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Agile Byte

Agile Byte: Case Study No.2

Agile Delivery of FCO's business critical IT

The requirement



Foreign &
Commonwealth
Office

Using agile, rapidly deliver a new solution to support FCO's response to overseas crises. For any crisis situation FCO needs to capture up to date information about affected British Nationals, quickly and efficiently, through a number of channels.

The main challenges:

1. **Critical lead times.** The core solution needed to be in place within 5 months of project start up to meet Ministerial commitments around introduction of the new system. After initial go live, ongoing development could follow the roadmap for the remaining financial year and beyond, including an element of continual improvement.
2. **On-boarding** the agile development supplier, deploying the team on-site in the FCO and starting to work with business users. It also included technical set-up - remotely building the proposed open source technology stack and establishing case and automated testing tools.
3. **Scope.** The solution had to deliver a useful crisis management product from the start, including:
 - a) New **digital channels** providing the general public with access to a wide range of channels to communicate with FCO, including an online form and SMS. Presenting the information 'real time' to HMG staff worldwide.
 - b) **Easy to use and administer.** The new system had to be highly intuitive for FCO staff to use in pressurised circumstances; this included account activation and access, if necessary outside the corporate network from mobile devices. Automation of repeatable activity was needed to avoid resources being overwhelmed by processing information in a large-scale crisis.
4. **Hosting.** Set up a new Cloud Infrastructure as a Service (IaaS). Establish a support wrap for the overall solution covered by a comprehensive SLA.
5. **Accreditation** for the entire Service including ISO27001 certification.

The solution

On-boarding and Elaboration. During procurement of services via G Cloud (see Agile Byte **case study 1** for details) we worked closely with FCO business stakeholders to develop a set of high-level requirements. This included a defined **Minimum Viable Product (MVP)** for the initial core solution. Agile Byte then ran a business impact assessment to measure the **sensitivity of the**

information being processed and worked closely with **FCO Accreditors** to determine the **accreditation** target at the outset.

Having selected the agile development supplier we began to **map out the team profile and sprint sizes**. The initial **Elaboration phase** focused on-boarding activities and agreed the split of requirements into epics and user stories that the team could realistically and accurately estimate against a couple of sprints ahead.

MVP implementation. The agreed approach to delivery followed the agile methodology by defining the delivery in terms of '**sprints**' (Usually a two week time boxed period of development from which a candidate release is the goal). The elaboration planning determined the number of sprints we would require to deliver the MVP. This was closely managed and reviewed by Agile Byte who provided project, technical, test management and security assurance and overall guidance to FCO business stakeholders throughout the process.

Critical changes were made early on to ensure that a satisfactory level of **velocity** was achieved. This included changing the initially proposed 2 week duration sprints to 3 weeks - reflecting the scale of the work involved in developing a well-engineered enterprise application from scratch. In addition the development **team profile and structure was adjusted** to reflect the nature of the work; a **User Interface specialist** was deployed to inform design principles and to ensure that the system was intuitive and easy to use. Team working practices were also reviewed and an FCO product owner brought on-board, supported and **mentored** in the role by Agile Byte. Emphasis was also placed on requirements **traceability** relating the MVP to the stories used by the agile development team to code and test against.

Once the required development velocity was achieved Agile Byte Staff then sourced the required services for **hosting** (IaaS), **SMS gateway** and support and maintenance (**against an agreed SLA**). Again, more detail can be found on these specific procurement activities in Agile Byte Case study 1.

Post MVP. With the agile development team now up and running and an improving sprint rhythm/velocity, additional business requirements could now be addressed. Although Agile is not about defining a fixed scope, Agile Byte was able to define a roadmap for developing the solution based around Themed Phases; this included automatic case prioritisation, Management Information and continual improvement – enhancement to existing functionality based on user feedback. The project also addressed recurring issues identified from end of Sprint retrospective (lessons learned) sessions, such as insufficient elaboration in advance of a sprint for effective sprint planning.

As the project has progresses we have already **off/on boarded** a number of the original project services to meet the needs of the project as it changes. Both the support/maintenance service, and the original cloud platform supplier have been replaced with more cost efficient but equivalent services from the **G Cloud**. This was all possible because of the G Cloud and FCO retention of the IPR providing an opportunity to see if the market place had a better, more cost effective supplier - it did. These changes have delivered real cost savings and benefit to FCO in a relatively short space of time.

The results

The fully accredited Crisis Hub solution went live ahead of the original deadline - around **four months** after the agile supplier was on-boarded. **The solution was used successfully in a crisis almost immediately.** Agile Byte have managed and assured the subsequent development to realise the full potential of the system. This has included new functional capabilities in the areas of automatic prioritisation and alerting, mapping and reporting - all in real-time.

Agile Byte have applied continual improvement principles to refine the development process, as well as the solution. We have pushed for further innovation by extending Agile principles to the whole project including business change through the use of Sprint boards, adopting greater simplicity and transparency with Kanban principles and extending Retrospectives to include all project stakeholders.

With well **over twenty overseas crises having been supported by the Crisis Hub Service during the past 18 months,** the FCO have really embraced the G Cloud approach and agile delivery process. But one thing the FCO and Agile Byte have learnt is there is not a single 'right' approach Agile within a government environment. The key is the need to leverage the flexibility of the method to deliver the intended benefits – **deliver quality quickly.**

Other areas of HMG are now starting to look at how they can follow a similar approach or re-use the functional capabilities FCO already have in place.

For further information

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