# **London Borough of Redbridge - Low-code patterns for housing management**

## 2. Lead authority details

**2.1 Lead authority name**

London Borough of Redbridge

**2.2.1 Full name**

Tom Harrison

**2.2.2 Role**

Programme Director

**2.2.3 Email**

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## 3. Project details

**3.1 Project title**

Exploring common design patterns for social housing on low code platforms to address the poor UX of traditional housing systems

**3.2 Project description**

Housing management systems (HMS) are monolithic ERP systems. Much of the functionality they package, e.g. workflow management, basic CRM and property databases, is commoditised. Despite this they are more expensive than would be expected, do not well meet user needs and migration between them is high risk leading to a broken market with little competition.

This project seeks to understand which housing functions can be provided using low code development platforms and challenges of this approach. Our hypothesis is that the functionality required to run a housing service can be better provided by alternatives to traditional HMS.

**3.3.1 The platform name and company**

Our intention is that the alpha would cover multiple platforms. Designers from LB Redbridge would work with designers from platform companies to develop patterns for specific services within Housing. The platform companies would then demonstrate how that pattern could be implemented on their platform so that pros and cons of various platforms can be understood. Placecube / Digital Place, Netcall / Liberty Create, Rapid IS / Rapid and Microsoft’s Power Platform are already in use by housing providers so we believe we should be able to attract multiple platform providers to the alpha.

**3.3.2 Do you have the platform already or do you have approval to procure the platform? For example, you have written a business case and the business case has been approved**

LB Redbridge will be completing a procurement for a low code platform by the end of 2021. Experience from this project will feed into that procurement, however the emphasis of this alpha is to produce a pattern that can be implemented across multiple platforms.

**3.3.3 Does the platform have a library to share modules/code that other councils can access? If yes, please tell us the URL**

Placecube module code is available at http://bitbucket.org/pfiks/, Liberty Create has an app library available at https://community.netcall.com/appshare/

**3.4 Describe how you will research the problem area and user needs arising from it?**

Housing Management comprises the management of estates, tenancies, leasehold enquiries, anti-social behaviour, right to buy applications and more. More so than other elements of housing (finance, asset management, housing needs) it is mostly forms, most of the time. Although there are variations in how these are tackled between housing providers this is limited as many processes have statutory underpinnings. We believe this makes them particularly well suited to low code development, which is typically strongest when tackling adaptive case management, and for sharing applications built on these platforms with other councils. Housing Needs is less heavily forms-orientated and more relationship-based but ideally requires Housing Officers to have access to information in systems used by various services, providing a different challenge for low-code platforms.

In this alpha we would like to identify specific high value or high volume processes within housing management and / or housing needs, develop platform-agnostic patterns for them based on user needs of staff and citizens, then implement prototypes in multiple platforms. This would help us understand:

- Whether well-designed services can be delivered on low-code platforms

- The suitability of low-code to different types of service

- The challenges are in doing this, e.g. access to existing systems

- Pros and cons of specific platforms

- Relative effort required compared to writing native code

For participating platform providers this would give them solutions that could be rolled out to other councils. If built out further this would stimulate competition with HMS providers. It is hoped that the benefit this would give platform providers would encourage them to make staff available at preferential rates for the alpha.

Vulnerability and digital confidence amongst residents is highly variable so solutions would need to be accessible across all channels. A potential weakness of low code is that it can create relatively heavy web pages and so resident-facing aspects will need to be assessed for their impact on resident data plans to avoid creating the digital equivalent of an 0898 telephone number.

Proof of identity is often required to access certain services, e.g. tenancy changes, and so the ability to do this securely may need to be developed on the platform depending on the service selected. Once built this would be useful to many council services beyond housing. Depending on the level of support received from platform providers, including this functionality may limit other parts of the alpha scope.

**3.5 Tell us about your users**

Users would be both council officers across housing management and / or housing needs and citizens. Citizens would comprise:

- Council tenants

- Leaseholders on estates managed by Redbridge council

- People at risk of homelessness, either currently living with family or in the private rented sector

We have started user research by mapping out some of the current processes in Housing Management and Housing Needs and identifying pain points. Examples are attached in 3.5.1.

Changes to be made to user experience vary by service. For example anti-social behaviour management cases vary enormously making the process impossible to map so we are considering the creation of process “fragments”, consisting of short checklists of actions that officers could add into a case as required to help them manage their workload.

There is a common theme across the processes mapped so far in that the UX and content for the citizen-facing elements are typically confusing and do not represent good accessibility.

**3.5.1 Upload supporting documents (optional)**

[V4\_Housing-Needs-current-customer-journeys.pdf](https://www.localdigital.gov.uk/index.php?gf-download=2021%2F09%2FV4_Housing-Needs-current-customer-journeys.pdf&form-id=38&field-id=161&hash=496f9874cb9946cb6fbfecc4d7598558f8a974503edf9a04b33ccf7322b9fa5e)

[Housing-managementV2.pdf](https://www.localdigital.gov.uk/index.php?gf-download=2021%2F09%2FHousing-managementV2.pdf&form-id=38&field-id=161&hash=3afc7e6e65a61a9bf02a1dd3ff4f7bddc75fc367667bf83af9f395a4076cea49)

**3.6 Describe how your project team will have the skills and time available to deliver the project in an iterative/agile and user-centred way?**

The Programme Director has experience of agile working practices and will coach other members of the housing and IT services. A Content Designer on the team has experience of agile working practices, as does a User Researcher / Service Designer who will shortly be joining the team.

Some of our Business Analysts have also worked on agile projects in the past, but typically not on user-centred design projects as they have been more systems-focused. It is our intention that they would complete either Acumen’s Introduction to Human Centred Design course or FutureLearn’s Getting Started with Agile and Design Thinking during this project, with further development throughout 2022.

We will engage with platform providers via the Digital Marketplace who will provide additional user research and UX / service design capability, alongside the technical skills necessary to work on their platforms. We have some development capability on the team currently, but they are primarily focused on interfaces and data management rather than building out new services.

**3.7 Tell us about your delivery plan**

Initial discovery in the form of process mapping and user interviews / workshops with staff has been completed with user research with citizens to start shortly. We are aware that Hackney Council have recently undertaken work with their Housing Management and Housing Needs services and would seek to use their user research to accelerate our own. Although platform providers would be working separately to deliver the pattern on their platform we would aim to create a unified team of designers from LB Redbridge and all partners to ensure no duplication of effort.

Timelines:

October

- User research with citizens

- Agree processes to tackle in alpha with service teams

- Start procurement of partner suppliers via Digital Marketplace

- Blogging, show and tells and project promotion

November

- Complete procurement of partner suppliers

- Set up project instances of platforms

- Begin prototyping and testing user journeys / screen designs

- Perform spikes on integrating development platforms with HMS

- Blogging, show and tells and project promotion

December / January

- Define service pattern for selected journeys

- Complete integration with source systems

- Build screens and workflows in supplier platforms

- Test with users

- Blogging, show and tells and project promotion

- Produce benefits case

- Produce user research report

**3.8 How will you openly share the learnings and outputs from the project as the work develops, both with the sector and MHCLG?**

Redbridge will release sprint notes throughout the project via our Digital Voice site and hold open show and tells. These will be promoted via Twitter, LocalGovDigital Slack, LinkedIn and through sector organisations such as Housemark, HACT, LOTI and Thistle – a professional network for social housing technologists in the south-east.

We will ensure development platform providers working on the alpha also promote their work to their customer base to drive interest and adoption of any resulting work.

All material and artifacts will be indexed via a project listing on Pipeline. User research and resulting service patterns will be added to the local gov digital user research library.

All work done on development platforms will be accessible via the platforms app stores, or similar.

**3.9 Describe the scale of economic and financial benefits to be gained from addressing the problem, both at a local and national level. Add detail on how you will estimate future costs and benefits from a potential solution.**

The total cost of an HMS over five years including implementation, licensing and support is typically in the region of £4m-£5m, with implementations frequently over-running their original timelines. Once implemented further improvements then incur additional costs with consultancy support from the traditional vendors typically in the region of £1,000 per day depending on company and experience level of the consultant.

If successful, this alpha would demonstrate that large parts of the functionality of an HMS can be provided by alternative software, that can be changed to meet shifting needs much more easily and cheaply by council staff. Although on its own it would not enable the complete replacement of an HMS, this could be possible if done in conjunction with other systems. For example, the repairs function could be run through through asset and contractor management platforms, or rent and service charge accounting could run on the council’s main financial management platform.

Beyond the financial implications however there are significant benefits to be gained by providing Housing Officers with a system better suited to their needs, that enables the delivery of more user-centred services. Similarly, although many HMS have resident-facing portals these are not typically designed with accessibility and usability best practices in mind and so there are significant benefits in providing alternatives. In this instance the savings from any channel shift achieved from new digital services would be relatively easy to calculate using the channel costs previously defined by SOCITM and PWC.

Depending on what is learned from this alpha, it may prove to be worthwhile to implement a development platform in addition to an HMS as the improvement in service it enables off-sets the additional costs. In this scenario, the HMS could be pushed into the background to act as a database, with users only directly interacting with applications built on the development platform.

**3.10 How much funding are you applying for to complete the project?**

£150,000

**3.11 How will the total project budget be used?**

| **Resource (e.g. staff time, supplier, contractor, etc.)** | **Time / Quantity** | **Total cost / Value** | **Who will pay (e.g. Local Digital funding or a particular project partner)** |
| --- | --- | --- | --- |
| Delivery Manager | £560 per day / 1 day per week for 12 weeks | £6,720 | LB Redbridge |
| User Researcher / Designer | £560 per day / 5 days per week for 12 weeks | £33,600 | LB Redbridge |
| Content Designer | £360 per day / 2 days per week for 12 weeks | £8,640 | LB Redbridge |
| User Research / Design capability from platform providers | TBC, depending on charge rate | £50,000 | Local Digital Fund |
| Development capability from platform providers | TBC, depending on charge rate | £100,000 | Local Digital Fund |