Digital Experts Programme
Tri-borough adult social care app case study

The issue and context

Faced with an ageing population and increasing constraints on their finances, the City of Westminster, the London Borough of Hammersmith and Fulham and the Royal Borough of Kensington and Chelsea (the Tri-borough) are shifting away from traditional adult social care provision towards a model that encourages flexible, personalized care with a strong emphasis on individual outcomes and greater cooperation between services. The aim is to reduce dependency, to support people to remain in their homes and in their communities for longer and to help people to help themselves.[1]

In support of this objective, and as part of the councils' shared corporate ICT strategy to build integrated ICT services across all three councils, the adult social care teams in partnership with the shared ICT service in the three boroughs have been streamlining their ICT and support infrastructure. The teams now use a single instance of the Frameworki social work case management system and they have also launched a joint adult social care signposting and information website for customers, People First (www.peoplefirstinfo.org.uk).

During 2013, the adult social care ICT programme was given the go-ahead to investigate the potential benefits of using mobile technology, in partnership with the corporate shared ICT service. A business analysis and requirements gathering exercise in the early part of 2014 was followed by a design and development stage. The programme then focused on working with Westminster's adult social care teams to pilot a bespoke mobile working solution for front-line staff.

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[1] See for instance the Tri-borough Market Position Statement 2013
https://www.lbhf.gov.uk/Images/Market%20Position%20Update%20April%202013_tcm21-180414.pdf

'We recognized that mobile devices were becoming increasingly important and that there was a great deal of scope to improve the tools and information that professionals had access to when they were out in the field.' Programme Manager, Tri-borough Adult Social Care IT Programme

There were three main elements in the proposed solution:

- Communications: access to work emails, calendars and contact lists on the move. Front-line workers highlighted the value of being able to stay more easily in contact with, and know the location of, colleagues and others.
- Consultation: a custom-built Frameworki mobile app which would allow users to securely view key personal information about service users (name, address, NHS number and so on) and case notes.
- Context: access to apps, internet and intranet resources (for example, the People First and NHS Choices websites, maps, train times etc.) that can be used while out-and-about to make discussions with service users more productive or to make a professional's job easier.

The ultimate aim, subject to a successful pilot, was to scale up the mobile working solutions so that they could be rolled out to all adult social care staff members in the three councils.

The project objectives and targets

By the beginning of 2015, the adult social care ICT programme had reached the stage where a bespoke Frameworki mobile app, with initial basic functionality, had been developed by the system supplier and was being deployed to front-line staff for piloting. The app was accompanied by email and calendar access and other useful apps and tools available off-the-shelf or via links.

The aim of the Digital Experts project was to complement the work already underway in two areas:

- To enhance the app to allow staff to securely view case documents and amend or add to the Frameworki case notes while out of the office – a key requirement for front-line staff
- To enable staff to access key contextual information from the mobile solution, for instance via the People First website.

Adult social care mobile working – a definition of success

The project would thereby deliver two key benefits:

- Adult social care staff across the three boroughs would be able to work more effectively and efficiently while out of the office and therefore spend more time with customers, by reducing the time taken to travel between office locations to collect, review and update case information. Even in a relatively small geographic area such as west London, travel can be very time-consuming.
- In addition, staff would be equipped with a mobile device that would enable them to look up information about a customer while in their home and to show them related information and resources that might be relevant to them. This would encourage people to find solutions for themselves, encouraging greater levels of self-sufficiency.

Given that within Frameworki approximately one million case notes are recorded each year, the potential efficiency gains from even a small saving in staff time are very significant, as the table below suggests.

Team	Assumed time saved time per visit in minutes per week						
	2 mins	4 mins	6 mins	8 mins	10 mins	15 mins	30 mins
Hospital Admission / Discharge Team	3,000	6,000	9,000	12,000	15,000	22,500	45,000
Community Independence / Reablement Team	3,480	6,960	10,440	13,920	17,400	26,100	52,200
Access and Placements Teams	288	576	864	1152	1440	2160	4,320
Locality Teams	1170	2340	3,510	4,680	5,850	8,775	17,550
Older People Mental Health Team	210	420	630	840	1050	1575	3,150
Total minutes saved per week	8,148	16,296	24,444	32,592	40,740	61,110	122,220
Hours per week	135.9	271.5	407.4	543.3	678.9	1018.5	2037
Per Annum (hours saved)	7,062	14,123	21,185	28,247	35,308	52,962	105,924
Full Time Equivalent Staff Member (37 hrs per week for 48 weeks per year)	3.9	8.1	12	15.9	19.8	29.7	59.7
Assumed FTE cost- £39,000	£155,069	£310,138	£465,207	£620,276	£775,345	£1,163,017	£2,326,034
Potential saving over three years	£465,207	£930,414	£1,395,620	£1,860,827	£2,326,034	£3,489,051	£6,978,101

Three other wider benefits were also envisaged at the start of the project:

- The team would be able to prove or disprove an element of their previous business analysis work relating to the value of making case notes editable on the move. This would be relevant to other urban authorities in particular.
- The mobile app would be available to other local authority clients of the supplier in a 'ready to use' state, requiring only relatively minor changes to visuals and graphics. The Tri-borough team had initial conversations with a range of other councils who were keen to adopt the functionality.
- Finally, the team would develop its knowledge about and contacts with the mobile working industry, including insights about security, device and software choices, mobile connection costs, app development approaches and the management of devices once deployed to end users. These insights would be shared with other councils.

As for timetable, the project planned to roll out 45 iPads to test the overall mobile solution by the end of April 2015 for an initial six to eight-week trial period. The additional work to deliver the functionality to add/amend case notes and to view ancillary information was scheduled to be completed by the end of June 2015.

Approach and progress to date

The Digital Experts project made rapid progress in developing the first of the proposed enhancements to the mobile app. By early May 2015, the Frameworki supplier had completed the case notes functionality, which was then rolled out for testing to a select group of practitioners during the month.

By early July, the testing of the case notes functionality was complete. Some bugs had been discovered that the supplier was addressing. The team was now planning to begin training an initial group of end users during the month with a view to releasing the first iteration of the app soon afterwards. Assuming all went well, the scale of the pilot would be increased during August and September.
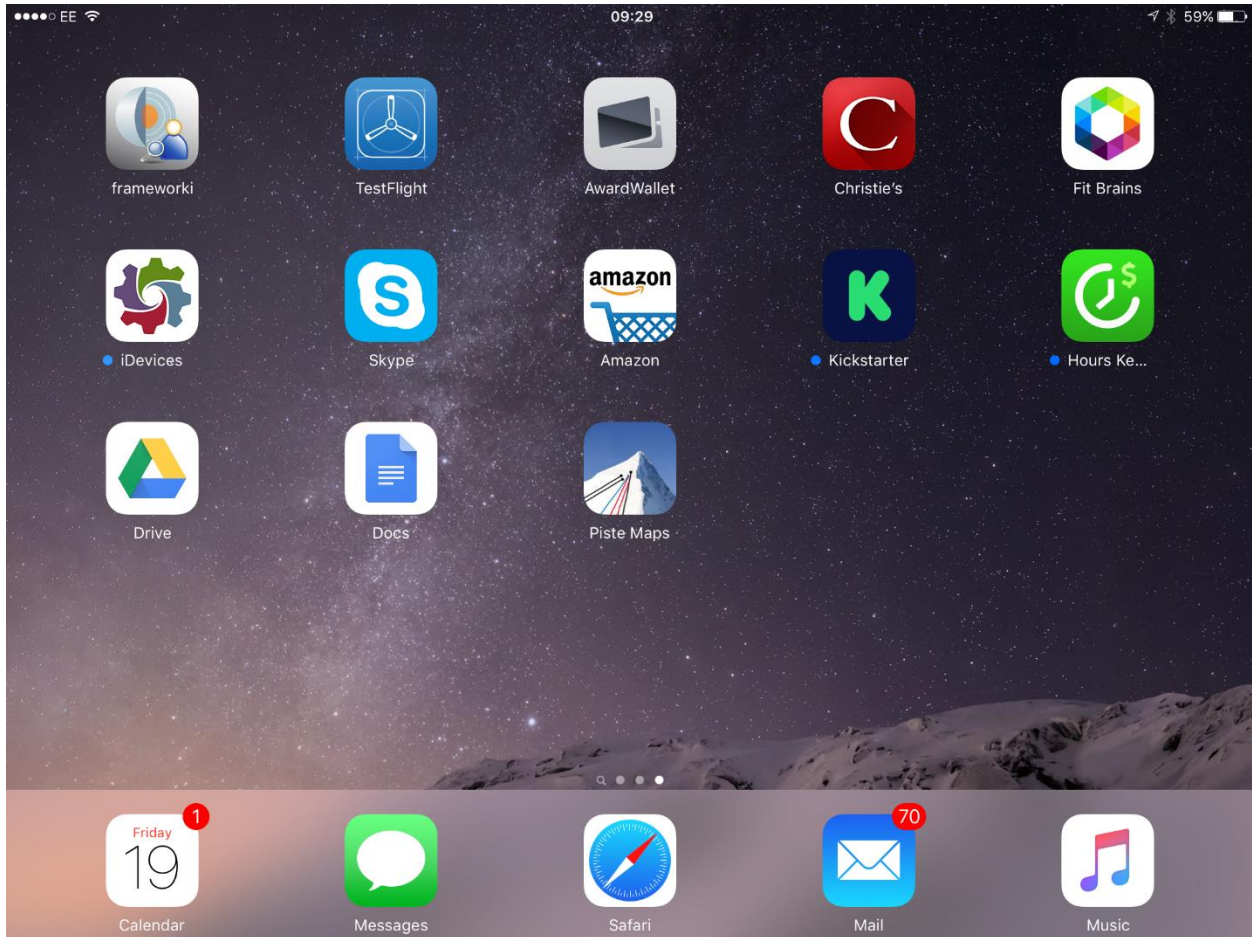
The proposed facilities on a Tri-borough mobile device

While this testing and training was taking place, the team had begun the process of engaging the supplier to start development on the next set of functionality aimed at viewing documents, forms and related information.

During July 2015 the supplier's development team encountered some technical issues in meeting the security requirements for dealing with sensitive information on mobile devices, and specifically in establishing a secure connection via the Tri-borough's corporate mobile device management system.

This system acts as a gateway to the three councils' network, adds an additional layer of security, e.g. allowing lost or stolen devices to be remotely wiped, and gives corporate control over what a given mobile device linked to the network can or cannot do.

The problems with accessing Frameworki using the app and mobile device management system remained unresolved during the following months, despite the social care team receiving continuous, extensive support from the corporate shared ICT service and their partners. In the meantime, the development of the second phase of app functionality had been put on hold until the connectivity issues were overcome, and an alternative in-house solution was developed to validate that secure mobile access to Frameworki was possible. The success of the in-house solution proved that access could be achieved.

At the time of producing this initial case study (May 2016), the issues with the supplier's app remained outstanding. Work is ongoing to understand and resolve these issues, or to enhance and migrate to the in-house app.

The outcome – successes and challenges

Despite the delays, members of the Tri-borough team believe they have made a great deal of progress and learnt a lot from both the Digital Experts project and the wider move towards supporting professionals in the field.

The first element of the Digital Experts project – to add case notes functionality to the Frameworki app – was developed and tested rapidly, with positive user feedback. There is no reason to suppose that the second element (access to wider information) will be any less successful.
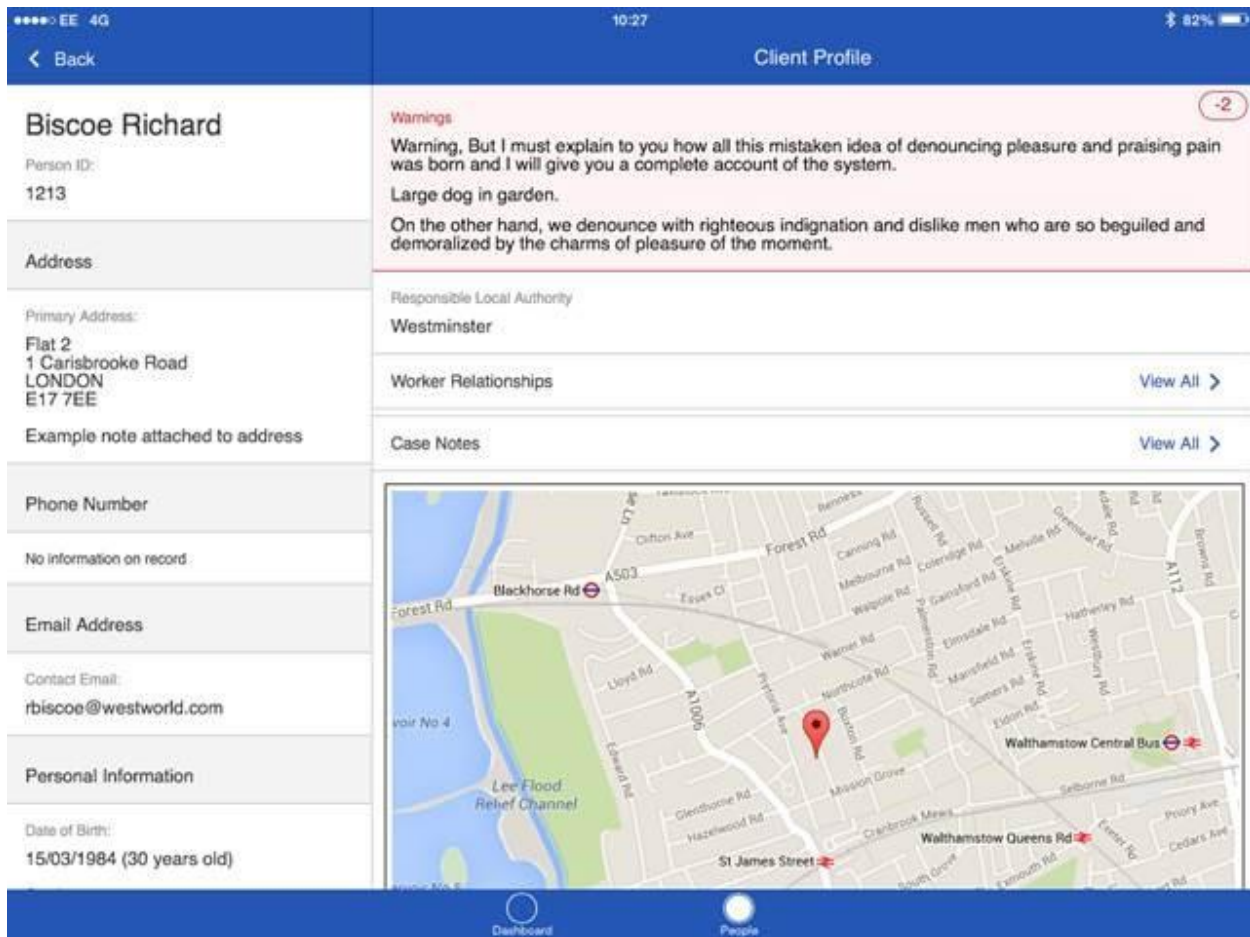
The client home page with access to other areas of the client record (test data)

On a broader note, collaborating with strategic consultants who specialize in mobile working has given the team an invaluable insight into different approaches to analysing user requirements. These approaches can be applied in future projects.

The user experience methodology employed by Tigerspike includes the following steps:
- *Interviewing team members to gain real insights*
- *Undertaking in-depth contextual inquiry*
- *Shadowing different adult social care team members while they visit clients and perform their daily tasks*
- *Analysing the information gathered to extract insight, investigating opportunities and risk regarding mobile working*
- *Creating affinity maps with the primary research insights*
- *Completing task analysis in real scenarios to explore mobile solutions that could improve existing workflow and mitigate users' pain points.*

Source: Tigerspike Strategic Consulting

The team has also significantly increased its knowledge and understanding of the mobile working industry. For instance, in the early days of the Tri-borough's mobile programme, mobile device management systems were in their infancy. They have now become more prevalent and increasingly important.

Similarly, some system vendors have not always accepted the need to provide open application programming interfaces (APIs) to support more effective access to their applications, whether through apps or web sites/portals. Through working on the Digital Experts project, the team has now reached agreement with the Frameworki supplier that their app will incorporate a wide range of fully supported open APIs.

Finally, the team has identified certain gaps in the market. For instance, in order to aid their evaluation of the pilot, they had started to search for monitoring software that would help them to understand how frequently the mobile devices, including the app and other features such as maps, were being used.

However, current products proved either unsuitable or extremely expensive to deploy at scale, with a potential impact on the Tri-borough's (and other councils') ability to make an accurate assessment of the business case for or against increased mobile working in adult social care.

Key learning points

- It is important to think carefully about what a council wants to achieve through mobile working. Through their collaboration with strategy consultants, the Tri-borough team has realized that they should not be trying to recreate a full office environment on mobile devices. Instead they need to focus on what it makes sense to do 'on the go' and the pinch points that professionals experience.

'Mobile working should be seen as a complement, not as a replacement to office working. It brings the possibility to get work done during periods where it wouldn't be possible otherwise.' Source: Tigerspike Strategic Consulting

'It often seems to be the simplest things, such as access to basic information, that make the biggest difference.' Programme Manager, Tri-borough Adult Social Care IT Programme

- Effective partnership working, both within the council(s) and with key external partners, is essential in a complex project of this nature. For instance, as the use of mobile technology evolves and expands, relevant parties may include front-line workers, ICT staff, external consultants and the full range of systems suppliers whose products need to link together. In the Tri-borough's case, fostering open and healthy relationships with their suppliers has been particularly important in addressing the complex technical issues raised by the project.

- It is crucial for all parties to understand the sensitivity of the data and information that they are using and to consider how best to protect it. The need to balance security against the requirements of effective operational delivery is a shared responsibility.

- Finally, the project has underlined the requirement for open APIs and a more flexible architecture from vendors. These represent the core enabling tools that will allow councils to operate securely and more flexibly with existing systems.

Next steps

The main priority remains to resolve the outstanding technical issues with the supplier-provided app that have arisen during the project. Once this is done, the team anticipates completing the second element of the Digital Experts project (access to key textual information from mobile devices) in a short timescale.

In the longer term, the ambition remains to roll out an effective mobile solution to a wide range of adult social care staff across the three boroughs and to monitor and realize the resulting efficiency gains.

Meanwhile, it remains important for Government, bodies such as the LGA and councils themselves to maintain pressure on their suppliers to offer the APIs and flexible technical architectures that are essential for modern digital developments in the public services.

Contact for further information
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