

Assessing the suitability of low code platforms for housing management

Alpha Phase report

London Borough of Redbridge Digital Team, May 2022





Our partners for Alpha

Design partner



Low code platform suppliers



Project sponsor



Core Alpha project team

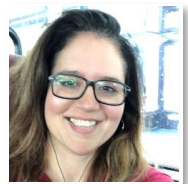
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Redbridge Housing

Karen Kirby
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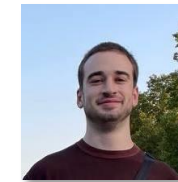
Amido



Rob Pearson
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- UX Designer



Executive summary: What

Redbridge ran an alpha phase project to explore ways of improving social housing management

We ran a 16 week Alpha project funded by the Local Digital Fund to:

- Test a user-centred approach to designing tenancy management services
- Evaluate the use of low code platforms for tenancy management as an alternative to enterprise housing management systems



Executive summary: Why

Existing housing management systems are expensive and not user-centred

- Enterprise housing management systems are used by social landlords but offer poor user experience.
- There are high quality open source housing solutions available. However, many councils lack either the budget or in-house technical knowledge to integrate these solutions with existing systems.
- Migrating housing systems is expensive. The high implementation costs have led to archaic in-house systems that have not kept pace with changing user needs.
- Alternatively, low code platforms need minimal hand-coding which reduces development costs. Low code also usually enables quicker setup and implementation times at the potential cost of some flexibility.



Executive summary: How

Developing user-centred tenancy management processes in low code platforms

- We defined service patterns for 3 tenancy management processes: Change of a tenant's details such as their phone number, application for a sole to joint tenancy and application for succession of tenancy
- We designed clickable prototypes of these processes. Our three low code partners developed these prototypes on their platforms. We kept user needs at the heart of alpha by holding user workshops and running usability testing on the prototypes and the low code platforms.
- By addressing user needs, we can ensure that housing systems are more intuitive. Councils with limited IT resources should be able to implement and maintain housing solutions built on low code platforms.



Executive summary: next steps

Our recommendation: **Move to Beta**

Redbridge will develop our findings from alpha to move to beta. This next phase will include:

- Getting a better understanding of universal service patterns and processes
- Refining and iterating our low code platform designs

To apply for further DLUHC funding Redbridge will need to:

- Find partner councils to prove the scalability of a low code approach
- Create a framework that designs services based on user needs from mamakes each partner council responsible for implementation on their own platform



Project Timeline

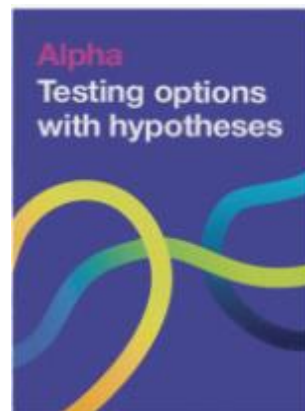
Nov 2021 - Dec 2021



Discovery

Focus on learning about your users and their context, the constraints that affect your problem or the wider context you're working in - and any opportunities to improve things.

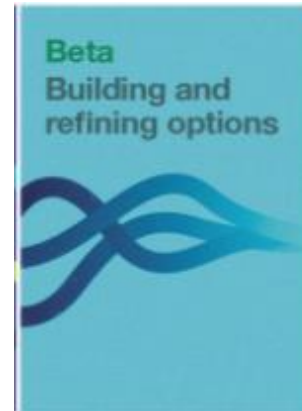
Jan 2022 - Apr 2022



Alpha

Alpha is where you try out different solutions to the problems you learnt about during discovery. Spend alpha building prototypes and testing different ideas. Do not be afraid to challenge the way things are done at the moment: alpha is a chance to explore new approaches.

May 2022 onwards



Beta

The beta phase is where you take your best idea from alpha and start building it for real. It also involves thinking about how your service will integrate with (or start to replace) existing services, and preparing for the transition to live.



Live

The live phase is about supporting the service in a sustainable way, and continuing to iterate and make improvements.



CONTEXT



Problem Statement

Social landlords lack user-centred solutions to deliver core housing functions.

The housing software market is dominated by a small number of providers. Migration between existing vendor solutions is expensive and high risk. This reduces incentives for providers to innovate products, creating a broken market. High quality, open source solutions have begun to appear but are still expensive to implement due to the number of integrations, e.g. with financial systems, that need rewriting.

This is exacerbated by many social landlords being district councils, with low internal development capacity and limited budget to rebuild integrations or fine tune open source solutions to the needs of their users.



Cost of Problem

Solution migrated to	Migration Costs	Ongoing enhancement costs
Proprietary HMS	£2m - £4.5m <i>Depending on size and complexity of landlord</i>	£750 - £1,500 p/d
Open Source	£1.5m - £2m <i>Dependent on variances in repairs delivery, housing management processes and internal capability/capacity</i>	£600 - £1,250 p/d <i>Can be avoided if council has suitable internal capability</i>

Cost of inaction:

- Systems stagnate and do not keep pace with changing user needs.
- It is estimated that better software could cut processing times by over 35% (see prototype testing)



Alpha Hypothesis

User-centred housing services can be delivered cheaply on low-code platforms, freeing up engineering time to “fix the plumbing” by rebuilding integrations with other systems.



Existing Model

Target Model

Future Model

User interface

Business logic

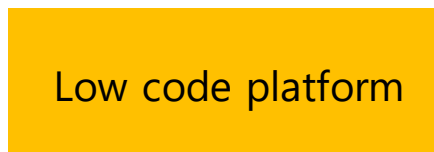
API

Flat file / point to point integrations

Data



Housing Management System



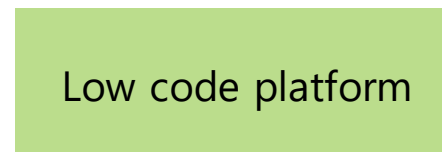
Low code platform



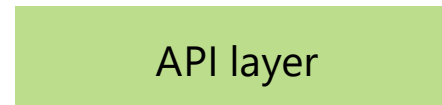
API layer



Housing Management System



Low code platform



API layer



Open Source Database

Traditional HMS tightly package all layers of an application and are typically integrated with other systems using a range of methods, which can be difficult to unpick.

Deploying low-code on top of an HMS enables a better UX and frees up developer time to "fix the plumbing" of systems by implementing a robust API layer around uninspiring but stable legacy tech.

With the API layer in place, the HMS can be switched to an open source database when it becomes the most valuable thing the team can do.

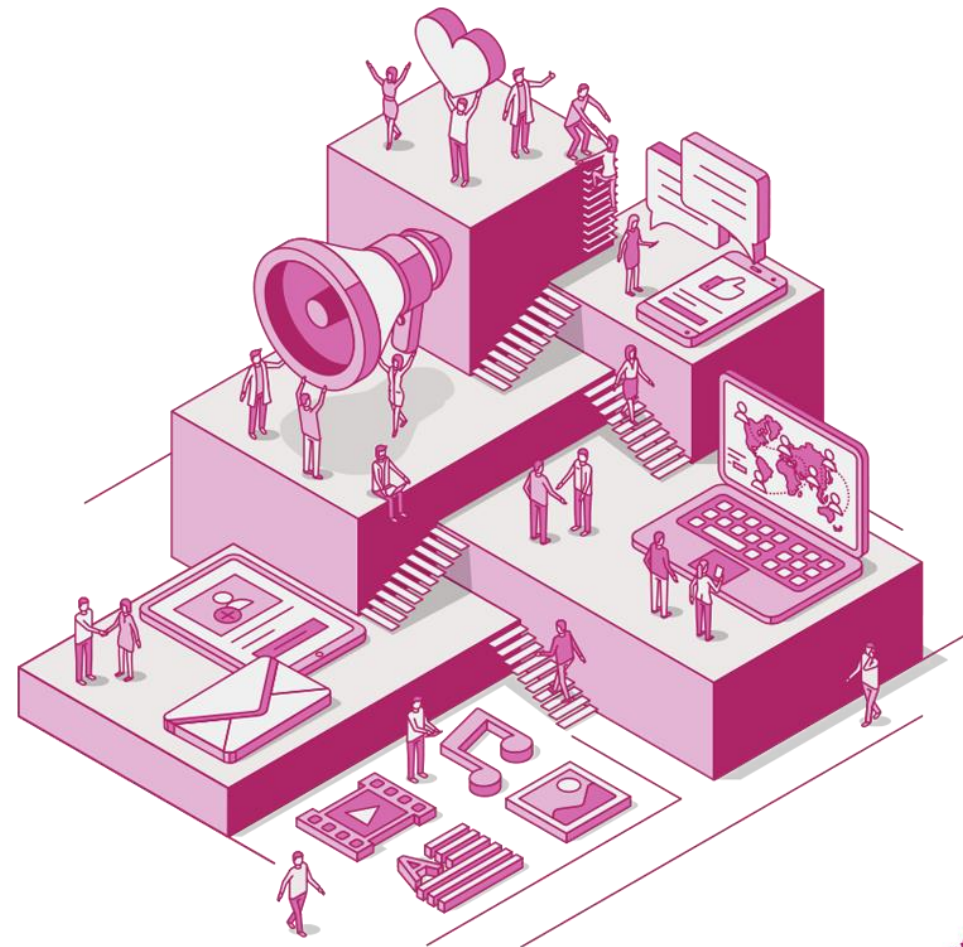


SCOPE



Our aims:

- Define service patterns for 3 tenancy management processes of varying complexity
- Develop these processes in 3 low code platforms
- Understand integrations needed with other systems
- Assess the suitability of low code platforms as an alternative to a traditional housing management system



Three tenancy management processes:

1. Change of tenant details (low complexity)
2. Sole to joint tenancy application (medium complexity)
3. Succession of tenancy application (high complexity)

Three low code platform suppliers and products:

1. Netcall – Liberty Create
2. Placecube – Digital Place, built on Liferay DXP
3. Rapid Information Systems – Rapid open-source application platform



Out of scope

- Mapping other processes that are linked to the 3 processes, e.g.:
 - "death of a tenant" process that precedes tenancy succession applications
 - "adding an occupant to a household" that needs to be completed before a sole to joint tenancy application
- Full service re-design, we tested concepts only
- User journeys beyond the "happy path" of the three processes
- Integration with Redbridge systems
- Mock APIs were created for the existing housing management system to model integrations



Roadmap

Alpha Goal: To prove that 3 key tenancy management journeys can be created in low code platform environments

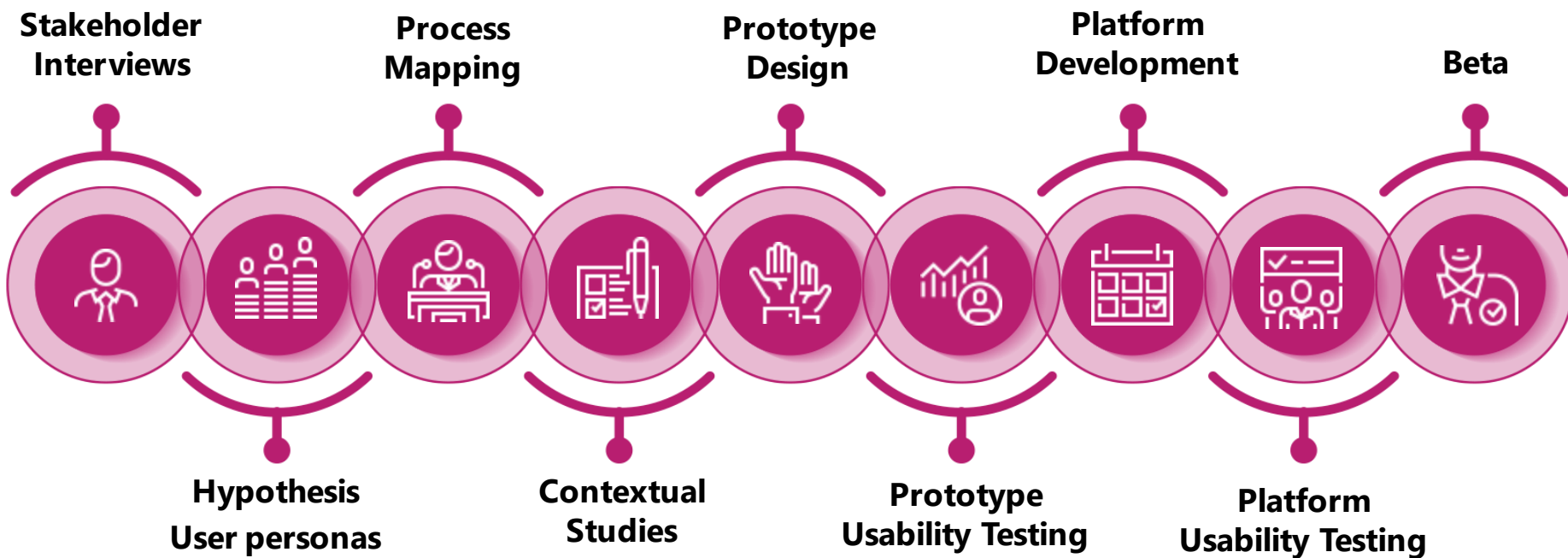
January		February		March		April	
Sprint 1	Sprint 2	Sprint 3	Sprint 4	Sprint 5	Sprint 6	Sprint 7	Sprint 8
Change of Details--->			Succession				
Sole to Joint----->							
				Low Code Platform development----->			
				Usability testing ----->			



USER RESEARCH



User research timeline – Discovery to Alpha



User research activities

Discovery

- 1-2-1 interviews (Qualitative data)
- Hypothesise
- Identify key stakeholders and user groups and personas
- Process mapping workshop
- Benchmarking case studies
- Contextual studies

Alpha

- Define Process Maps and User Journeys
- Develop visual prototypes based on Process Maps and User Journeys
- Prototype usability testing
- Low Code Platform development
- Low Code usability testing and SUS (System Usability Scoring)

User personas – Housing Officer



"20-25% of time could be saved if tenants could upload documents"

Housing Officer

The Housing Officer will spend time to ensure that each change of tenancy process is completed, and checks are suitably carried out. They report to the Senior Housing Officers

- Has been in the job role for 5+ years
- Has identified best ways of working
- Works closely with Senior and Customer Service Officers
- Has had to develop ad-hoc ways of working
- Does not find the Housing Management system intuitive or logical



User personas – Senior Housing Officer



"The ability to see where a case was in the system would be beneficial in a new system"

Senior Housing Officer

The Senior Housing Officer will oversee the change of tenancy processes and will sign off cases and applications provided to them once due diligence has been completed and all documentation is completed

- Has been a Senior Housing Officer for 10+ years
- Works closely with Housing and Customer Service Officers
- Has identified Mutual Exchanges as being the most time consuming
- Would find a dedicated Housing Management system of high value
- Reports that there is an excessive amount of paperwork involved in the change of tenancy processes



User personas – Customer Service Officer



***"Northgate is quite basic
and is not very intuitive"***

Customer Service Officer

The Customer Service Officer is the first point of call for most tenants and will handle the initial requests and applications. They will then process to log these details on to the Housing Management System and delegate to the appropriate Housing Officer

- Has been in their role for 8+ years
- Has primary contact with tenants
- Works closely with the Housing Officers
- Finds having to switch between two systems frustrating
- Finds that the existing Housing Management system is not intuitive
- Would find an online portal for tenants of high value

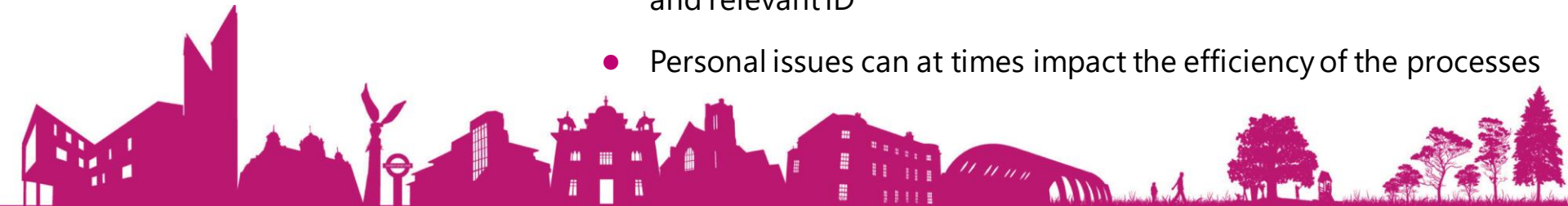


User personas – Tenant



The tenant will communicate at various times with the Customer Service and Housing Officers. They are required to complete various forms during the change of tenancy process and will be keen on completing the processes swiftly.

- Communicates directly with Customer Service and Housing Officers
- Finds the forms at times, difficult to follow and understand
- Must telephone or email to get updates on their change of tenancy case
- Does not always have the means to print and submit documents and relevant ID
- Personal issues can at times impact the efficiency of the processes



User personas – Application Developer



"I want to use a platform that employs industry standards so that I can develop applications that can be easily integrated with new or legacy systems"

Application Developer

The role of Application Developer covers maintenance and support, systems implementation and integration as well as systems analysis and design

- Has concerns around business process complexity and dependency on IT Service to carry out key business processes
- Support and maintenance of bespoke tools needed to carry out business processes
- Difficulties packaging legacy applications and deploying to users
- User error due to lack of training or unintuitive user interfaces



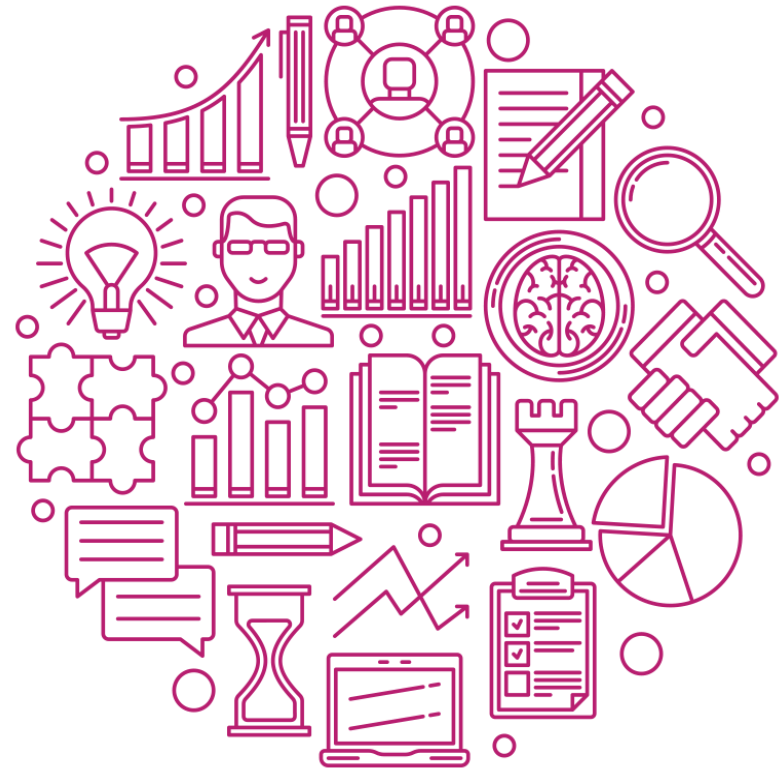
User stories – Housing Officer

As a Housing Officer...

“I want a system that automatically creates and sends emails when requesting tenant evidence so that I can save time”

“I want a system that can automate manual tasks so that I can save time”

“I want to use a platform that stops me having to re-enter the same data so that I can save time”



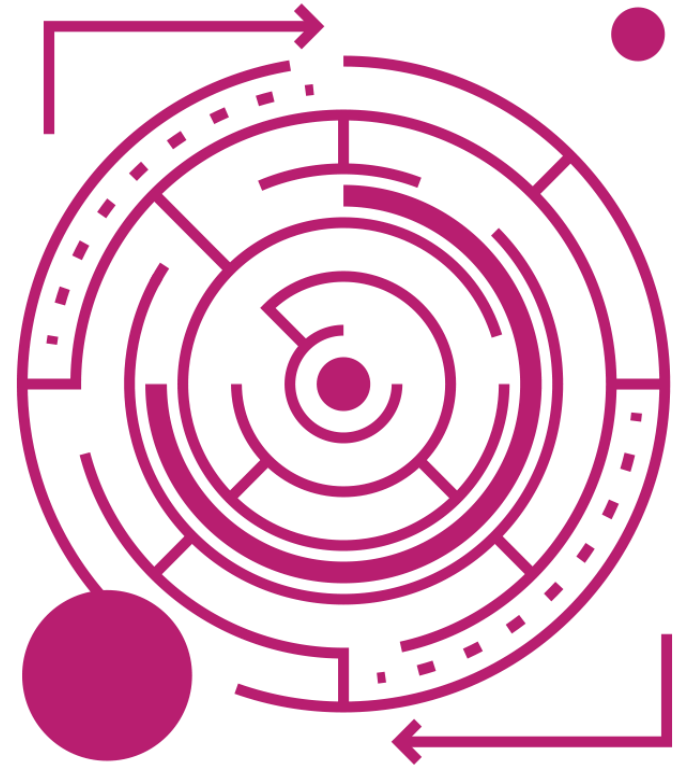
User stories – Housing Officer

As a Housing Officer...

“I want to easily see the current status of my cases so I know what to work on next”

“I want to be able to see my and my colleagues workloads so we can help each other out”

“I want to see documents in the same system so that I don't have to switch back and forth between systems”



User stories – Development and Support

As an Application Developer...

“I want to develop applications on a robust and secure platform to provide my customers with faultless applications and business assurance”

“I want to develop applications on a platform that is intuitive and feature rich so that I can deliver innovative solutions without compromises”



User stories – Development and Support

As an Application Developer...

“I want to use a platform that is well documented so that I don’t have to figure out how the platform has been engineered or waste time implement features incorrectly”

“I want to use a platform that employs industry standards so that I can develop applications that can be easily integrated with new or legacy systems”

“I want to use a platform which has a strong developer community attached to it to aid collaboration and the sharing of ideas”

PROTOTYPING



Our approach: Prototyping

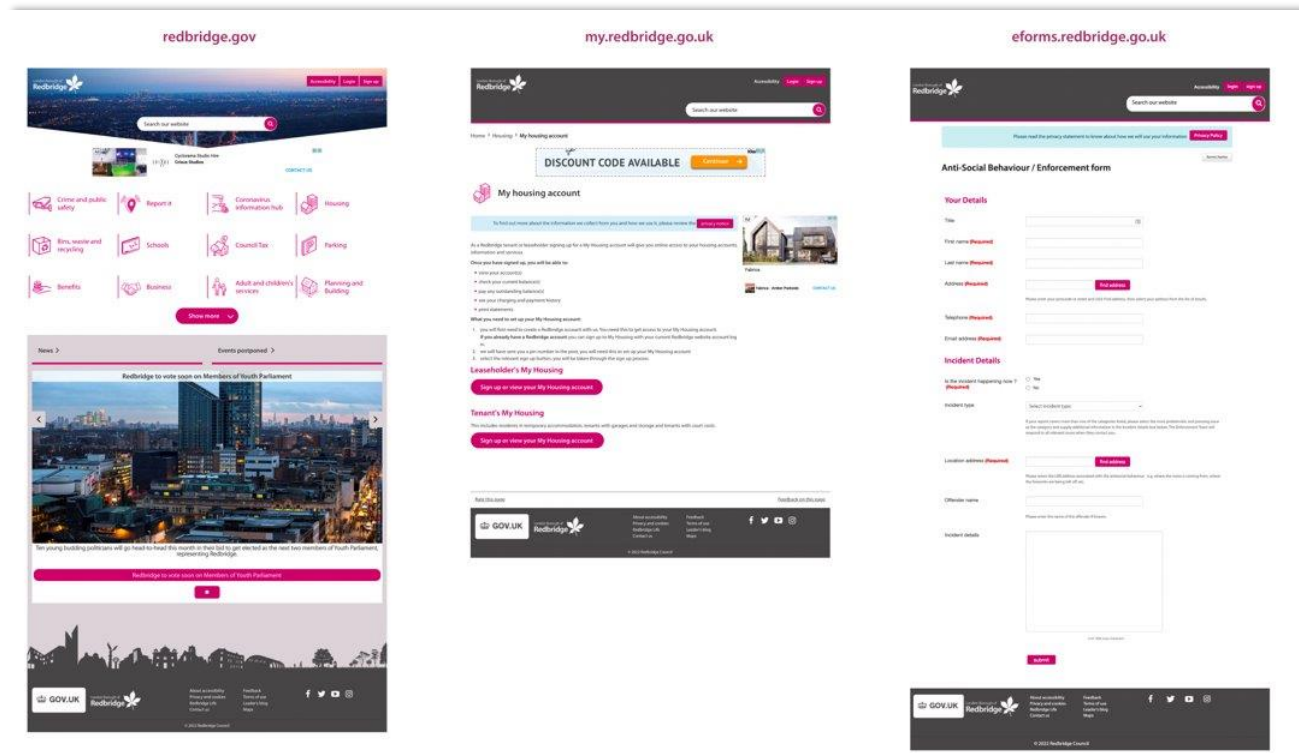
- Identified where technical integrations with existing systems were needed and created mock API stubs
- Created clickable prototypes to demonstrate what new ways of working could look like
- Prototype built around a Case List "hub" where Housing Officers could see all their cases
- Property Dashboard gives an overview of occupiers, rent account balance and links to documents
- Designed using Redbridge's style guide and branding
- Ran usability testing sessions Housing Officers to gauge how intuitive designs were



Design System


We started with the same visual style as Redbridge's website, including:

- header and footer banner
- brand colours
- font
- form fields
- call to action buttons.




New design features

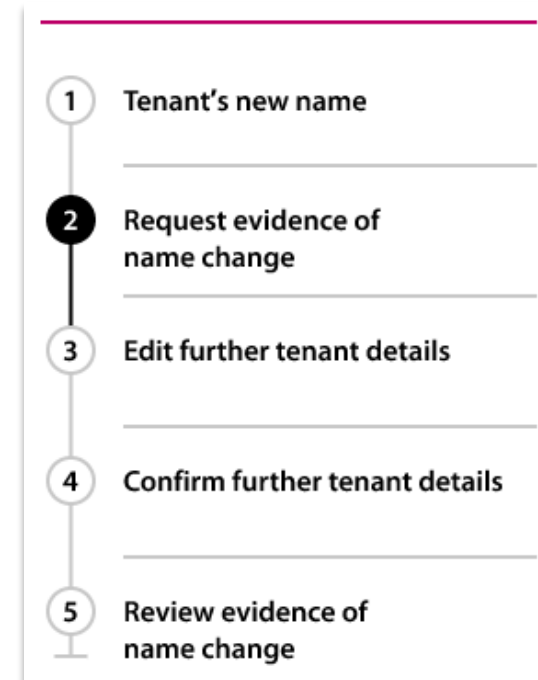
'Eligibility check' information boxes to show which checks have been completed:

 All housing officer eligibility checks passed
[Show all](#)

Automatic eligibility checks

 The tenancy's rent account is not in arrears

Gov.UK step indicator to show where the user is in the process:



Links to prototypes

Change of tenant details:

- [▶ Change of details - Change of tenancy wireframes \(figma.com\)](#)

Sole to joint tenancy application:

- [▶ Sole to joint tenancy - Change of tenancy wireframes \(figma.com\)](#)

Succession of tenancy application:


- [▶ Succession - Change of tenancy wireframes \(figma.com\)](#)

Prototype screenshots: Case List and Sole to Joint

London Borough of Redbridge  Welcome [officer name] [Log out](#)

Case List


Home > Search results

London Borough of Redbridge  Welcome [officer name] [Log out](#)

Sole to joint tenancy

Home > Search results > 14 Wellington Road, E11 2HB > Sole to joint tenancy

Search

Wellington Road 

54 properties found

Sort by: address A-Z Property class: all Tenancy type: all

2 Wellington Road, N14 5ST Alicia Evergreen Abdal Evergreen	Property class: council property	Tenancy type: secure
2 Wellington Road, N14 5ST Oliver Riveria	Property class: council property	Tenancy type: intro
6 Wellington Road, N14 5ST Denny Greer Rohit Greer	Property class: freehold	Tenancy type: secure
8 Wellington Road, N14 5ST Jez Yu Vicky Yu	Property class: leasehold	Tenancy type: intro

Sole to joint tenancy

Select person to add to tenancy

14 Wellington Road, E11 2HB

Current tenant: **Vida R Catarina**

The proposed joint tenant must be on our records as living at the property.

Select person (required)

Ira Jones

Guillermo Jones

If the person you want to add is not listed, you will need to add them as an occupant to this property first and then return to the sole to joint process.

[Next](#)

[Cancel](#)

- Select person to add to tenancy
- Eligibility checks
- Request evidence
- Review evidence
- Submit for enhanced checks
- Enhanced checks
- Review enhanced checks officer recommendation
- Arrange appointment

Prototype screenshots: Property Dashboard page

14, Wellington Road, IG11 2RP

Property details

Tenancy details		Home details	
Address:	14 Wellington Road, Clayhall, Ilford, Essex, IG11 2RP	UPRN:	1066498
Status:	Let	Account type:	SECS (Standard council home)
Tenancy start date:	12/04/2012	Property type:	Home
Rent start date:	18/04/2012	Home type / subtype:	Flat / low rise
Tenancy ceased date:	-	No. bedrooms:	2
		Permitted occupancy:	3
		Floor level:	1

Processes

[New process](#) ▾

[View active processes](#) ▾

Succession

Vicky King succeeding to 5 Coventry Road, IG1 4QR

People

Tenants

Mrs. Vida R Catarina		Mr. Peter J Smith	
Date of birth:	29/08/1982	Date of birth:	29/08/1972
Age:	39	Age:	39
PIN:	3346995	PIN:	3346995
Start date:	12/04/2012	Start date:	12/04/2012
Prime phone number:	07764664831	Prime phone number:	07764664831
Email address:	vidarcatarina@gmail97.com	Email address:	vidarcatarina@gmail97.com

Rent

Balance: £130.22

a/c number: 1001946-004-1661

Last payment: £16.12
21/12/2021

Total weekly rent: £151.12

[View rent on Northgate](#)

Occupants

Mr. Guillermo R Jones		Mr. Ira D Jones	
Date of birth:	19/08/1999	Date of birth:	04/01/2002
Age:	39	Age:	39
PIN:	4133565	PIN:	4233565
Start date:	31/08/1999	Start date:	04/01/2002
Prime phone number:	07764664831	Prime phone number:	07764664831
Email address:	vidarcatarina@gmail97.com	Email address:	vidarcatarina@gmail97.com
Warning code:	Hearing difficulties	Warning code:	Hearing difficulties
Vulnerable:	No	Vulnerable:	No
Disabled:	No	Disabled:	No

Documents

- [Tenancy agreement](#) added 12/04/2012
- [Marriage certificate](#) added 12/02/2021
- [Driver's licence](#) added 24/12/2020

[View docs on IAW](#)

USABILITY TESTING: PROTOTYPE



Usability testing approach: Prototype testing

- Identify key tasks within each process for Housing and Customer Service Officers to complete
- Create tasks in usability testing software (Maze)
- Lab usability testing allowing to monitor and evaluate user interaction and engagement with the use of heatmaps, live recordings
- Contextual inquiries using end of task surveys and open discussions with scoring via surveys
- Provide insights back to the design team on the user experience and engagement
- Resolve any user journey issues ahead of LCP (Low Code Platform) development



Usability testing: Prototype analysis

Heatmap and click analysis

Heatmaps and user clicks monitored to better understand how user interacted with each process and to identify areas of hesitation, confusion or UI (User Interface) errors.

Home

Search

Search for property

Work items

View: All processes Housing patch: LBR1 - (Housing officer name) Show: 10 items

2 Peter Street, N14 5ST Abdul Evergreen	Change of details	Initiated 02.01.2022	1 day left	Awaiting HO review
12 Tiptree Hill, N12 6XT Samantha Donalukon	Sole to joint tenancy	Initiated 12.01.2022	4 day left	Awaiting HO review
4 Pole Street, N11 0IP Justin Pullman	Succession	Initiated 09.12.2022	10 day left	Awaiting evidence
2 Peter Street, N14 5ST Lex Green	Change of details	Initiated 02.02.2022	12 day left	Awaiting evidence
Flat 3, Homefield road, N10 7UI Amir Iqbal	Succession	Initiated 08.02.2022	12 day left	Awaiting evidence
Flat 3, Homefield road, N10 7UI Amir Iqbal	Succession	Initiated 08.02.2022	12 day left	Approved ✓
Flat 3, Homefield road, N10 7UI Amir Iqbal	Succession	Initiated 08.02.2022	12 day left	Rejected

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Home

Search

Search for property

Work items

View: All processes Housing patch: LBR1 - (Housing officer name) Show: 10 items

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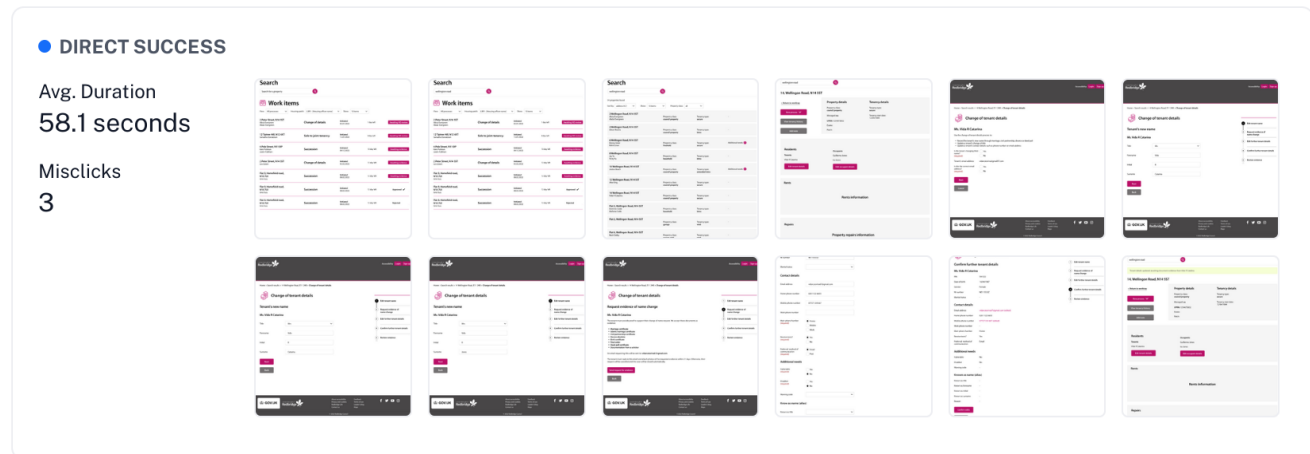
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Usability testing: Prototype analysis

Direct Success Rates

The user journey was monitored via Maze to establish whether a user completed a task directly from A-B



Usability testing: Prototype analysis

End of task surveys

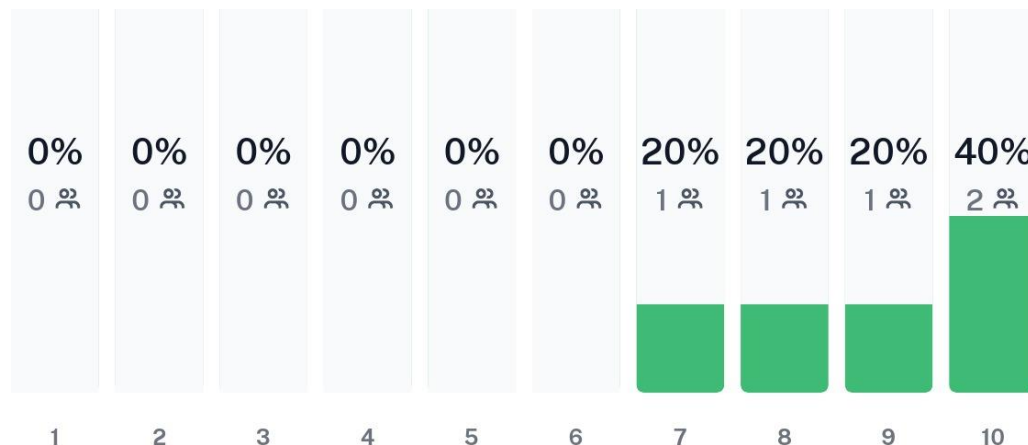
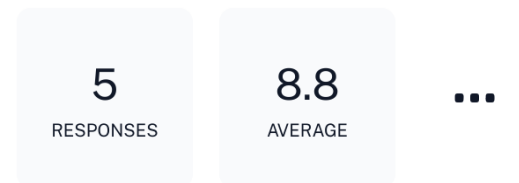
Users were asked to answer a series of questions after each task to assist with analysing the UX (User Experience) and areas of issue or confusion around the process and UI (User Interface)



How easy was it to navigate through each page?

OPINION SCALE

1 being very difficult, 10 being very easy

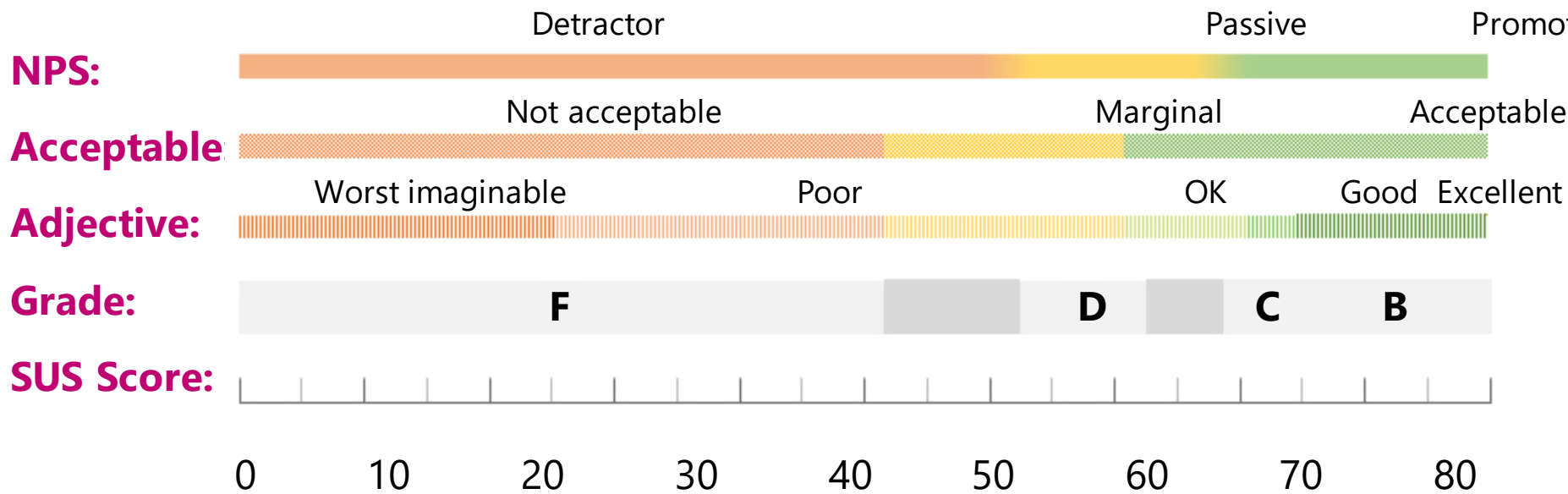


Usability testing: SUS Scoring Matrix

Grade	SUS	Percentile	Adjective	Acceptable	NPS
A+	84.1-100	96-100	Best Imaginable	Acceptable	Promoter
A	80.8-84.0	90-95	Excellent	Acceptable	Promoter
A-	78.9-80.7	85-89		Acceptable	Promoter
B+	77.2-78.8	80-84		Acceptable	Passive
B	74.1 – 77.1	70 – 79		Acceptable	Passive
B-	72.6 – 74.0	65 – 69		Acceptable	Passive
C+	71.1 – 72.5	60 – 64	Good	Acceptable	Passive
C	65.0 – 71.0	41 – 59		Marginal	Passive
C-	62.7 – 64.9	35 – 40		Marginal	Passive
D+	51.7 – 62.6	15 – 34	OK	Marginal	Detractor



Usability testing: SUS Scoring



Usability testing: Prototype results

Change of Tenant Details – User Journey

Task	Direct Success Score	UI Average Score	UX Average Score	User Navigation Average Score	SUS Score
Update email address	55.5%	70%	75%	75%	68.8% / C / OK
View / approve submitted evidence	100%	89%	93%	93%	93.75% / A+ / Best imaginable
Update tenant's main telephone number	83.4%	82%	88%	82%	83.85% / A / Excellent
Update tenant's mobile number	100%	84%	88%	88%	90% / A+ / Best imaginable
Update tenant's title and surname	100%	85%	90%	87%	90.5% / A+ / Best imaginable

Usability testing: Prototype results

Sole to Joint – User Journey

Task	Direct Success Average Score	UI Average Score	UX Average Score	User Navigation Average Score	US Score
Start sole to joint process through to requesting evidence	100%	82.5%	82%	84%	87% / A+ / Best imaginable
Complete Sole to Joint process beyond fraud and evidence checks	100%	80%	82%	84%	87% / A+ / Best imaginable



Usability testing: Prototype analysis

Conclusions

- Usability scores high after first use, demonstrating an intuitive UI
- Both 'Change of Details' and Sole to Joint processes passed SUS (System Usability Scoring)*
- Positive user responses recorded with marked improvements against existing system (Northgate)
- High scoring passes recorded for User Experience and User Interface
- High percentage of direct success rates indicating understanding of UI user journey
- 7 Housing Officers included in usability testing
- 6+ hours of usability testing

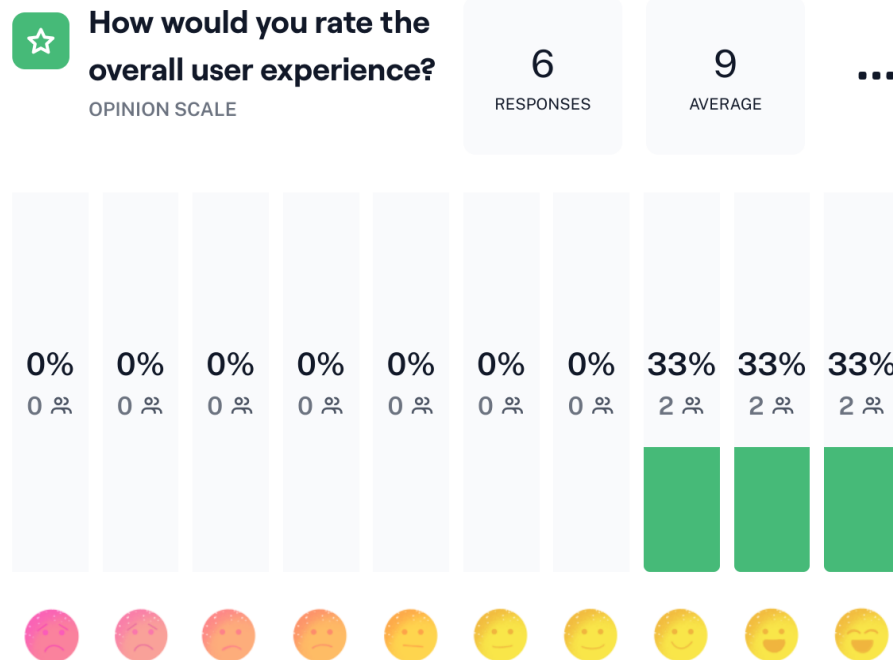
*Succession process not tested



Usability testing: Prototype analysis

Results break down

- After testing, a high number **(83.2%)** of testers reported that they **did not struggle** at all with the **Change of Detail processes**
- **(85.5%)** of testers reported that they **did not struggle** at all with the **Sole to Joint processes**
- Users rated the **User Experience** a high **(90%)**



Usability testing: Prototype analysis

User Feedback

“Clear and easy to use.”

“Just got a little confused when I was on the edit page as I couldn't see all the personal details to edit ”

“Very simple and straightforward, self-explanatory.”



USABILITY TESTING: LOW CODE PLATFORMS



Our approach: low code platform development

- Each platform provider took a slightly different approach to prototype implementation:
- **Netcall's Liberty Create** is targeted at “citizen developers” who can build applications via the user interface. It has an existing package, Tenancy Hub, that provides a starting point for housing processes.
- **Placecube's Digital Place** is built on top of Liferay DXP so covers both CMS and low code functionality. It also targets citizen developers with prototypes implemented using the multi-stage form module.
- **Rapid's Application Development Framework** is a fully open source platform aimed primarily at developers. The prototypes were implemented using its form building component.



Low code platform demos

Each low code platform supplier ran through a process at a Show and Tell:

- **Rapid:** Demo of 'Change of tenant name'
<https://youtu.be/NKy6xqIm1W0?t=689>
- **Netcall:** Demo of 'Sole to joint tenancy application'
<https://youtu.be/8dkxx8FMJ2Y?t=123>
- **Placecube:** Demo of 'Sole to joint tenancy application'
<https://youtu.be/q3aaH37lvF0?t=204>



Usability testing approach: Platform testing

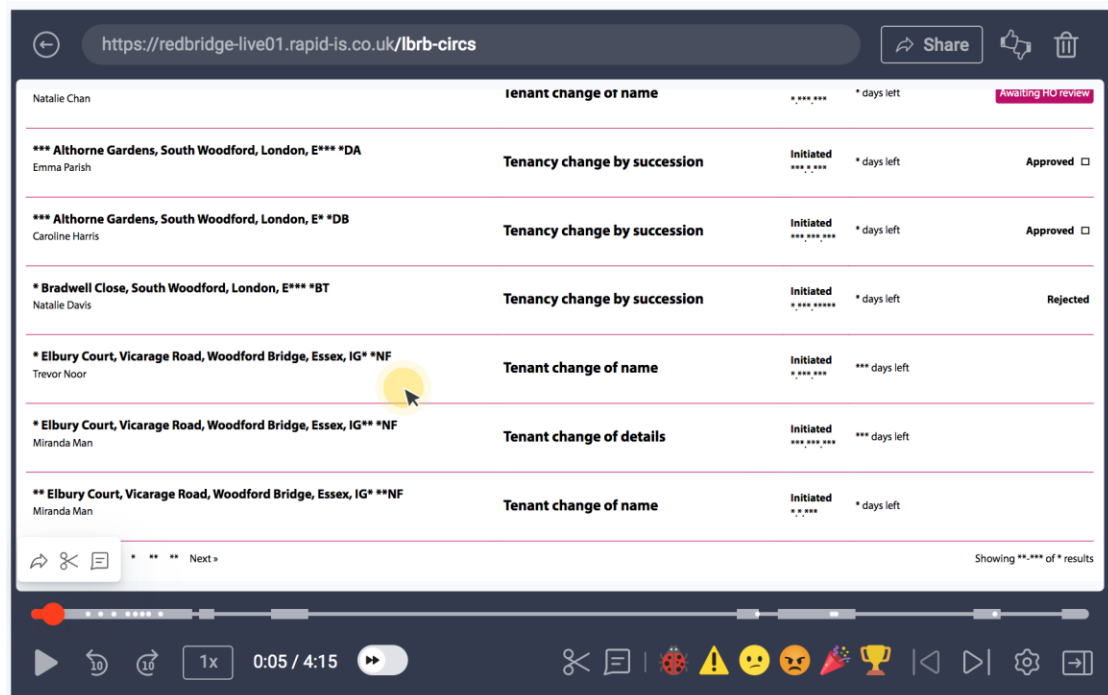
- Identify key tasks within each process for Housing and Customer Service Officers to complete
- Connect usability testing software (HotJar) to LCP test sites for testing
- Schedule and conduct on-site Lab usability testing
- Monitor and evaluate user interaction and engagement with the use of heatmaps, live recordings and end of task surveys and discussion
- Post testing analysis and SUS (System Usability Scoring)



Usability testing: LCP analysis

Heatmap and click analysis

Solutions built on LCPs were tested through lab testing, heatmap and click analysis. Session were recorded and the user journey recorded.



Name	Address	Change Type	Status	Progress	Notes
Natale Chan		tenant change or name	*****	* days left	Awaiting HO review
*** Althorne Gardens, South Woodford, London, E*** *DA	Emma Parish	Tenancy change by succession	Initiated ***	* days left	Approved <input type="checkbox"/>
*** Althorne Gardens, South Woodford, London, E* *DB	Caroline Harris	Tenancy change by succession	Initiated ***	* days left	Approved <input type="checkbox"/>
* Bradwell Close, South Woodford, London, E*** *BT	Natale Davis	Tenancy change by succession	Initiated ***	* days left	Rejected
* Elbury Court, Vicarage Road, Woodford Bridge, Essex, IG* *NF	Trevor Noor	Tenant change of name	Initiated ***	*** days left	
* Elbury Court, Vicarage Road, Woodford Bridge, Essex, IG** *NF	Miranda Man	Tenant change of details	Initiated ***	*** days left	
** Elbury Court, Vicarage Road, Woodford Bridge, Essex, IG* **NF	Miranda Man	Tenant change of name	Initiated **	* days left	

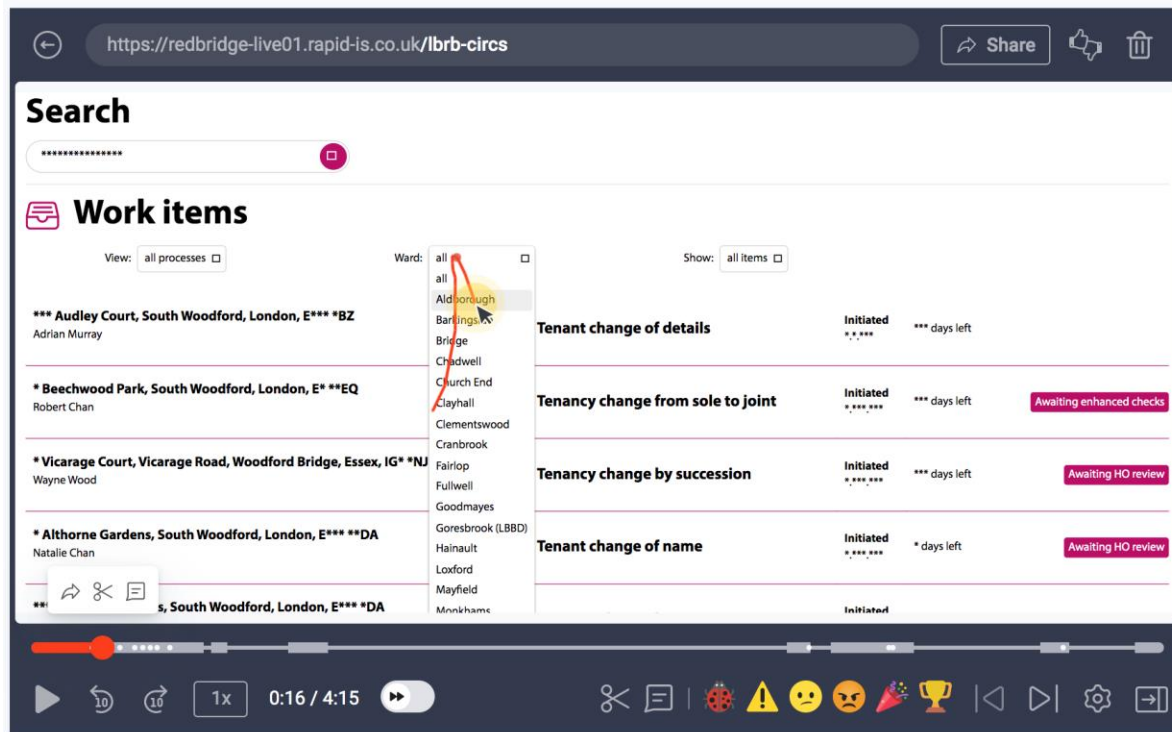
Showing **.* of * results



Usability testing: LCP analysis

Direct Success Rates

Recorded LCP user journeys were analysed to monitor the success rates of users starting and completing a process from A-B.



Usability testing: LCP analysis

End of task surveys

All users were asked to complete a short survey to assess their experience of using the systems to complete various process tasks and provide valuable feedback if or when they had an issue navigating each page

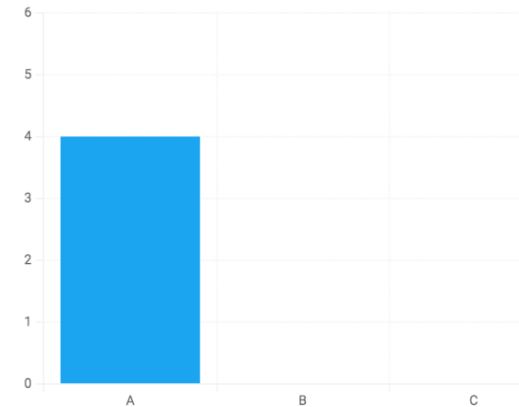
Responses Results Performance

Show results for:

Given the choice, would you prefer to use this new system rather than the current (Northgate)? ▾

#	Answer	Count	%
A	Yes	4	100%
B	No	0	0%
C	Not sure	0	0%

4 total respondents



Usability testing: Low Code Platform results

User Journey

Task	Direct Success Average Score	UI Average Score	UX Average Score	User Navigation Average Score	SUS Score
Start sole to joint process (start to finish)	100%	90%	86.66%	86.66%	90.83% / A+ / Best imaginable
Change of Details (start to finish)	100%	90%	90%	90%	92.5% / A+ / Best imaginable



Usability testing: LCP analysis

Timings – Northgate vs LCP Systems

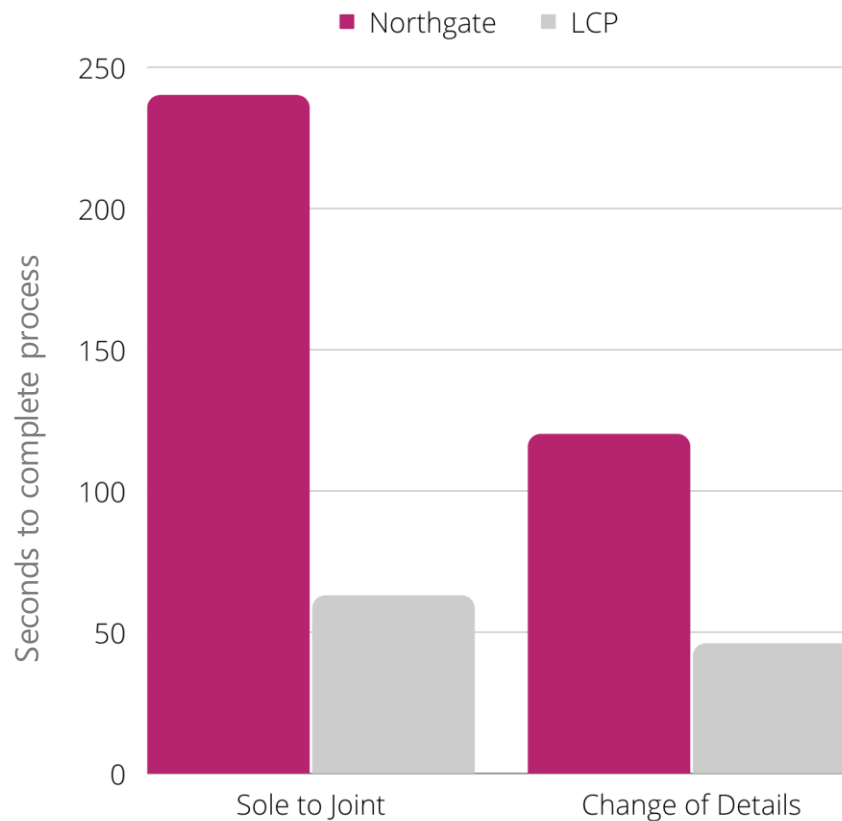
Process	Northgate (Average time)	LCP (Average time)	Difference +/-
Sole to Joint	240 seconds	63 seconds	-177 seconds / LCP 26.5% quicker
Change of Tenant Details	120 seconds	46 seconds	-74 seconds / LCP 38.33% quicker



Usability testing: LCP analysis

Timings

The Sole to Joint process on average, in the LCP systems is **26.5% quicker** than that of the **Northgate system**. The Change of Details process in the LCP systems is **38% quicker**.



Usability testing: LCP results

Change of Details and Sole to Joint – User Journey

- **90%** of users confirmed that they would prefer to **use the LCP system over Northgate**
- **90%** of users confirmed that they **did not struggle** with the LCP processes
- **36/40 (90%)** was the overall score from users who rated the **User Interface**
- **35/40 (87.5%)** was the overall score provided when users rated their **User Experience**
- The automated email process in the LCP systems is a contributing factor to the **process times being cut** between **27-38%**

“The system looks more modern than Northgate”

Usability testing: LCP results

Change of Details and Sole to Joint – User Journey

- **35/40 (87.5%)** was the overall score users provided when asked how '**easy**' it was to navigate through each page
- **75%** of users from the usability testing confirmed that the **LCP systems were quicker than the Northgate system** with **25%** saying they were **not sure**

“It's a lot quicker and straightforward.”

“This new system would save us (Housing Officers) between 30-40% of time”



Key Insights and Responses



Discovery insight	Alpha response
<p>There is very high percentage of tasks which are manual. There appears to be a lack of any automated tasks</p>	<p>The automated emails requesting evidence from a tenant regarding change of details worked effectively as did the submission of evidence for review</p>
<p>Having tabs is a popular need from those who currently use the Northgate system. The ability to add notes too would be of benefit</p>	<p>The use of breadcrumb trails/indexes within the user interface allowed users to successfully navigate between stages of a case</p>
<p>It is a common theme that a system which merges the functionality and features of Information at Work and Northgate would be ideal</p>	<p>Users found the ability to review and approve documents within the Housing Management System and not switch between systems time saving and helpful</p>
<p>Being able to add notes to a tenant's profile has been suggested on several occasions</p>	<p>Users were able to add and view tenant notes easily and effectively after running a search for a tenant or property</p>



Discovery insight	Alpha response
<p>Housing Officers and Customer Service Officers have reported that they are having to enter the same data on to two different systems</p>	<p>Users being able to review updates, evidence, tenant details in the low code platform is time saving with the introduction of automated emails cutting process times by 27-38%</p>
<p>The change of tenancy processes amount to on average, 30% of a Housing Officers workload</p>	<p>Users reported after usability testing that the new system would save between 30-40% of their time</p>
<p>There is an excessive amount of paper forms for each of the change of tenancy processes which must be then scanned on to the Information at Work system and manually entered on to the Northgate system</p>	<p>Users welcomed the ability for tenants to submit evidence or documents directly into the low code platform, eliminating the requirement to scan or move documents from one system to another</p>
<p>There is no way current way of being able to correct a mistake made on the Northgate system and users must place a call with the support team to make any amends</p>	<p>Users successfully completed the change of tenant details process with an SUS (System Usability Scale) score of 92.5%</p>



Discovery insight	Alpha response
<p>There is no logical UI (User Interface). For example, users are not able to view details of a tenant without having to copy the user ID and running a search</p>	<p>Usability scores registered highly after first use, demonstrating an intuitive UI</p>
<p>Housing Officers have expressed having no interest in the possible analytical tools that typical Housing Management Systems provide</p>	<p>User expressed their satisfaction that a filtering system was in place to filter cases by a specific status</p>
<p>There is high dependency on the use of the Northgate system, email and the Information at Work system</p>	<p>Users reacted positively to emails being automatically created and sent to tenants</p>
<p>There is currently no option to include details of tenant's accessibility needs on the Northgate system</p>	<p>The ability to add notes regarding a tenant's personal circumstances was received with positivity and found to be useful</p>



BUSINESS CASE



Value of opportunity

Scaling this project to cover all tenancy management processes could save local authorities £2.6m p/a.

If homes managed by housing association are included, this rises to £6m p/a.

Beyond tenancy management, this approach could also cover leasehold services and income collection.



Non-financial benefits

In addition to reduced processing times improved software would also:

- Improve service levels
- Reduce failure demand
- Improve staff experience
- Support channel shift
- Facilitate better data sharing with other services



Value of opportunity

Process Complexity	Time Saving	Volume p/a	Savings p/a	Savings per property*
High	Not calculated**	185	15hrs 24mins	-
Medium	~180 secs	811	40hrs 33mins	-
Low	~75 secs	~14,000	291hrs 40mins	-
Total	-	~15,000	347hrs 37mins	4mins 42secs

*Redbridge Council currently manage 4427 socially rented properties

**It was not possible to accurately measure this figure based on MVP of process but was estimated at 5 minutes



Value of opportunity

Saving per property	Saving for Council properties (total)*	Saving for Housing Association properties (total)**	Total Saving in Social Housing sector
4m 42s p/a	125,333 hrs	188,000 hrs	~313k hrs p/a
-	£2,678,082 p/a	£3,440,455 p/a	~£6m p/a

*Based on 1.6m socially rented homes managed by councils

**Based on 2.4m socially rented homes managed by housing associations

Time savings based solely only on process execution and do not include savings related to better UX in general system navigation.

Financial value of savings are based on average Housing Officer salary of £26k p/a as per National Careers Service, Payscale, Indeed.com and Reed.co.uk.

Savings include employers NI for councils and housing associations. Savings include LGPS contributions for councils but assume statutory minimum pension for housing associations.



Complexity Level of Tenancy Management

Process	Complexity Level	Total Amount Completed	Priority for Beta
Change of Details	Low	100 per year	Done
Sole to Joint	Medium	20 per year	Done
Succession	High	45 per year	Medium
Assignment	Medium	16 per year	Low
4 weekly visits/Introductory Tenancy	Low	200 per year	Medium
Mutual Exchange	Medium	12 per year	Medium
Tenancy Audits	Low	2200 per year	High
ASB	High	140 per year	High
Gas Servicing	Medium	700 per year	High
Alterations/Improvements	Medium	25 per year	Low
Management Transfers	Medium	18 per year	Low
Discretionary Tenancies	Medium	10 per year	Low
Abandonment / Sub-letting	Medium	10 per year	Medium
General Correspondence/Worktray	Low	10k-12k emails p/a total misc correspondence, e.g: 100 p/a changing contact details 60 p/a pest control 75-100 p/a forced entry	Low



RECOMMENDATIONS AND NEXT STEPS



Following completion of business case...

- **Find partner councils to join for beta.**

Alpha has proved the approach can work. Additional partners are needed to prove it's scalable and ensure core solution isn't specific to Redbridge.

- **Don't have one council manage multiple low-code providers**

The approach worked in alpha but caused a lot of overhead for the team. Each partner council should be responsible for their implementation, partnering with providers if necessary.

- **Better understand universal patterns before tackling other processes**

Certain procedures are prerequisite to many services, e.g. adding an occupant to a property, or death of a tenant.

- **Continue iterating design**

Ministry of Justice Digital have created components well suited to internal applications which should be adopted where suitable.



Design Principles

- Be the guide – the system should be intuitive to users and not forcing them to 'think' their way through each task
- Less clicking - the user interface should be self-contained and minimise tabs
- Don't reinvent the wheel - the system should utilise well-tested, common patterns from existing design systems
- Provide the right data, in context, on demand – don't display information not relevant to the task at hand
- Accessibility – highly accessible software is better for all users
- Design for different mental models – some officers will start a process from an address, others from a person. Accommodate both.

