential to provide a framework for continuous delivery and rapid evolution of products and features, enabling the BBC to respond swiftly to audience feedback.

Accenture led the definition and rollout of the program delivery method, developing roadmaps and agreeing the governance approach. This was crucial to meet the standards of transparency that are vitally important to the BBC and involved liaising effectively with BBC management as well as other staff, consultants and contractors. Achieving that required Accenture to work as a truly embedded seconded team, working in a way that aligned with the BBC’s culture, processes and methods.
Engineering management

As well as program management, Accenture also supported the approach to leading and operating its engineering management teams. This initially involved working with BBC leadership to integrate a number of teams working across existing personalization projects, into one common engineering factory of over 100 people. It was essential to ensure that the work of all those teams delivered to a common agile culture, methodology and cadence. That made it possible to track progress and guarantee that any new requirements, products and teams relevant to the work of a specific team could be integrated effectively and consistently.

Accenture leveraged its Digital Delivery Factory (DDF) capability to introduce best practices for agile, multi-team delivery. The DDF is a combination of methodology, tools and enablers aimed at accelerating large-scale digital programs and ensuring that multiple teams can work independently with a high level of predictability and interoperability. The DDF is built around effective breakdown of roadmap items by feature and by architecture, ensuring a constant flow of development-ready tickets. These concepts enabled the myBBC management team to make quick decisions based on relative complexity of the services being built, allowing teams to work with autonomy while simultaneously promoting cohesion across the program.

Setting up the factory involved:

1. An aggressive ramp up of engineering teams – from 0 to 70 people in less than two months
2. Collaborative operation of multiple parallel agile delivery streams
3. Transitioning back to the BBC for ongoing product development and the operation of live services
Accenture supported the development of technology roadmaps across a number of core services to enable multiple parallel streams of development. The resulting roadmap provided a clear plan and picture of the capabilities required in order to meet the program’s goals. Accenture strove to break down barriers between teams in order to avoid a siloed approach to each platform service, fostering a more collaborative environment driving towards common program goals.

Architecture development

Accenture provided skilled resources to support the architectural definition of myBBC, performing a mix of conceptual and more practical delivery of architecture support. This meant switching between, for example, defining high-level principles and models to working with technical teams on the best way to build, test and deploy modern web-scale digital products.

Accenture’s architects helped myBBC to define the overall architecture and more granular architectural patterns and services across four key areas:

1. **Audience Facing Services:** The services that combine platform services to either collect or surface data as part of the engagement with BBC Products. They also create a compelling reason to sign-in and therefore allow the BBC to personalize the Products for audiences. Examples of these include commenting, voting, and activity aggregation services.

2. **Operational Components:** The services that are used by internal or operational teams to manage the overall platform. Examples of these include analytics and reporting dashboards and editorial tools to control the various platform and audience facing services. Also includes personalization support tools like moderation, vote creation etc.

3. **Platform Services:** The services that provide micro-services for collecting engagement data and, more importantly, surface high-value capabilities informed by that data to drive engagement across BBC Products. Examples of these include recommendations, notifications, activity and identity services.

4. **Architectural Support Services:** The services that underpin the platform from a non-functional perspective. These are cross-cutting Platform services that provide security, scale, flexibility, and resilience. Examples of these include encryption services, API management and tools to support the development and environment pipelines for DevOps capabilities.
Architecting for web-scale involves careful consideration of consumption patterns and volumes, and requires the adoption of modern cloud-based architecture components and services.

Key characteristics of the myBBC architecture are:
• Repeatable, rapidly deployable cloud-based infrastructure stacks
• Flexible, rapid expansion to continuously deliver new functionality
• Repeatable integration with identity services across multiple digital products
• Highly configurable integration with platforms
• Micro-services based architecture providing high performance even with low levels of compute resource
• Highly scalable cloud-based platforms as a service (PAAS) capabilities
• Enabling continuous delivery through automation, containerization, and developer accountability
• Modern front-end, web-based frameworks and technologies

In addition, Accenture helped to govern architectural decisions across such issues as security, scalability, cost of ownership, functional responsibility and risk of commoditization. This ensured that on such a large program of work, teams worked collaboratively with the BBC’s whole architecture community to align with BBC Product’s roadmaps, plans and objectives.
RESULTS

myBBC has transformed how all online BBC products and services engage users. The result is a personalized online experience, tailored marketing and improved content discovery which drives up relative time spent and increases audience loyalty and appreciation.

The BBC’s 400 editorial staff now have access to better audience analytics tools and insights with real-time data provided to journalists, while they can also understand what audiences are doing across the different devices and platforms they’re consuming BBC content on. Marketing teams are also able to monitor social media more effectively to understand better how audiences are responding to TV, radio and news stories and content.

Accenture has helped the BBC to provide real value to the license payer by providing:

- Access to a personalized content experience across multiple devices, products and services built on a seamless Identity platform
- Exciting notifications upon new releases of their favorite BBC content
- Tailored recommendations of new content driven by analysis of previous activities
- Safeguarding the future relevance and license payer value of BBC content, through providing comprehensive and meaningful data to producers and editors
- Enabling personalized coverage of the Olympics and key cultural events

The initial benefits of myBBC have already proved popular with audiences:

- In the year following May 2015, over six million users signed in to the BBC – with over a third of users coming back to the BBC on a monthly basis to benefit from personalized signed-in experiences
- Over a billion personalised notifications have been sent to fans via the BBC Sport app - along with tens of billions of breaking news alerts from the BBC News app
- Millions of users signed in to BBC News and BBC Sport mobile apps, with tens of millions of topics and content items selected
- Over a billion BBC programs were recommended to viewers and listeners based on what they’ve previously watched/listened to and are interested in
- Audiences are using or benefitting from personalized experiences - including BBC iPlayer play, pause and resume; notifications and recommendations - hundreds of millions of times a day
- The number of people signing up to the pan BBC newsletters has increased by many times over
- In the last quarter of 2015, signed-in users consumed almost fifty percent more BBC content than those who weren’t signed in
As myBBC continues to expand its service catalogue across BBC Products, the BBC will continue to ensure it can reach all the different segments of the audience in a way that is highly relevant – continuing to drive its transformation from a traditional broadcaster into a leading digital company.
ABOUT ACCENTURE

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