

HOUSING REPAIRS DISCOVERY

DEFINING A COMMON SERVICE PATTERN

CLIENTS: SOUTHWARK COUNCIL, LEWISHAM HOMES,
GRAVESHAM BOROUGH COUNCIL AND LINCOLN CITY
COUNCIL



THE BRIEF

Run a discovery on whether a common service pattern for housing repairs is possible and what it would look like.

The aim of this discovery is to find out:

- Barriers to adoption of digital repairs services
- Elements best suited to automation/self-service
- Optimal use of technology to improve user satisfaction and reduce costs
- If a common service pattern for end-to-end delivery of repairs is possible
- How the service pattern can be mapped to the Housing Associations' Charitable Trust repairs data standard

THE PROBLEM TO BE SOLVED

Councils are responsible for providing repairs to socially rented properties.

Most users access the service by phone and it is typically the service with the highest volumes. The service is attractive to provide digitally, however when an acceptable telephone channel exists, take-up is often low, possibly due to:

- Failure demand, with users calling for updates on existing requests
- Lack of clarity on who has the responsibility for repairs
- Complex diagnosis
- Urgent/dangerous repairs not suited to digital channel
- Preference to speak to an agent
- Demographics of tenants are the same as those likely to be digitally excluded

Consequently providers don't always realise expected savings from channel shift/digital repairs services that meet the service standard, may not be economical for smaller providers.

THE SIZE AND COST OF THE PROBLEM

Local authorities provide responsive repairs to 1.6m socially rented properties in England, in addition to repairs to communal areas and blocks also impacting on leaseholders. Current annual costs of repairs call handling for councils involved in this bid are:

- Southwark, 53k properties, £1m
- Lewisham, 18k properties, £500k
- Gravesham, 6k properties
- Lincoln, 8k properties, £150k

Extrapolating these the national cost of repairs call handling could be estimated at >£30m p/a and a large financial benefit in creating a digital service so good, that people prefer to use it.

OUR HYPOTHESIS

We believe that a common service pattern for end-to-end housing repairs is possible

For council tenants and leaseholders

Which will achieve

- Lower transaction costs
- Improved customer satisfaction
- Increased completion rates (and reduce the % of failure demand)
- Increase digital take up

We will know this hypothesis is valid if we:

- Design a common end to end service pattern and validate this with the four partner authorities, suppliers and other councils/housing associations
- Design an ideal online journey and test this with users and validate with the 4 partners and other councils/housing associations
- Carry out user research to identify that a common service pattern will meet the user needs and identify the expected digital uptake.
- Carry out analysis to understand if implementing the proposed common service pattern will deliver financial and non financial benefits

OUR APPROACH

We split this discovery project into 4 phases, which we ran over 5 sprints. Below is a summary of what work was carried out in each phase.

1. User Research

- Identifying users and common behaviors
- Call listening, interviews, surveys
- Online analytics and behaviours
- Review survey
- Blockers to going online
- Staff interviews and shadowing
- Customer journey mapping
- Demographic data and authority profiles

2. Best Practice Research

- Best practice reviews
- Benchmark of other Authorities online repair service
- Interviews with authorities and suppliers who have delivered an online repairs service
- Interviews with software providers
- Surveyed other councils

3. Define a Common Service Pattern

- Define the end to end common service pattern
- Designing an ideal online journey
- Validate the service pattern with the four partner authorities, suppliers and other councils/housing associations
- Prototype and test online journey
- Recommendations for Alpha

4. Benefits and Business Case

- Gathered data from the authorities to understand the benefits that could be delivered if the common service pattern was delivered.
- Benefits case
- Business case
- Cost to develop Alpha

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01

USER RESEARCH

SUMMARY OF WHAT WE DID

- Researched the Demographics of 4 Councils
- 100+ calls were listened to and analysed in the contact centres of the 4 Authorities
- 80+ Customer Interviews
- Reviewed online analytics to find out volumes of people currently reporting repairs online
- Gathered service data to understand different volumes of calls and reports for each repair type and whether these are for new or existing repairs
- 31 users surveyed to understand why they chose to go online and what their normal online behaviours is
- Accessibility of existing online repair service of 4 authorities reviewed
- Shadowing call centre agents, planners and repair operatives
- 8 personas developed and identified 5 common behaviours
- Identified online behaviours for each persona types and propensity to go online which we have identified to be between 40-75% of users
- Created user stories and identified 18 user needs for each behaviour type
- Prioritised the user needs - we have identified 7 user needs for the online journey
- Customer Journey mapped the current process of the 4 authorities and identified where the online user needs were not being met

DEMOGRAPHICS

Southwark

- Population: 314,232
- % social housing: 41.9%
- Tenants: 40K
- Leaseholders: 15.5K
- N° Repairs reported: 300k YTD
- Phone vs online: 8%
- Household without English: 11%
- Poverty rate of 31%, which is above the London average of 27%

Gravesham

- Population: 106,101
- % social housing: 13.2%
- Tenants: 6.5K
- Leaseholders: 400
- N° Repairs reported: 66.5K YTD
- Phone vs online: 0.7%
- Poverty rate: 10%

Lincoln

- Population: 97,541
- % social housing: 22.4%
- Tenants: 7.8K
- Leaseholders: 300
- N° repairs reported: 50K YTD
- Phone vs online: 3.7%
- Poverty rate 15%

Lewisham

- Population: 301,307
- % social housing: 27% (2014)
- Tenants: 13K
- Leaseholders: 5.5K
- N° Repairs reported: 116k YTD
- Phone vs online: 8%
- Poverty rate: 26%

CALL LISTENING AND CUSTOMER INTERVIEWS



+100
**Call
Listening**



+80
**Customer
Interviews**



+30
**Customer
Surveys**

	SOUTHWARK	LINCOLN	GRAVESHAM	LEWISHAM
Call listening	29	21	45	27
Customer interviews	16	19	24	28
Customer surveys	32			

CUSTOMER INTERVIEWS RESULTS

55.25%



ONLINE SHOPPING

- 42% Gravesham
- 46% Southwark
- 58% Lincoln
- 75% Lewisham

Main shopping brands were
Ebay, Sainsbury and Iceland

<20%



REPORT A REPAIR ONLINE

Have reported or tried to report
a repair online.

Main reasons for not going
online are trust issues and not
knowing that the online service
exist.

*Across the 4 Authorities

52%



ACCESS OTHER COUNCIL SERVICES ONLINE

For example pay rent or council
tax.

KEY FINDINGS FROM CUSTOMER SURVEYS

- **32** Residents answered the survey
- **51.6%** of the residents responded that they have **reported a repair online**
- **60%** answered that they chose online to report a repair because they **prefer doing things online**, the other **40%** said that they chose online because the **phone lines were busy or not open** when they wanted to call
- **53.3%** said that they do other council things online like **paying rent or council tax**
- **94.7%** said that they **shop online (Amazon) and are on social media platforms**
- **87.5%** responded that they do **online banking and food shopping**

ANALYTICS

**>30% vs
<7%**

REPAIRS REPORT ONLINE

Differences in repairs reported online between authorities inside (Southwark 17.6% and Lewisham 35%) and outside London (Lincoln 6.8% and Gravesham 1.5%)



49.6%*

MOBILE VISITS

- 59.69% Gravesham
- 34% Southwark
- 46.36% Lincoln
- 58.5% Lewisham



iPhone*

MAIN DEVICE

The most popular mobile phone device around the 4 authorities is the iPhone



*Data taken from Google Analytics

Call Listening And Customer Interviews

REPAIR LOCATION

+50%

Repairs are in the **bathroom** or **kitchen** across 4 authorities.

TYPE OF REPAIR

+30%

Repairs are **leaks** or **heating** problems across 3 authorities (Southwark, Lewisham and Lincoln).

*Gravesham is the exception with more construction issues

CALL CLASSIFICATION

+40%

Calls in London Authorities (Southwark and Lewisham) are for **chasing** or existing **repairs**.

AVG. CALL TIME

5:30 min avg.

London and bigger authorities have a longer call avg time (Gravesham 2:31, Lincoln 4:35, Lewisham 6:06, Southwark 8:47).

WE IDENTIFIED:

In total, across the 4 partner authorities we developed 20 personas including:

- 12 resident (tenant and leaseholder)
- 4 contact centre agents,
- 3 operatives personas; and
- 1 face to face customer service agent

We grouped the resident personas into behavioural types to make finding commonalities easier.

We identified 8 personas with common behaviours.

This helped us understand the propensity to go online and identify key blockers.

8

Personas with common behaviors

17

User Needs

- 1 met
- 8 partially met
- 8 not met



"I can't spend time on the phone during working hours as I'm in a very busy office."

Age: 40

Work: Supervisor

Family: Single Mother, Two Daughters

Bio

Kate is a single mother, her daughters are 10 and 8. She works full time as a supervisor in a busy office. The family lead a very busy life but all chip in and help each other. She is very efficient and gets things done quickly and multitasks a lot. She is a tech savvy and has iPhone and a tablet.

Kate (Tenant)

Frustrations

- She can't spend time on the phone during working hours as she is in a busy office
- She wants an appointment out of working hours (or near as possible to these times) as she does not want to use annual leave to wait for a repair operative to come around.
- She doesn't understand why her issue is not treated as more as of a priority.
- She doesn't like she has to call and wait in a queue just to check the appointment or to reschedule.
- She may need to reschedule due to work commitments

User Needs

- To be able to report a repair online and book an appointment
- To be able to reschedule and cancel appointments online or escalate an issue
- To be able to check details of the appointment online
- To receive reminders and alerts about her appointment.
- To have the repair resolved at the first visit

Brands



Preferred Channels

- Mobile
- Tablet

Behaviors

Busy during the day and needs to be able to report this in her own time which is normally out of hours.

SUMMARY OF PERSONAS AND BEHAVIORS



KATE



ROSALYN



EMMA & JOHN



AMER



MEGAN



JAISALMER



SUSSIE



DORIS

BEHAVIOUR	Busy during the day and needs to be able to report this in her own time which is normally out of hours.	Will call to confirm the appointment and check where the repair operative is and what time he will arrive.	Report a repair or amend a repair booking on behalf of a tenant. Would like someone else to be present during the repair appointment.	He tried to do this online but had a bad experience so now chooses to call as he receives a better service.	Will not report a repair online as the service over the phone is excellent.	Believes his repair is an emergency when it is not. Believes he will get an better outcome over the phone.	Not very confident online but can do things online if they are well designed and easy to use.	Can't go online, does not have the skills, device or internet access
USER NEED	-To be able to report a repair online and book an appointment -To be able to reschedule and cancel appointments online or escalate an issue	-To be able to check details of the appointment and what time the repair operative will attend. -To receive reminders and alerts about her appointment	-To report a repair online or over the phone and book an appointment. -To add contact details of the person who will be home during the appointment.	To report a repair online and book an appointment	-To report a repair online or over the phone and book an appointment. -To understand what she is responsible for.	To understand what the priority of his repair issue is so that he knows when it will be fixed.	-To report a repair online or over the phone and book an appointment. -To have an easy to use and accessible online repairs service	-To be able to report a repair at a face to face office or over the phone
RELATES TO	Southwark and Lewisham	Southwark and Lewisham	All	All	Lincoln and Gravesham	All	All	All
%CALL LISTENING/ INTERVIEWS	15%	12%	9%	5%	8%	19%	9%	23%
QUOTE	"I can't spend time on the phone during working hours as I'm in a very busy office."	"I want to know exactly what time the repair operative will arrive"	"I want to book the appointment on behalf of John and be there during the appointment as John is vulnerable "	"I've reported a repair online before but I had a bad experience so i'll call from now on"	"I receive an excellent service over the phone, so I why would I go online?"	"I would do it online but it's an emergency so I need to call"	"I really struggle with writing and I know my spelling is so bad"	"I can't go online, I don't know how to use a computer"
POTENTIAL ONLINE SHIFT	M	M	M	M	M	M	M	L

PRIORITY USER NEEDS IDENTIFIED

As a resident (tenant & leaseholder)	I want to find out what I am responsible for	so that I know whether to report the repair or fix myself	PARTIALLY MET
As a resident (tenant & leaseholder)	I want to be able to report a repair online		MET
As a tenant	I want to be able to book an appointment for the repair to be fixed		NOT MET
As a tenant	I want to add my contact details	so you can confirm my appointment and send me reminders and alerts	PARTIALLY MET
As a tenant	I want to add contact details of the person who will be home during the appointment	so that you can contact them directly if you will be late or have issues locating the property	NOT MET
As a tenant	I want to know the priority of my repair issue	so that I know when I can expected it to be fixed	NOT MET
As a tenant	I want confirmation of my reported issue and appointment time		NOT MET
As a tenant	I want to be able to cancel my appointment		NOT MET
As a tenant	I want to be able reschedule my appointment		NOT MET
As a tenant	I want to advice on how to fix my issue		PARTIALLY MET
As a tenant	I want to report multiple repairs		NOT MET
As a resident (tenant & leaseholder)	I want to report a communal repair		PARTIALLY MET
As a resident (tenant & leaseholder)	I want to know if a communal repair has already been reported	so that I don't have to report it	PARTIALLY MET
As a resident (tenant & leaseholder)	I want to be able to amend or escalate the repair issue		NOT MET
As a leaseholder	I want to add my contact details	so can confirm that my report has been received	PARTIALLY MET
As a leaseholder	I want confirmation of the issue I have reported		PARTIALLY MET

ONLINE JOURNEY ISSUES ACROSS 4 AUTHORITIES

- **Account** mandatory (Southwark and Lewisham)
- **Long journeys**, many steps (around 11) to be able to report a repair
- **Call to Actions** don't follow usability best practices (size, colours, content)
- No clarity of what is an **emergency** and what is not
- No clarity of tenants **responsibilities**
- Confusion in **diagnosis** of repairs
- Confusion in **contact information**
- Confusion between **booking and reporting** repairs
- No clarity of **next steps**
- How to report **communal repairs**
- **Leaseholder** responsibilities not clear

STAFF INTERVIEWS AND SHADOWING

INTERVIEWS:

- Direct Labour Organization (DLO)
Managers (2)
- Performance Managers (1)
- Call Centre Managers (4)
- Planners (2)
- Operatives (4)
- Call centre agents (4)

OBSERVATIONS:

- Operatives (4)
- Call Centre (8)
- Customer Service Offices (1)
- Face to Face (one stop shop) (1)

CONTACT CENTRE KEY ISSUES

- **Multiple systems** to log a repair (Address lookup, Diagnose, scheduling)--- Lewisham, Lincoln, Southwark
- **Address lookup** problem, some addresses are not being found --- All
- Too many **repair codes** to memorize ---- All
- Sometimes the **contact information** of the tenant is not update ---- All
- **Long calls** because the systems are slow --- Southwark and Lewisham
- **Angry tenants** because of long waiting times --- Southwark and Lewisham

OPERATIVE KEY ISSUES

- Not having **visibility of the day** ahead
- Tenants that are **not home**
- Going to **wrong houses** because the tenant's information was not correct
- **Misdiagnosis** of the problems, because they arrive to the house and realize that the repair was not theirs to fix
- **PDA's** not user friendly --- All except for Gravesham



USER NEEDS FOR STAFF



Staff	User Needs
Call Centre Agent	I need to be able to check the status of a property to see if the repair is the responsibility of the authority.
Call Centre Agent	I need to log a repair on behalf of a resident.
Call Centre Agent	I need to diagnose the repair and understand the priority and urgency.
Call Centre Agent	I need to book an appointment on behalf of a tenant.
Operative	I need to know the location of the job, type of repair and materials needed
Operative	I need to timesheet and account for my time on the job
Planner	I need to schedule the work for the operatives
Planner	I need to prioritise emergency repairs
Face to Face Agent	I want to assist residents with booking an online repair

BARRIERS TO ADOPTION OF DIGITAL REPAIRS SERVICES

- Our research with customers identified that **23% are not capable of going online**. According to the 2018 Lloyds Consumer Digital Index; 79% of the English population has all five Basic Digital Skills which is inline with our findings (16% cannot complete an online form).
- The phone service is much better than the online service. **In all authorities the user gets a better experience over the phone**, particularly in Lincoln and Graveland where they offer residents an excellent service over the phone and a poor online service. Even though call waiting times are longer in Southwark, users choose this channel as it is still better than online.
- There are **trust issues with authorities** from previous interactions e.g. their repair issue took a long time to be resolved / was not fully resolved or their housing benefits were paid incorrectly which caused financial problems.
- Mobile version of the service is **not responsive, accessible or user friendly**
- **Forcing a login is a blocker** in particular for Southwark, where the user has to link their tenancy details to their MyAccount. Customers indicated that this process was difficult and our analysis indicates that the process creates friction which dissuades users from completing the process.
- The reporting of a repair **does not result in an appointment**; the appointment is sent 24 hours later, leaving users unsure of next steps and which triggers another follow-up contact
- There is **no way to view or amend an existing booking** (which is a high-volume contact for Southwark and Lewisham).

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02

BEST PRACTICE
RESEARCH

SUMMARY OF WHAT WE DID

- Carried out 7 Best practice reviews
- Review of what other councils / authorities are doing online
- Surveyed other authorities and received 8 responses
- Interviews with partner authorities
- Interviews with other authorities
- Interviews with software providers
- Identified commonalities and differences between the 4 authorities

WHAT ARE OTHER AUTHORITIES DOING ONLINE?

Desk based analysis of 28 authorities online repair service:

Findings:

- **8** of the authorities give the resident the option to login to an account to report a repair and request an appointment. Only 3 of them force the user to create an account to report their repair.
- **8** of the authorities provide a long online form to report repairs (similar to Lincoln and Gravesham's) which didn't require an address look up at the beginning.
- **7** authorities provide an online repair service which consists of a step by step process (using images) to report a repair (similar to Lewisham's).
- **4** authorities asked for the address and/or rent reference number at the beginning of the process to report a repair.

Link to the detail <https://docs.google.com/spreadsheets/d/1Yi4SIQ3Qen8E-3YrhSZCmIOyZEA9aDT75nZ8mOru5U/edit#gid=0>

RESULTS - SURVEYED OTHER AUTHORITIES

8 Authorities answered the survey – 6 of these authorities are in London and 2 are in the home counties

Findings:

- **62%** of Authorities allow council tenants to report a repair online. Only two of them force the user to login to an account to be able to report the repair.
- **25%** of Authorities let the user book a 'real' appointment slot into a scheduler
- According to the authorities the main blockers for users to report a repair online was:
 - to **forced login** to an account
 - the **phone is better** service
- According to the authorities the main types of repair are:
 - **Heating**
 - **Blockages**
 - **Electrical**

The highest volume of repairs reported online was 15% however all other authorities we surveyed only achieve between 5-10% uptake

BEST PRACTICE ANALYSIS FINDINGS

- Users **don't want to create an account**: forcing users to create or login to an account to report repairs is a blocker to using the online service.
- **Diagnosing the issue with questions** is better than using images.
- Users expect to be able to **book their repairs appointments online**.
- Vocabulary used in **questions to detect emergencies** should be carefully analysed and tested, as tenants often consider their repair is an emergencies when it is not.
- **Target one area of the repairs** service to move online rather than attempting to launch everything at once.
- Using **images to diagnose repairs** online is not mobile responsive.



INTERVIEWS WITH THE PARTNER AUTHORITIES



SOUTHWARK

WHO WE SPOKE TO:

- Paul Davis – DLO manager
- Caroline and Denise – Contact Centre managers

KEY FINDINGS:

- There are issues with diagnosis, customer communication, stock and the number of follow on works
- Incorrect diagnosis of the location and trade of repairs due to limited information from residents
- Incorrect diagnosis leading to repairs not allocated enough time to complete
- Stock process is paper based and increases follow on works
- Jobs are cancelled when work has not been completed

Southwark would benefit from repairs logging being online to keep residents informed of job statuses, using photographs to improve repairs diagnosis and introducing a customer sign off process to prevent repairs being cancelled before completion.

LINCOLN

WHO WE SPOKE TO:

- Fraser Trickett
- Matt Hillman – DLO manager
- Amy Larder – Planner
- Scott Walker – contact centre team leader
- Gareth Griffiths – Performance Manager

KEY FINDINGS:

There are issues with the quality of diagnosis, being stringent on repair responsibilities and significant technical issues with the mobile devices. Some of the issues are:

- No diagnostic software
- Incorrect diagnosis leading to insufficient time allocated for repair completion
- Completing works that are the tenants' responsibility
- Mobile software only works with Windows devices
- Device availability and stability means only 22 of the operatives use PDAs – less than half the workforce
- Paper-based working limits job information updates from the workforce, which affects customer service as key details are not available to discuss with residents

Lincoln's process would benefit from a robust mobile working solution and a structured approach to diagnosing repairs.

LEWISHAM

WHO WE SPOKE TO:

- Charmen Tulloch – Contact Centre Manager
- John Pridmore – DLO manager

KEY FINDINGS:

There are issues with the quality of diagnosis and communication with customers:

- Issues with identifying tenant responsibility
- Issues with establishing the urgency of works
- Appointment confirmation difficulties as mobile text message service is not used
- Job updates not being completed by operatives

Lewisham's repairs team is keen to use photographs during the diagnosis process to improve the ability to assess the urgency and nature of repairs. The Repair Finder diagnostic tool is available but is underutilised, as staff have lost faith in its effectiveness and using it is not mandatory.

GRAVESHAM

WHO WE SPOKE TO:

- Matthew Gill – DLO supervisor
- Nicole Arthur – Service Delivery Manager (Repairs)

KEY FINDINGS:

- There are issues with the quality of diagnosis as a diagnostic tool is not in place – something the service is seeking to resolve
- Navigation to the repairs tool on the website is poor, resulting in increased calls to the contact centre

Gravesham process would benefit from a better navigation to the repair tool on the website.

COMMONALITIES BETWEEN 4 PARTNERS

REPORT



- Customer contact channels
- Validate customer and address
- Identify if user is a leaseholder
- Use external contractors for specialist work
- Have policy for rechargeable repairs
- Seek to identify communal repairs
- Seek to identify Right to Buy applications
- Have policy on repair responsibility

DIAGNOSE



- Classify repair
- Use schedule of rates
- Inconsistent approach
- Want to improve accuracy

APPOINTMENT



- Offer appointment slots
- Appointments are weekday only
- Appointment offered at point of contact
- AM/PM/School run/All day used

LOG



- Create works order in housing system
- Use priority timescales
- Apply Right to Repair legislation

SCHEDULE



- Use scheduling software
- Manage follow on works
- Manage no access
- Lack materials links to scheduling
- Issues with misdiagnosis
- Issues with appointment lengths

COMPLETE



- Use mobile software
- Post inspections
- Update schedule of rates
- Update material usage
- Want to use photographs

STOCK



- Single main supplier
- Imprest stock
- Replenishment process

FINANCE



- Job costing
- Purchase order for subcontractors
- Purchase order for materials
- DLO income

DIFFERENCES BETWEEN 4 PARTNERS

REPORT



Contractor selection criteria
Recharge collection appetites
Roles and structures
Access to repair history

DIAGNOSE



Use of diagnostic tool
Schedule of rate differences

APPOINTMENT



Evening and weekend slots

LOG



Job priorities
Confirmation to customer

SCHEDULE



Dynamic scheduling
Emergency teams

COMPLETE



Issue with No access to the
property

STOCK



Assigning materials to jobs
Technology in replenishment

FINANCE



Operative salary v paid by job
DLO management systems

Interviews with providers and authorities who have already delivered a digital repairs services

We spoke to people in the industry who have already delivered a digital repair service to get their get their lesson learned.

These were:

- **Active Housing** – Simon Wilkes Business Development Manager
Active Housing are a software company that specialises in repairs diagnosis and developing online solutions for housing associations either through use of its own product or linking to those provided by others.
- **MHS Homes** – Matt Eddy Project Manager
MHS is a housing provider in Kent which has developed two solutions in order to improve online delivery amongst its customers
- **Yarlington Housing Group** – Worked in partnership with Active Housing to deliver an online service for its residents.
- **Dutch data standard team** – Arjen De Vries and his team have been involved in the development of a data standard for social housing in the Netherlands for the last 10 years.

While speaking with the individuals, we concentrated on the front end of the repairs delivery pattern.

Summary of Feedback and Lessons Learned

Step	Best practice	Lessons learned
Report	Collect photographs Concentrate on content	Improves diagnosis and delivery – Dutch Can try to do too much and get a confusing solution for the customer – Active
Diagnose	Target SORs – use a deployment set rather than the full rate book	Ease of set up and integration – Active
Appoint	Use a basket facility to collect rates	Enables easier integration with systems as can
Log	Clarity on integration requirements Provide repair history	Ensures the links between systems are possible – Active Good communication with customer reducing return calls

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03

DESIGNING COMMON SERVICE PATTERN

Summary of what we did

- Defined an end to end common service pattern based on research with the 4 partner authorities with different operating models
- Designed ideal online journey
- Validated with industry colleagues and partners
- Prototype and tested online journey
- Recommendations for Alpha

COMMON SERVICE PATTERN

- The common service pattern that has been developed into eight major components that cover the end-to-end repairs service.
- These are Report, Diagnose, Appoint, Log, Schedule, Complete, Stock and Finance.
- Using this approach has enabled us to collect the tasks that need to be undertaken, the data required and features of the pattern together.
- The journey is divided into two parts. The front end journey captures the process of the repair being reported, assessed and diagnosed, appointed and scheduled.
- The back end journey focuses on the delivery of the repair within the operational repairs service.

	REPORT	DIAGNOSE	APPOINT	LOG	SCHEDULE	COMPLETE	STOCK	FINANCE
Details	Customer accesses repair reporting channels when there is a fault and confirms property and person details.	Customer completes form to provide key repair details and evidence.	Available appointment dates and times are displayed so the customer can chose when the operative will attend to complete works.	Works order is raised on housing management system and confirmation supplied to customer.	Work is scheduled to operative for the date and time chosen.	Operative attends, fixes fault, updates SORs, job notes, materials used and provides photographs. Work may be eligible for post inspection.	Materials are ordered and supplied.	Completed job is approved for payment, subcontractor and stores purchases are invoiced and job costing completed.
Tasks	<ul style="list-style-type: none"> • Access online service • Confirm resident • Confirm address • Confirm leaseholder • Confirm communal • Assess responsibility • Confirm emergency • Provide contact details 	<ul style="list-style-type: none"> • Confirm Location • Confirm Priority • Confirm Trade • Provide Description • Provide Photographs • Assign SOR 	<ul style="list-style-type: none"> • Retrieve available appointments • Display available appointments • Customer chooses preferred appointment 	Log job Confirmation to customer	<ul style="list-style-type: none"> • Review repair request and appointment Identify health and safety issues • Review joint access requirements • Assign to operative • Review photographic evidence – desktop pre-inspection • Remind customer of appointment 	<ul style="list-style-type: none"> • Attend site • Manage access • Assess variation or inspection needs • Complete works • Operative provides photographs • Customer signature • Update SORs on job • Update timesheet • Post Inspection 	Stock ordering and replenishment.	<ul style="list-style-type: none"> • Review works Sign off job as complete • Purchases for subcontractors and stores • Invoices authorised for purchases • Costs of job posted • DLO income claimed
Data	<ul style="list-style-type: none"> • Username (optional) • Password (optional) • Customer first name and surname • Flat/house number • Street • Town/City • Postcode • UPRN/Property ID • Block/scheme reference (optional) • Customer ID/Tenancy ID • Customer name • Customer phone number • Customer email • Property status (leaseholder/communal) • Contact name • Contact phone number • Contact email 	<ul style="list-style-type: none"> • Where is repair - dwelling, block, communal • Location (room) • Type of work eg heating • Trade - eg plumbing • Faulty item • Text description • Schedule of rate code • Schedule of rate description • Standard Minute Value against SOR • Priority • Photograph of fault 	<ul style="list-style-type: none"> • Available appointments - date and time • Appointment descriptions eg AM/PM/School run/All Day 	<ul style="list-style-type: none"> • Job priority • SOR code • SOR description • Job trade • Appointment date and time • Job description • Job summary • Work type • Contract • Contractor code • Contractor name • Job source code (optional) • Property ID/UPRN • Tenant ID • Contact name • Contact email • Contact phone • Job number • Confirmation text/email (optional) • Access details/notes 	<ul style="list-style-type: none"> • Job number • Priority • SOR code • SOR description • Trade • Appointment date and time • Property ID/UPRN • Access details/notes • Property alerts eg asbestos • Person alerts - vulnerability indicators • Contractor Code • Contractor Name • Operative code • Operative name • Operative trade • Operative skills (optional) • Appointment number • Component/asset details (optional) 	<ul style="list-style-type: none"> • Job number • Priority • SOR code • SOR description • Trade • SOR quantity • Appointment date and time • Appointment number • Property ID/UPRN • Access details/notes • Property alerts eg asbestos • Person alerts - vulnerability indicators • Appointment completion codes eg no access • Job notes • Stock code • Stock description • Stock quantity • Appointment completion time • Appointment completion code • Additional works • Job completion date • Job completion time • Job completion code • Photographs • Customer signature 	<ul style="list-style-type: none"> • Purchase order number • Purchase order details • Supplier code • Supplier description • Purchase order value • Stock code • Stock description • Stock quantity 	<ul style="list-style-type: none"> • Job number • Priority • SOR code • SOR description • Trade • SOR quantity • Job notes • Stock code • Stock description • Stock quantity • Appointment completion time • Appointment completion code • Job completion date • Job completion time • Job completion code • Photographs • Customer signature • Timesheet code • Timesheet notes • Timesheet quantity • Job audit history • Job stage update

User need

- As a resident I want to be able to easily report a repair online.
- As a resident I want to find out what I am responsible for.
- As a resident I want to sign in to my authority account so that I can keep track of all my reports in one place.
- As a resident I want to be able to amend or escalate the repair issue.
- As a resident I want to know if a communal repair has already been reported so that I don't have to report it.
- As a resident I want to report a communal repair.
- As an authority we want to stop duplicate repairs being raised.

- As a resident I want to understand what I am responsible for.
- As a resident I want to advice on how to fix my issue.
- As a resident I want to be able to report if the repair is to my property or to a communal area so that it can be diagnosed correctly.
- As an authority we want to know the location of the repair so that we can diagnose the issue and the trade and offer the correct appointment slots.
- As a resident I want to provide more details of the issue so that it can be diagnosed correctly.
- As an authority we want to know the detail of the repair so that we can diagnose the issue and the trade and offer the correct appointment slots.

- As a resident I want to know when my repair will be fixed.
- As a resident I want to be able to book a suitable appointment.
- As an authority we need to be alerted when appointment slots are not available so that we can move appointments around according to priority.
- As a resident I want to be able to reschedule my appointment.
- As a resident I want to be able to cancel my appointment.

- As a resident I want confirmation of my reported issue and appointment time.
- As a resident I want to easily add this appointment to my diary.
- As a resident I want to be given a unique reference no. so that I can amend my appointment or report in the future.

- As a resident I want to be reminded of my appointment slot so I don't miss it.
- As a resident I want to be able to amend or cancel my appointment.

- As an operative I need to have a summary of the job including location and issue so that I can carry out the job

- As an operative I need to know the type of job and materials needed so that I can fix this first time.
- As an operative I need to order replacement stock once I have used an item or running low.

- As an operative I need to be able to timesheet and account for time on job and travel time.

Known Issues

need to examine property data for all authorities to ensure address look-ups can work

All - need to establish if job needs to be created in order to bring back available appointments from scheduling systems

Lincoln - Universal Housing APIs may not be fit for purpose

This section relies on the organisation having a scheduling system such as Kirona DRS.

If the system allows dynamic scheduling, which places appointments directly into operative diaries, then there is no need to carry steps (to be numbered)

If dynamic scheduling is not an option then planners will need to manually check the appointment and job details and select the most appropriate operative.

Amongst the partner authorities, Southwark would need to manually schedule as its scheduling system - Impact Response - does not have this functionality.

Lincoln do not have a suitable mobile working solution

Southwark use a paper based stores management

ELEMENTS BEST SUITED TO AUTOMATION / SELF SERVE

Of the 8 common steps we believe that 5 out of the 8 steps are suited to self serve / online as this has been achieved by other authorities / providers. We have also carried out research into the systems used and APIs available:

- Report
- Diagnose
- Appoint
- Log
- Schedule

The follow 3 step are not suited to self service / automation:

- Complete
- Stock (*some elements could be automated but not included in minimum viable product*)
- Finance (*some elements could be automated but not included in minimum viable product*)

VALIDATING THE PROTOTYPE

The objective of the prototyping phase was to prove the assumption that the common service pattern could be achieved via an online journey.

To test and demonstrate the prototype we created [clickable wireframes](#) and requested feedback from the other authorities and users.

Industry feedback

We sent this to colleagues in other authorities and demonstrated this at best practice visits to receive feedback on the flow.

Step	Feedback	What we did with the feedback
Report	Don't use a calendar view to book appointments - list the available appointment slots (accessibility, usability and responsive issues)	<i>Added to the design to be tested at Alpha</i>
	The address look-up could be a problem, review this early on in the alpha phase. The address look up is only as good as the data in the HMS	<i>Added to risks for Alpha</i>
Diagnose	Getting the diagnosis questions right is key, test quickly and often	<i>Added to risks for Alpha</i>
	Everyone thinks their issue is an emergency so they will pick the emergency options e.g. report a major leak	<i>Added to risks for Alpha</i>
	Try to identify the item in more detail as this has had a good impact on 'right first time' e.g. what type of tap is it	<i>Added to the design to be tested at Alpha</i>
	Pick a repairs process to focus on in alpha or you will get swamped with defining the diagnosis rules for all other items	<i>Added to risks for Alpha</i>

TESTING THE PROTOTYPE

We also tested this flow with 6 users to get their feedback on if this flow would meet their user needs. We tested this with:

- 3 council tenants
 - I want to report a new repair x2
 - I want to reschedule my appointment
- 3 leaseholder
 - I want to report a communal repair x3

Findings:

- Would not login into an account to report a repair
- Were able to navigate through the entire journey (3 communals, 2 new repair, 1 existing)
- Resident feedback was positive, saying that they would rather go online if it was this easy

Recommending the HACT Data Standard

We determined that the sector should adopt a data standard.

We came to the conclusion through assessing:

- Cost reductions
- Better decision making
- Adopting new technologies
- Sharing data
- Flexibility and agility

We reviewed the HACT Data Standard and recommend the sector adopt the standard.

This was based on an assessment against:

- Completeness
- User Friendliness
- Has a community
- Neutral
- Customer Focused

We did, however, recommend improvements to make the standard more user friendly for Local Authorities

OUR HYPOTHESIS FOR ALPHA

We believe that by implementing our common service pattern and ideal online customer journey which includes reporting, diagnosing, scheduling, amending repairs and sending appointment reminders and alerts

For council tenants and leaseholders (Excluding 1 behavior type - cannot/will not go online)

Will achieve

- average of 58% online take up (average digital uptake identified from user research across 4 partners)

We will know the Alpha phase has been a success if:

- If the online common service pattern can be applied to all authorities
- If 90% of users can complete the task during user testing
- If the user diagnoses the correct issue and priority 80% of the time during user testing
- If a repair can be reported in less than 3 minutes

ALPHA

- We believe that by creating an Alpha product delivering elements of the ideal customer journey that we can prove our assumptions that it will deliver the expected benefits and meet the users needs.
- It will also prove the assumption that a common service pattern can be implemented regardless of the authorities systems and business rules.
- The decision was taken to focus on one repair type end to end. The repair type selected for alpha is leaks as this will deliver the majority of benefits for all authorities.

RECOMMENDATION FOR ALPHA

The partners considered a range of options for the Alpha product.

The decision was taken to focus on one repair type end to end and to focus on 'leaks'. The key reasons for selecting this option are:

- It will deliver the majority of benefits for most authorities (both within the participating authorities and across the industry): i.e. it is high volume
- It includes chase repairs which is around 50% of the calls and one perhaps the largest area of demand failure
- The scope includes areas that were considered particularly important for meeting user needs and that were considered to have failed when user research on existing products was conducted

THIS INCLUDES:

- Reporting
- Diagnosing (location, type and severity)
- Scheduling an appointment
- Receiving alerts and notifications about the appointment
- Making changes to the appointment e.g. cancelling, rescheduling appointment and escalating the issue

THIS EXCLUDES:

- Communal repairs
- All other repair types
- Optional My Account integration
- A contact centre version of the online tool

Proposed Roadmap and Costs

The project has assumed 3-4 months to deliver the alpha phase (plus any funding timescales) at a cost of no more than £100,000. The proposed roadmap is as follows:

Phase	19/20	20/21	Beyond
No of councils	4	4	10+
Alpha and Beta MVP <ul style="list-style-type: none">● Develop a Minimum Viable Product focused on leaks.● Develop API connectors● Integrate with Southwark repairs systems● Develop using HACT Data Standar			
Full Digital Product Development <ul style="list-style-type: none">● Develop processes for all repair types● Test integrations and open API's with multiple vendors and councils			
Full Digital Roll-out <ul style="list-style-type: none">● Full roll-out● Develop integration adaptor library for faster roll-out			

04

BENEFITS



SUMMARY OF BENEFITS

Local authorities will be able to realise a broad range of financial benefits as a result of implementing the Ideal Customer Journey.

We worked with the 4 partner authorities to identify the quantifiable benefits

These benefits are summarised below

Quantifiable Benefit Category	Quantifiable Benefit
Completion of repairs for qualifying customer groups	1. Leaseholders (reduction in repairs and recovery of s.20 charges)
	2. Tenants with a RTB Application (reduction in repairs)
	3. Repairs for households accommodated in TA (reduction in mis-completed repairs)
More accurate diagnosis	4. Out of Hours repairs (reduction)
	5. Rechargeable repairs (reduction)
	6. First time fixes (increase)
	7. Variation Orders (reduction in number and average value)
	8. Pre and post inspections (reduction in physical inspections)
Responsive repairs calls: appointments, (re)scheduling and updates/confirmation	9. Missed appointment calls (reduction in call volumes, and appointments by operatives)
	10. Rescheduling appointment calls (reduction in call volumes)
	11. Update/confirmation calls (reduction in call volumes)

Lead Authority (Southwark)

The benefits case for the Lead Local Authority has been calculated by working out the maximum achievable benefit for each of the above quantifiable benefits (where information has been provided to enable these to be calculated) and then:

- Reducing this in reflection of the proportion of tenants that our research has indicated are likely to use online services (in the Lead Local Authority this has been established to be 46%), and;
- Profiling the realisation of these as follows:
 - o 33% of the digitally achievable benefit being realised in Yr 1 (19/20)
 - o 66% of the digitally achievable benefit being realised in Yr 2 (20/21)
 - o 100% of the of the digitally achievable benefit being realised in Yrs 3–12 (21/22 to 30/31)

The maximum annual benefit for the Lead Local Authority, which we have estimated will be realised from 21/22, is £573k.

The total net present value benefit (adjusted for inflation) realisable by the Lead Local Authority between 19/20 and 30/31 is:

£5.08m (£128 when expressed per general needs/sheltered property)

Partner Authorities

The benefits case for the Partner Local Authorities has been calculated on the same basis as for the Lead Local Authority, similarly taking account of the proportion of tenants that our research has indicated are likely to use online services in each of these:

- Lincoln 58%
- Lewisham 75%
- Gravesham 42%

The maximum annual benefit for the Lead Local Authority, which we have estimated will be realised from 21/22, is £439k.

The total net present value benefit (adjusted for inflation) realisable by the Partner Local Authorities between 19/20 and 30/31 is:

£3.95m (£151 when expressed per general needs/sheltered property)

Average Local Authority (in England)

A benefits case has also been calculated for the Average Local Authority in England adopting and implementing our Ideal Customer Journey. This has been calculated by working out the maximum realisable benefit for each of the quantifiable benefits set out above for the Average English Local Authority.

There are currently 161 local authorities across England managing council stock (excluding the 4 Local Authorities participating in the Discovery project). Each of these has an average of 9,452 general needs/sheltered properties.

The maximum benefit for each has been calculated by working out the maximum quantifiable benefit for the 4 Local Authorities participating in the Discovery Project, per property, and then calculating this for the Average Local Authority in England.

A high case and low case has then been calculated in reflection of the proportion of tenants that our research has indicated are likely to use online services:

- High Case - 62%, based on the upper quartile proportion of tenants our research across the 4 Local Authorities participating in the Discovery Project indicates are likely to use online services
- Low Case - 52%, based on the median proportion of tenants our research across the 4 Local Authorities participating in the Discovery Project indicates are likely to use online services

Finally the realisation of these benefits has been profiled over time, similarly to the 4 Local Authorities participating in the Discovery Project.

The results of our analysis indicate that the maximum annual benefits for the Average Local Authority in England, based on the above are:

High Case: £170k

Low Case: £143k

The total net present value benefits (adjusted for inflation) realisable by the Average Local Authority in England until 30/31 are:

● **High Case: £1.53m**

● **Low Case: £1.28m**

Non quantifiable benefits

We have also identified a range of other benefits that will have a beneficial financial impact on local authorities responsive repairs services that we have not quantified as part of this project. These are summarised in the table below:

Theme	Other (Non-Quantified) Financial Benefits
More Comprehensive & Accurate Repairs Data	<ul style="list-style-type: none"> ● Proactively managing repairs ordering for tenants reporting disproportionately high numbers of repairs by: <ul style="list-style-type: none"> ■ Providing further advice/information, to support behaviour change ■ Targeting repairs MOTs ● Bringing more repairs together as planned works using data about trends in levels and types of repairs ● Using better and more comprehensive data to produce more accurate s.125's as part of the Right to Buy process
Better Diagnosis	<ul style="list-style-type: none"> ● Using more accurate repairs diagnosis, linked to underlying property level repairs data to: <ul style="list-style-type: none"> ○ Reduce warranty repairs undertaken as responsive repairs ○ Ensure repairs subject to Planned/Cyclical maintenance are either not undertaken, or completed on a more limited 'fix and make do' basis ○ Reduce the potential for repeat orders, for the same repair, by enabling this to be checked in the background ○ Enable the targeted ordering of materials ● Linking repairs diagnosis to SoR items and combining this with comprehensive information on variation order levels, average values and types ensures better control of repairs budgets by enabling: <ul style="list-style-type: none"> ○ Committed spend to be tracked against budgets ○ The targeted reduction of variation order numbers and average values ● Using targeted web-chat (which appears automatically on certain pages when a customer pauses on these for an unexpectedly long period of time i.e. they appear to be 'stuck' assumption) to additionally improve repairs diagnosis ● Reducing the level of rechargeable repair and non-emergency repairs ordered out of hours by tenants by using a range of automatically generated warnings at appropriate points during diagnosis (and the broader online ordering process) to discourage them from doing so ● Enabling customers to indicate when previously reported repairs have deteriorated and the urgency of these has increased as part of repairs diagnosis (or the broader online ordering process), ensuring stock is kept in best order
Appointment & Contact Data	<ul style="list-style-type: none"> ● Using avoidable contact data to enable specific issues with the repairs service, where improvements can be made, to be identified. For example, this might involve looking at: <ul style="list-style-type: none"> ○ Follow-up calls by contractor – for missed appointments etc.

Theme	Other (Non-Quantified) Financial Benefits
Appointment & Contact Data	<ul style="list-style-type: none"> ● Reducing the number of missed appointments and missed appointment calls by ensuring that information is captured for the person who will be in the property when the operative attends the appointment, as part of the on-line reporting process ● Using a combination of appointment/job completion data, SoR codes and operative timesheets to enable local authorities to: <ul style="list-style-type: none"> ○ Challenge and refine SoR time allowances to increase service efficiency ○ Identify and analyse levels of non-productive time
Others	<ul style="list-style-type: none"> ● Increasing the number of repairs covered by contents insurance by using the on-line repairs reporting process to pro-actively promote this ● Using predictive modelling, AI and the greater richness of data generated across the on-line customer journey, in combination with existing repairs information to improve strategic and operational management information by using this to model (and better plan) individual dwelling, communal, planned, cyclical and major works ● Increasing customer propensity to channel shift (and the consequential realisation of additional financial benefits) by ensuring that on-line and phone based service offerings are consistent with one another (with the phone based service effectively being an assisted version of the on-line service offering) ● Better managing customer expectations throughout the on-line customer journey – so that service levels (and expectations thereof, including timescales for the completion of different types and priorities of repairs) are clear from the outset to help reduce the number of (and officer time spent dealing with): <ul style="list-style-type: none"> ● Members enquiries ● Missed appointment calls

THANK YOU

OrangeMaple is a digital innovation agency. We create digital experiences that customers love. We combine amazing service design with deep technology and understand how to change the way people feel, connect and interact.



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