Cardiff Gov App

How it came about?

- Cardiff Council carried out a feasibility study into building its own mobile app in early 2017 and launched development in the Autumn of that year.

- We initially investigated commercial off the shelf (COTS) apps used by other councils before deciding the best route was a multi-purpose app developed in-house.

- The Cardiff Gov app was launched on 20th June 2018, initially supporting recycling and waste services, and has been downloaded over 30,000 times.

- This single app provides a convenient one-stop shop for citizens, and is a smarter way to connect with council services on a 24/7 basis.

- A fully bilingual version of the app is also available which is an essential under the Welsh Language standards

- The priority was to start with services that currently generate high volumes of phone calls to the council, along with those which can most benefit from a native mobile experience such as location and push notification capabilities.

- At this early stage, we also took the opportunity to agree on a new strategy for componentising our back end services using a Microservices architecture, and ensured that our corporate website and CRM system also took advantage of these new services at the same time as the mobile app.

- This stood us in good stead for bringing online future digital channels that we have now made available to citizens, such as our Chatbot.
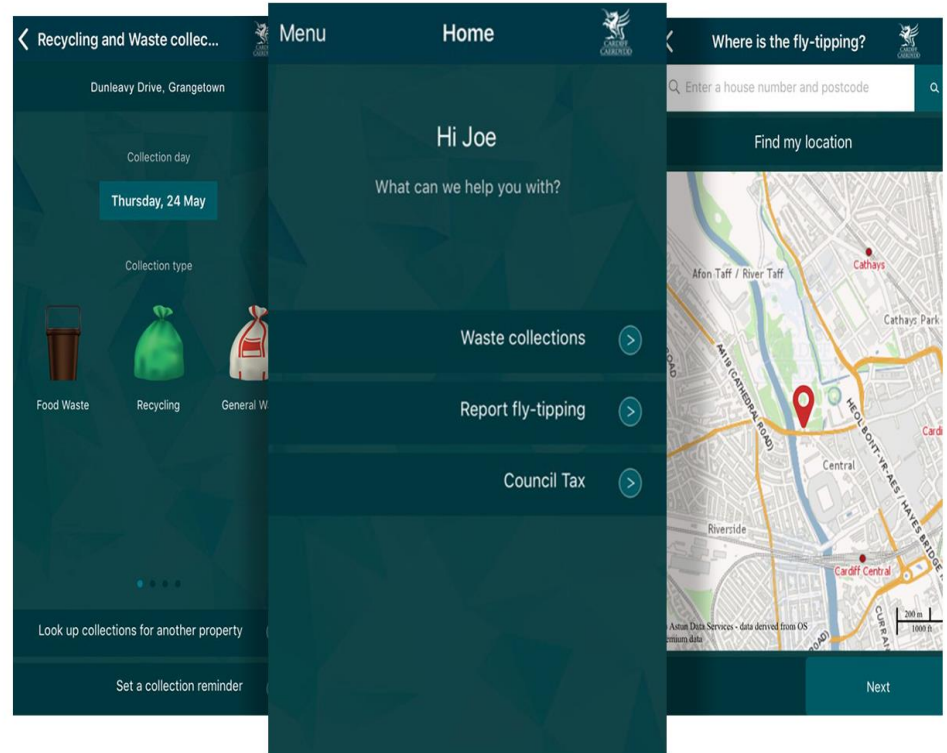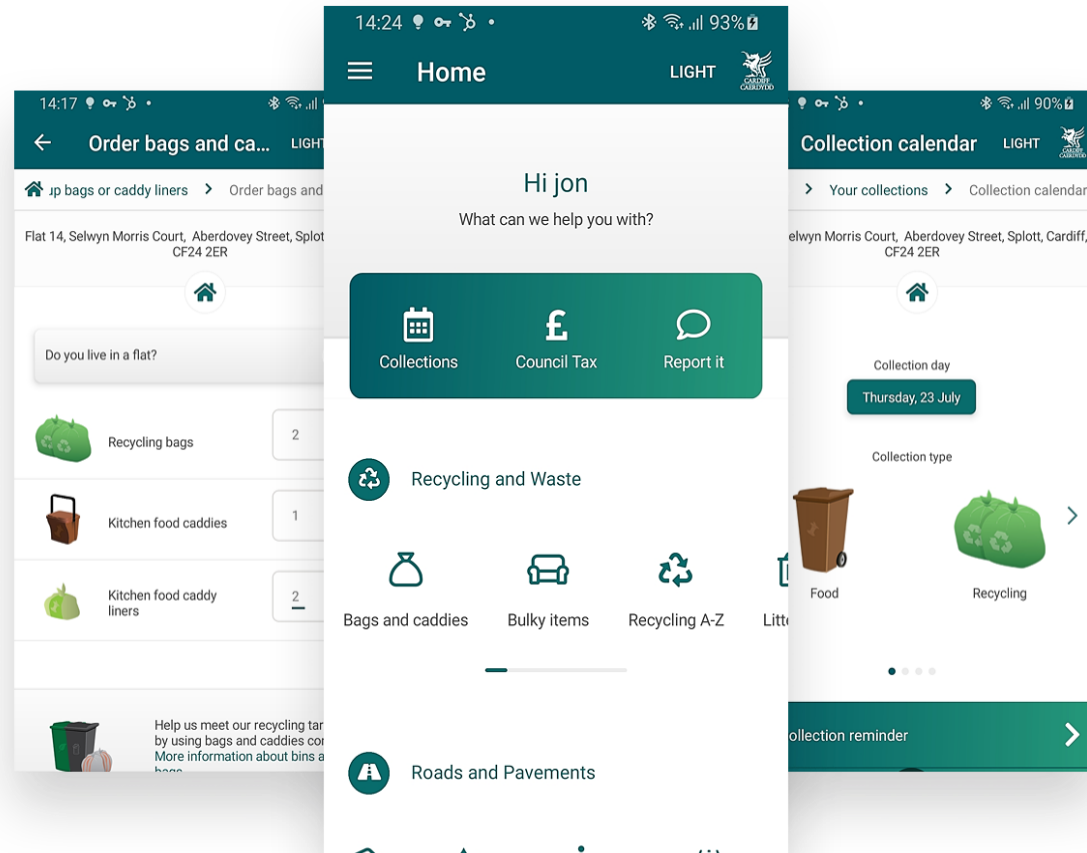
App – version 1

How it works?

- The app was developed using the Agile SCRUM project management methodology and ran in parallel with us building our Microsoft Azure cloud infrastructure, which now hosts the services.

- The development platform chosen was Microsoft's Xamarin Forms, which generates both iOS and Android versions from one single code base, and also incorporates the ability to simulate tests on thousands of mobile devices / operating systems combinations.

- The Agile approach has allowed Cardiff to release new builds on a 2-3 month cycle and the feedback options within the app have allowed users to input into the service roadmap.

- Each time we release a new service, we replicate the to-be process across a range of channels (app, web, phone, chatbot). This allows for multi-channel consistency and enhanced channel choice for our residents.

- The team on the project is a collaborative effort across a variety of teams including ICT, the web development team, the digital delivery team, customer services and corporate communications.

- The council has a funded digital programme which includes IT developer resources. This resource was able to build the app, and continues to enhance and support it, providing us with the control over when we add functionality without needing to pay a supplier every time to do so.

- The web development team have been heavily involved from the start to ensure that the overall UX is of a very high standard, which is integral to keeping people on platform as well as ensuring that the design meets people's accessibility needs.

App services

- The services that we included on the app when we initially launched included:

  – Check your recycling and waste collection dates
  – Create push notification for waste collection reminders
  – Report fly-tipping straight from the scene
  – Check your council tax account and make payments

- As part of this initial release we were also able to retire the text message service for waste collections, and replicate new functionality to the existing web offerings.

- Since the initial launch we have added a number of new services including:

  – Report litter issues on our city's streets and public open spaces
  – Find out where to pick up waste recycling bags locally.
  – Ordering waste bags and caddies to be delivered to your property.
  – Search our A – Z of recycling for advice on how to get rid of household items.
  – Report issues on the roads and pavements in Cardiff
  – Sign up for Council Tax e-bills and notifications

- We have also updated the look and feel of the app (as you can see in the image opposite)

App – version 2

Take up during Covid-19 period

- App downloads have increased by over 65% over this period when compared to the average number of monthly downloads since the app was launched.

- Digital usage has increased for every service added to the app since the app was launched, and the number of phone calls have reduced for each service that we have added to the app since launch.

- Over this Covid-19 period, digital channel usage has increased across these services when compared to the same period of the previous year:

  – Fly tipping reporting   -   Over 15% increase
  – Waste calendar queries   -   Over 50% increase
  – Waste bags and caddy ordering -   Over 427% increase

- Phone call volumes have reduced across the following services when compared to the same period of the previous year:

  – Fly tipping reporting   -   Over 40% reduction
  – Roads & pavements reporting   -   Over 50% reduction
  – Street cleansing reporting   -   Over 65% reduction

- Throughout this Covid-19 period, the channel shift across the majority of services on the app and web has **amplified** when compared to the channel shift prior to this period.

- The ever increasing number of downloads, and the ease of use of services across digital channels on a 24/7 basis should ensure that the channel shift remains across these services, and also indicates that this trend should continue across all additional future digital services.
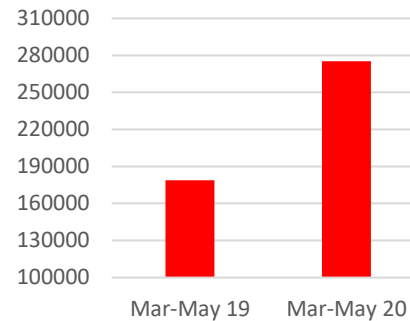

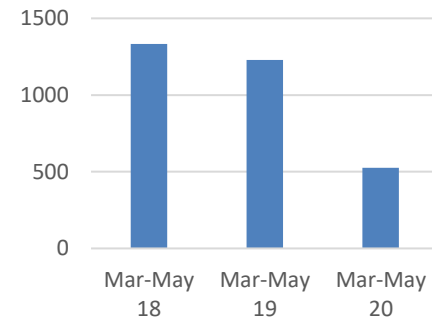Fly tipping - Digital reports
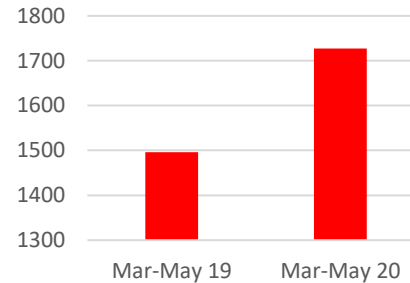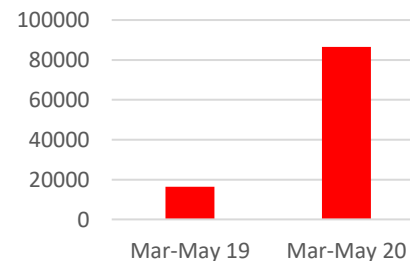

Fly tipping - Phone calls
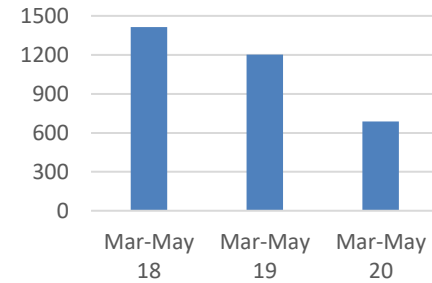
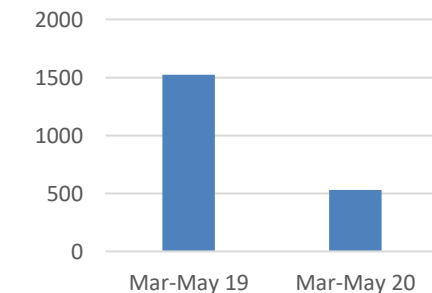Waste calendar queries - Digital channels

Roads & pavements - Phone calls

Waste bag and caddy ordering - Digital channels


Street cleansing - Phone calls

Benefits

- Building in-house has brought many benefits:

  - Staff working collaboratively on an exciting new project with public engagement using an agile development approach with the entire project team learning many new skills.

  - Moving to an API-based Microservices architecture and aligning the product roadmaps for our current digital channels (Corporate Website, Mobile App, CRM system and Chatbot - Bobi).

  - Project is Cardiff's first proper in-house cloud development project

  - Re-purpose the already-developed location-based reporting of fly-tipping (for example), with several other processes open to this 'rinse and repeat' approach in the future.

  - Work undertaken for the new digital services has served as a catalyst for Cardiff to start architecting a data provisioning and reporting element for each service in order to analyse the effectiveness of service changes or campaigns we may undertake.

  - We have also invested in business process modelling / re-engineering. This involves, where possible and practical, getting reports from the Mobile App, Website or CRM system directly into back office systems via API's, to not only give a better customer interaction, but to also speed up delivery or completion of service requests or reports.

- Before each new service is added onto the app, we remove waste from the existing process and the process is streamlined to improve the customer experience.

- We have modernised the way we interact with our customers so that they can interact with us on a 24/7 basis, quickly, easily, and at a time that is convenient to them.

- We have been able to channel shift the high volumes of simple-to-resolve contacts that the council receives by telephone, email and post, through to digital channels (which are less expensive to run).

- Each new service added to digital channels initially results in an increased demand for this service, but overtime the number of phone calls reduce for these services and the demand returns to pre-digital levels.

- We have enabled the citizens of Cardiff to interact with a number of service areas via one corporate app.

- We have improved quality of information submitted to front-line and back-office staff, i.e. the inclusion of photographic evidence when reporting problems related to visible services

Bobi - Chatbot
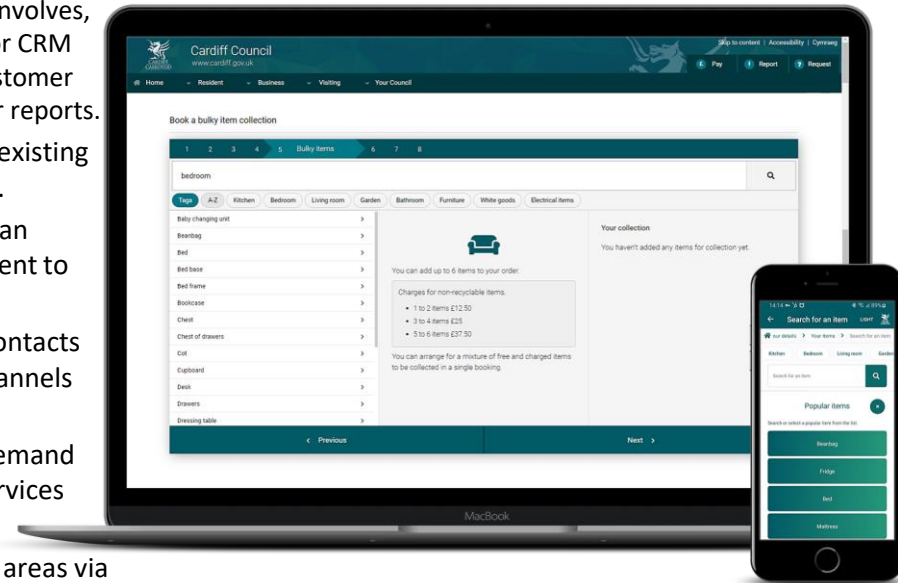
Corporate Website

Future possibilities

- We will continue to focus on digitalising waste and recycling services over the coming months.
- The waste bulky collection booking service will be added to the app and web in August 2020.
- Bookings for an in-house version of our household waste and recycling centre will be available on both channels by the beginning of October 2020.
- We also have plans to add waste non-collection reporting onto the app and web, and also allow citizens to order all types of waste bags and bins.
- Cardiff's development roadmap currently extends to spring 2022, an other high volume services that we are looking to add onto the app in the future include:
    - Reporting street lighting issue
    - Report a problem car parker
    - Paying traffic related fines
    - Parks issues
    - Report Waste enforcement issues
    - Financial queries – Housing benefit; housing rent; debt recovery
    - Reporting Graffiti
    - School admissions