

Case study

From 4 hours to 15 minutes: Smart entry to Swindon's Household Waste Recycling Centre

Background

Swindon Borough Council is unique in that it has one Household Waste and Recycling Centre (HWRC) serving 97,000 households. The site is in an urban area and has one entry/exit road which is shared with other council operations and businesses.

The HWRC service (pre-COVID) experienced significant peaks and troughs in demand, with c.1000-1200 vehicles attending on peak days and queues taking between 4-5 hours (and people bringing 'picnics'). Most demand was unpredictable with weather and holiday periods playing a significant factor. The HWRC teams work outside in all weather conditions and must be able to respond to dynamic events such as vehicles breaking down or emergency services access to site.

- Serving **97,000 households**.
- Upto **1200 vehicles** attending on peak days
- Queues taking between **4-5 hours**

The Challenge

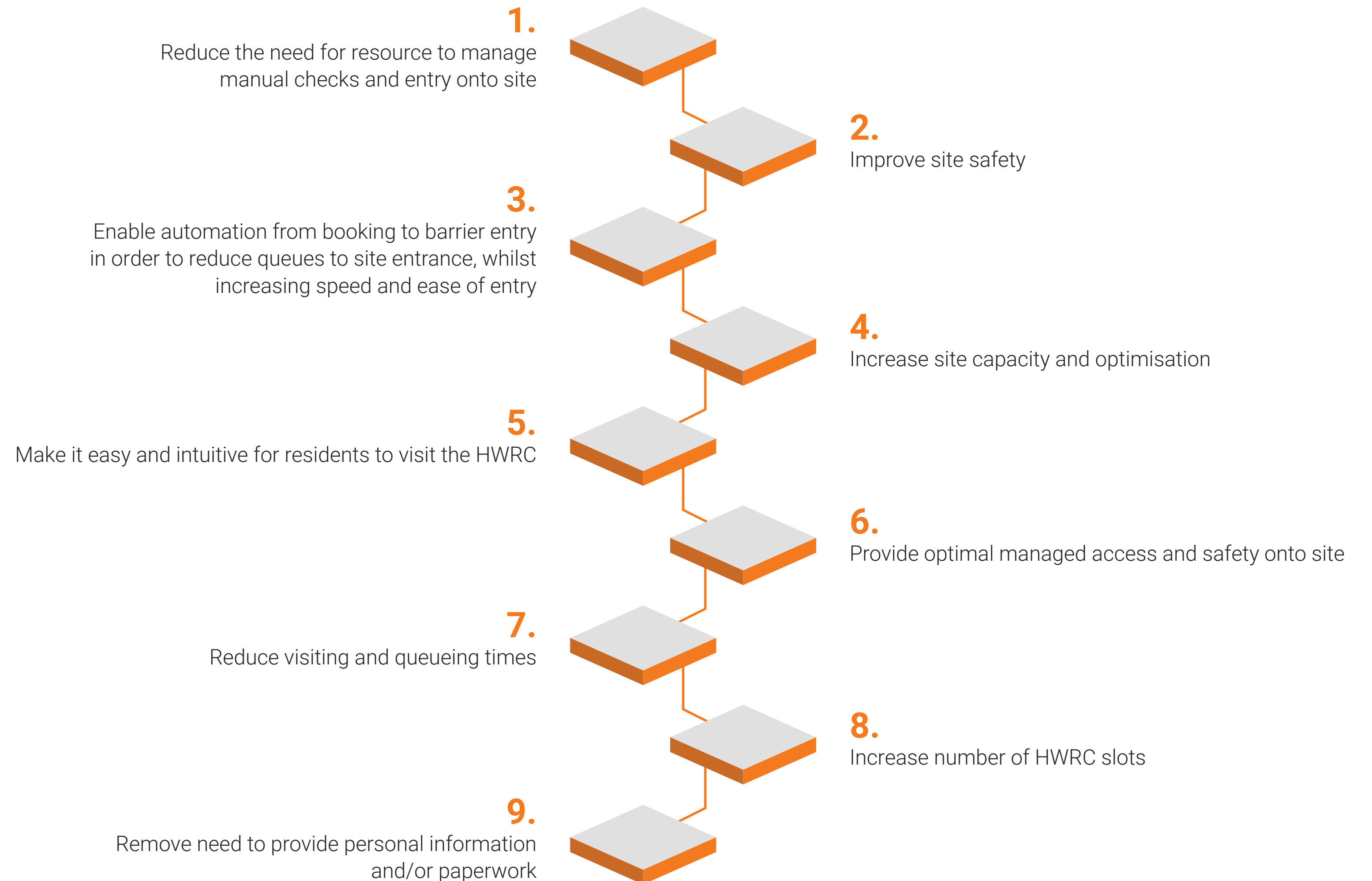
Swindon Council wanted to reduce the need for additional resource (and associated costs) that had been brought in to assist with the management of the HWRC COVID service delivery. They were mindful that residents are passionate about the HWRC and any changes to waste services are highly emotive.

Swindon's award-winning Emerging Tech team saw an opportunity to use technology to automate manual checks, simplify residents' booking and visits to the HWRC, and create an overall better customer experience.



Swindon's new HWRC Smart Entry system

Service Aims



Solution

A rapid discovery was carried out to better understand site usage, patterns, and influences. This determined that the current manual paperwork, checks and operations could be managed through technology, and an optimal site operation based on data-driven decisions was achievable.

The solution lay in a simple QR code. Residents would be able to make online bookings on the website, receiving a QR code that when scanned at the HWRC would allow them entry through a barrier system. AG Automation - gate automation systems specialists - were perfectly placed to design a barrier entry that would operate with the kiosk entry technology, whilst meeting strict safety standards. Tornado Storage Solutions were able to provide a fully customisable and automated check in control kiosk that would be supported by 24/7 remote engineer assistance.

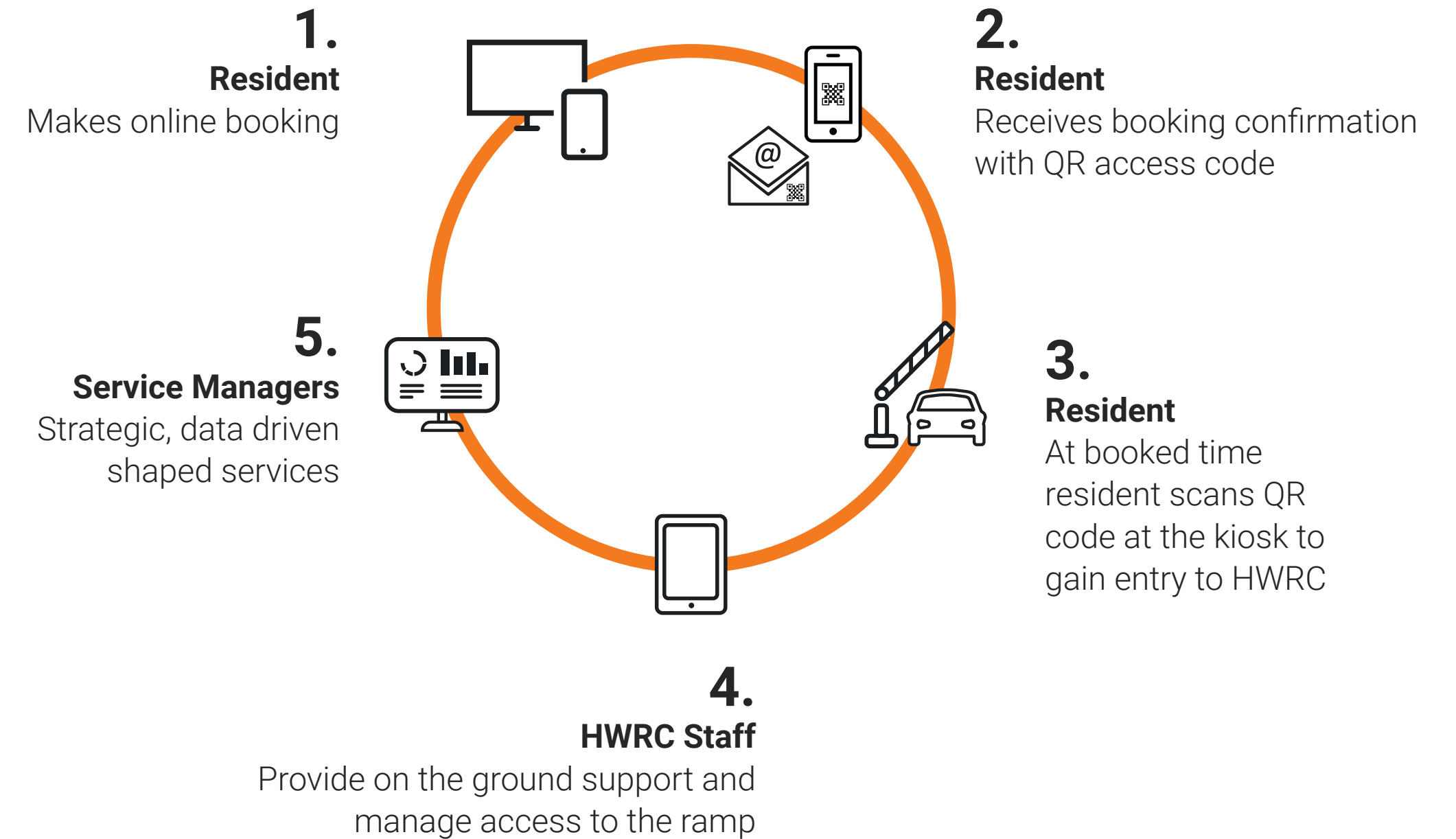
The solution was delivered in 4 phases:

Phase 1	Phase 2	Phase 3	Phase 4
Online bookings	Automated bookings data and mobile working	Physical entry barrier with traffic lights and intercom	Fully automated booking and entry system feeding into a reporting database for future data driven decision making and business intelligence

“We're powering this all from one of our streetlights! Making best use of existing infrastructure, avoiding operational disruption and additional cost, (unfortunately solar couldn't reliably support the number of vehicles that use the site daily)”

*Sarah Talbot, Emerging Technologies Lead,
Swindon Borough Council,*

How it works:



Development work

Methods and SBC developed and built custom barrier entry software which was installed on the Tornado hardware. This process takes the HWRC booking data from JADU and validates it on entry and raises the barrier when required. Every scan is written back to the reporting database so entry information and patterns can be used to build insightful reports such as how many people arrive early or late etc.

Methods also built workflow in Microsoft's PowerAutomate to generate and send the entry QR codes to customers when a booking is made to tie the JADU booking process and Kiosk software together.

Results

Here you can view the Smart Entry solution in action: [View video](#)

For Swindon Council, creating better public services is always their key objective, whilst saving vital cash that can be ploughed back into improving services. As such, they have been thrilled to report that immediately post Go Live residents feedback was:

98.6%

rated the experience of booking their visit as easy or very easy

85%

said they used their QR code to scan in and 93% said the experience of using the QR code was easy or very easy

84.5%

confirm they read the information provided about the site layout and what to expect on their visit, and 98% said the information was helpful

98.5%

describe their overall visit as good or very good, with 88.9% stating their recent visit experience was as good or better than previous visits

“400 tasks in 4 months of creative collaboration by a collectively brilliant and small dedicated team bringing together some really disparate tech to create an incredibly low-cost, high-impact, resilient solution for residents”

*Sarah Talbot, Emerging Technologies Lead,
Swindon Borough Council,*

For Swindon Council, the results from the HWRC Smart Entry initiative has seen:

98%	Positive booking and visit rating from residents
6 month	Payback period
Contactless	Managed entry delivering a service that is contactless and as COVID-19 secure as possible.
Mobile working for site staff	Resident call via intercom can be managed anywhere on site
Time saved	217 hours per/year site manager time saved
Additional booking	25% additional booking slots
No queueing/ reduced carbon emissions	1-2 seconds entry. Mitigates the amount of carbon emitted by vehicles standing in the queue, contributing towards the councils goal to achieve Net Zero Emissions
High quality data	Near real-time reporting database for data driven decision making
Empowered service	Modern , efficient, effective; thinking and working differently (better use of skilled staff on site)

This technology is being shared by Swindon Borough Council under the Local Digital Declaration. If you would like to discuss this and find out more, please contact emergingtech@swindon.gov.uk.