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2. Project contact details

2.1 Lead authority name

North Tyneside Council

2.2 Details of the person leading this application

Paul Armstrong

Role

Head of Digital Innovation

Email address

Paul.Armstrong2@northtyneside.gov.uk

Phone number

2.3 Details of a senior stakeholder from lead authority

Role

Email address

2.4 Details of a Section 151 Officer from lead authority

Role

Email address

2.5 List your project partners and provide a single point of contact for each organisation.

Project partner organisation	Name of single point of contact	Role of single point of contact	Email address of single point of contact	Phone number of single point of contact
Newcastle Council				
Gateshead Council				

3. Your project proposal

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3.1 Project title

Digitisation of bulky waste collection using dynamic scheduling and route optimisation

3.2 Project description

Using artificial intelligence to assess the variables of the collection and then link through to a payment gateway. Collate priority queues including the insertion of ad-hoc tasks as reported, routing and scheduling of the routes and the administration of the jobs using in cab technology. A large section of the discovery will focus on discussion with end users to explore 3 objectives:

Is there user interest?

What technologies would be best?

If the data agrees the project is viable?

3.3 How much funding are you applying for?

93500

4. Project assessment

4.1 Describe the problem that your discovery project seeks to investigate.

Our current process for bulky waste collection is very administration heavy and offers very little choice to the customer. The primary customer of this function are residents of the borough looking to dispose of bulky waste through the Local Authority. This project will provide a much improved experience for customers of the service. Being able to provide updates keeping customers informed will be a huge benefit for residents. Also being able to offer cheaper collections on multi pick up routes as opposed to single trip collections will off great choice for the customer. This is relevant to other Local Authorities because currently most only offer fixed priced collections on set days. Opening up choice of cost for this service, potentially offering a cheaper options may reduce fly tipping reducing calls for that service. However the main user of this project will be Local Authority employees. This will range from call handlers through managers to collection employees on the front line. The main beneficiary of this project will be Local Authority staff. There are huge opportunities to streamline the collections process and make it more automated and less labour intensive for all involved. Allowing AI to do the heavy lifting of collating and scheduling routes along with pricing up collections and identifying what equipment and vehicles would be needed to complete the collections will take pressure off managers to organise routes based on inconsistent information from customers.

4.2 Describe the outcomes and outputs you aim to achieve by the end of the project.

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Our discovery work is broken down into 3 distinct objectives that will provide clarity on how best to move forward once the discovery work is complete.

The first objective is to determine if there is user interest in adapting the service in the way we believe will push it forward. Linked to this objective we would look to produce comprehensive set of requirements documentation. This will include user stories consulted extensively with both internal and external customers ensuring that all key requirements are captured and recorded in a clear, concise and repeatable way. Along side this wire frame and rendered mock ups of how interaction screens might look would also be produced, all informed by user research.

The second objective is to assess what technologies are available that could be used to carry out the functions we wish implement. This would include looking at what other organisations are using to carry out similar pieces of work. The end result would be a comprehensive report detailing technology options that could be used to achieve our aims. This would include recommendations of what and how best to implement them.

The final objective is to do some data analysis and modelling to assess the different options and funding models that could be applied and which are the most viable to implement. The end result of this would be a detailed paper assessing what sort of take up would be needed for the change to be practical and successful.

4.3 Tell us how your project will make local government services safer, more resilient and/or cheaper to run in the context of the problem area.

The aim of the project is to provide resilience to a key Local Authority process. Being able to do this in a faster, more efficient and more reliable way is a key step in improving the offering of the service. Being able to notify customers of events will offer peace of mind and ensure that good service is provided. Being able to offer preferential rates for certain activities will allow the service to generate income to fund further expansion and ease financial pressures. Along side this, reducing the need for multiple trips where information is not correct and the event cannot be carried out will ensure that more events can be completed with the same resourcing. Once the outcome of the data model has been proven successful this would then be applicable to other organisations and services looking to do similar digitisation exercises. This is a known area of interest across out partners and other Local Authorities in the North East.

4.4 Tell us about your project stakeholders and how you plan to engage them.

The most important stakeholders are the end users of the service. We will be engaging with customers through our residents panel and small workshops of frequent or recent users of the service. Their input will be the biggest source of discovery in making this project a success. The team delivering the service are also incredibly important in ensuring that the right information is gathered to put the project on good footings. Their input will be critical in working out the logistics of the service. All of this must be supported by the head of the service and lead Member for environmental services. All of whom will be consulted through workshops and direct consultation. Regular contact with the supporting Authorities will ensure engagement is across all partners. The progress and learning will be shared through regular publishing of the reports and documentation on progress. Following the success of the project a full show and tell will be organised to inform the rest of the sector.

4.5 Tell us about any local government sector engagement you've carried out or intend to carry out.

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We initially canvassed senior ICT employees through the North East ICT group to garner interest in our projects. This is a group that meets regularly consisting of all the Chief Information Officers from Local Authorities in the North East. Once Newcastle and Gateshead Councils show interest we engaged directly with them to offer more details at which point they confirmed the benefit of out bid.

We would be using standard GDS and AAA accessibility standards across the project when both when eventually building the product. We would also be looking to make any reports and presentations in an accessible way to ensure they can be consumed by as many people as possible. To date we haven't engaged with anyone from central government. Should we be successful we would look to engage with central government through local digital to ensure our direction is correct.

4.6 How will the project budget be used?

Item (e.g backfill staff time, buy in user researcher, software, hardware and others)	Time/quantity	Total cost/value £	Where will the funding come from? (e.g Local Digital funding or a particular project partner)
Backfill business analysist resource	60 days @ £600	£36,000	Local Digital funding
Consultant (data modelling)	40 days @ £750	£30,000	Local Digital funding
Research devices for user testing	10	£10,000	Local Digital funding
Software research consultancy	20 days @ £750	£15,000	Local Digital funding
Analysis tools	15 users	£2,500	Local Digital funding
NTC Staff time - Business analysis	60 days @ £250	£15,000	NTC
NTC Staff time – Wire framing	20 days @ £300	£6,000	NTC
NTC Staff time – Project management and strategy	40 days @ £400	£16,000	NTC

4.7 Tell us about your delivery plan.

This discovery project will be run in an agile way in line with all other digital projects undertaken by North Tyneside Council. The first step of the project will be to set a goal for the discovery in this project. In order to get to this we plan to hold workshop sessions with all stakeholders to drill down to the single statement of what we are trying to achieve. From here we will be looking to define the problem we wish to address. This will involve breaking down assumptions about the problem and asking many questions to agree what is in and out of scope for this problem.

This document will be compiled form a number of other important pieces of work linked to the 3 outcomes we are looking to achieve. This will all be standalone pieces of work done concurrently. Pulling together all of the user research together to gain an overview of what customers are looking for and in what way they want the service to change. Analysing our service data to see what the outcome would be given different parameters and uptake will inform he viability of the project and the best ways I which to change it. The third piece of work is the technology research. Providing what software would be best to use and how best to implement it will also take place in this phase of the project.

A roadmap will then be produced outlining what, and who will be involved in workshops. Through regular touch points in the IT governance process all stakeholders will be kept up to date. The key documents that will be produced through the discovery process will support the stages mentioned above. A business case will be produced to evidence need the project. A user research report will also be produced detailing all of the business analysis that has taken place throughout the project. The final key document is a conclusion document. This will assess what will need to be developed in the next stage of the process with specific requirements.

4.8 Describe how your project team will have the skills and time available to deliver the project in an iterative, agile and user-centred way.

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As part of our digital services we have created two new teams. A digital innovation team which manage delivery and perform business analysis and user research, and a bespoke development team with experience of large-scale ux design and build of products using agile delivery methodologies through prototype, alpha, beta and live.. We have built our new IT team with talented staff who have a track record of delivering digital innovation at scale. Some examples of the product that have been delivered in the first 3 months by the team are a new contact directory, an FOI system and a waste permit allocation system. A significant portion of our development team have previously worked together to deliver enterprise bespoke solutions for the NHS using an agile approach. These system included life critical mortality prediction systems and a document management system which automatically produced and distributed 22 million documents. Our business analysis team have good experience working on large organisation dependent systems successfully, having worked on large financial projects amongst a number of large scale service specific systems. Bringing in consultants to fill skills gaps in the teams will help to make the project team more robust and transfer some of those skill into the team to help fill the gaps long term.

4.9 Define the governance structure of your project.

Fortunately our partners are located near by geographically. With close links already in place between the senior management of the partners through the North East ICT network. However frequent meetings on a regular schedule will be put in place to touch base and ensure that all partners are having an input. We plan to report all of our discovery work through our IT governance structure. This will start with 2 weekly reporting into IT steering group. This allows people from across the business and IT to see the work and offer support and suggestions on its direction. Given the funding and collaborative nature of this work we would also be reporting into out IT board. This will brief senior leaders from across the business on the discovery being undertaken. Further governance structure would also be put in place to bring together all partner stakeholders to update on progress and seek guidance from all engaged in the project.

4.10 Outline the risks to project success.

The 3 major risks we se to this project are firstly the difficulty in procuring the appropriate consultancy services needed. The skills we would be looking to bring in are highly sought after and are in high demand. Fortunately we are able to mitigate this risk by making good use of our strong links with existing partners and organisations we have work with previously. We are confident we will be able to source the skills we need.

The second risk is ensuring that we have the political buy in to make the changes that may be needed to make the project a success. This is especially true where costs may change given the current financial climate. We have had positive conversations with lead Members for the service area and IT which support the project and this bid. Keeping Members involved will mitigate this risk.

The final risk is that the data modelling work concludes that the project is not viable for any reason. We expect the modelling to be extensive and detailed offering a number of options so this risk may be small is still present. If this is the case, working in an agile way will allow us to pivot the project in a direction that will still realise benefits in a different way.

4.11 Describe how project monitoring and evaluation will happen.

We have a robust governance approach in place for ICT programmes and this application is no exception to this. The application was discussed and is endorsed by our IT Board, our highest level of governance and decision making with representation from the two elected member responsible for the digital portfolio, the director of resources, along with senior officers from across the council. This bid and all projects within have also been discussed and approved by our ICT Steering group which includes representation from all operational colleagues and partners responsible for delivering digital change. It also includes representation from HR, information governance and customer services teams. The bid itself has been prepared by the Head of Digital Innovation who will be responsible for its delivery and reviewed by the Chief Executive, Chief information Officer and Director of Resources prior to submission who are fully supportive of the bid and are committed to the ongoing delivery through their roles as senior responsible offer and executive sponsor respectively. In order to ensure good governance across partner organisations a project board will be pulled together involving all stakeholders.

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4.12 Describe the benefits and savings your project is likely to deliver.

There are very real benefits and savings to be realised through this project. In terms of time savings and increased throughput, by effectively identifying the items that need collecting and ensuring that the right equipment is in place to complete the collection, the number of repeat trips to complete the interaction will be reduced. This will allow another task to be completed in the same time that the second trip to complete the first task would have taken up. In financial benefits, being able to offer flexible rates for different collection times and rounds will encourage uptake of the service leading to increased income for the service. Using improved routing developed using AI will improve the fuel usage in vehicles across the service. Other benefits that will come out of this project are simpler routes for employees easing their load. Moving to in cab devices will also support a wider cultural change away from paper for the service, improving digital skills as a whole and improving how work is done. The customer service benefit of being able to digitally feedback to reporters when tasks are complete will help to reduce complaints and general dissatisfaction for customers. Offering updates and conclusions will reduce multiple reports and ultimately offer a much improved user experience for customers. We also have a formal benefits management framework designed to identify, measure and assess benefits for projects that will be used.

5. Agreement with DLUHC

5.1 Please confirm that you commit to delivering the project outputs listed below. Please tick the box to agree.

- I agree

5.2 Agreements with DLUHC

Please tick the box to agree.

- I agree