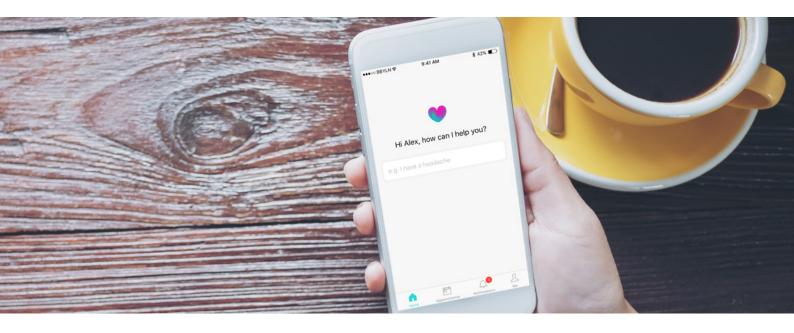# Babylon Health – leveraging Camunda for Clinical Safety

Babylon's mission is to put an accessible and affordable health service in the hands of every person on Earth. As one of the biggest general medical practices in the UK, it introduced Camunda to deliver the right treatment to individual patients, ensuring clinical safety across a complex human workflow management ecosystem.

Revolutionizing Healthcare

Babylon is one of the largest National Health Service (NHS) practices in the UK, as well as one of the leading companies providing healthcare services worldwide, processing tens of thousands of daily consultations with individual patients.

Each consultation triggers a complex, personalised workflow combining human and automated tasks to ensure each patient receives the right treatment and doesn't require any further support. For example, following a consultation patients might be asked to take further diagnostic tests, like a blood test in a location of their choice, which then triggers multiple tasks based on the results.

With personalised workflows for every single consultation, Babylon was confronted with a significant management challenge. On top of that, the safety of patients is a consistent consideration throughout – losing track of a patient during a process can have a catastrophic effect on their personal health and cannot occur under any circumstances.

Clinical Processes as Workflows

Following an inception period, Babylon's clinical workflows team decided that BPM workflows allow for the closest representation of clinical processes. Leveraging a workflow engine would allow them to focus on developing the workflows themselves, instead of building their own engine – which can be highly error-prone. Additionally, the visual language of BPMN requires little to no technical knowledge and allows non-technical stakeholders to visualise the end-to-end process.

"We started looking into workflow processing tools and we found Camunda among a few other alternatives," explained Luca Mozzo, Software Engineer, Babylon. "We decided to start working with Camunda because of its unique features and the Enterprise support that was available to us. To mention one, the availability of an off-the-shelf complete UI allowed us to go live much earlier than other BPM solutions."

Minimal Effort Implementation

The first deliverable for Babylon's clinical workflows team was designed around Camunda BPM from the very beginning, making the implementation effort minimal. Even integrating with services across the company was straightforward because the team was easily able to build an API around Camunda, or modify specific components. Additionally, the support for several Java frameworks meant adding Camunda to a blank project was as easy as adding a dependency and some configuration.

Babylon's team took advantage of the consultancy hours with experienced Camunda practitioners, available as part of the Enterprise license, to ensure they started off on the right foot and reduced potential issues in the long-term.

"We also found the public Camunda forum very active, where every question has an answer," Luca said. "If we need to discuss something that is implementation-specific or we couldn't find the answer in the forum, we could always get our answer with the Enterprise Jira support system."

Ensuring Patient Safety

Patient safety is Babylon's number one priority when designing processes. Losing track of a patient during a process can have a significant effect on their health, so teams must ensure that patients don't slip through the cracks. Automating this human workflow management is one of the clearest advantages of using Camunda for workflow automation.

On top of that, Babylon ensures consistency of treatment across all patients, creating a seamless user experience which provides genuine value to patients and the business alike. For example, regularly evaluating data from Camunda ensures the completion time for individual tasks meets Babylon's internal targets and the team is able to adjust the staff allocated to specific tasks as demand rises and falls.

In some workflows, information about the outcome of tasks – like issuing a prescription - are sent directly to the patient in Babylon's app, where patients can see the results themselves. "In the future we might have 'patient tasks' where the patient needs to complete a simple task, like confirming an appointment date through the app in order to advance in the workflow," Luca explains. "Camunda is a tool for us and our partners to ensure we're providing the best service to our end users."

Expansion and Automation

As a fast-growing global business, Babylon is constantly optimizing existing workflows and creating new ones. Alongside, tech teams are working to make the clinical workflows more scalable and better integrated with the Babylon ecosystem. In parallel, Babylon is automating some of the repetitive tasks currently done by humans, which will allow them to quickly scale to accomodate an increasing number of patients.