

PropTech Engagement Fund: Round 3

Application Form

1. Introduction

Complete this form to apply for Round 3 of the PropTech Engagement Fund to design, deliver and test the outcomes outlined in the Round 3 - Prospectus Guidance.

All applications must be emailed to digitalplanningteam@levellingup.gov.uk by **11:59pm on 27 January 2023**. Please use the subject line ‘Application to PropTech Engagement - Round 3’.

For more information on how we will process your data, please refer to the privacy notice (Annex A) on page 6 of this document.

2. Application summary

Application type	<ul style="list-style-type: none">• Individual Application – Single Local Authority• Joint Application - Multiple Local Authorities
Local Authority (If joint application, please list all authorities and advise who will be the lead authority and where payments should be made)	Nottingham City Council – LEAD and payment processor City Of Bradford Metropolitan District Council District Council tbd
Primary contact from the lead authority	Name: Mick Dunn Role: GIS Service Manager Email: mick.dunn@nottinghamcity.gov.uk
Senior Stakeholder / Project Sponsor from lead authority (e.g. Director of Planning)	Name: Paul Seddon Role: Chief Planning Officer Email: paul.seddon@nottinghamcity.gov.uk
Section 151 Officer contact	Name: Ross Brown Role: Corporate Director of Finance & Resources Email: ross.brown@nottinghamcity.gov.uk
Total Proposed Budget £	£375,000

3. Project overview

3.1 High-level summary of proposed project, objectives & outcomes. *(Please specify if this is related or builds upon a project funded either under Round 1, Round 2 or the Continuous Funding Round).* [guide 150-200 words]

This 3D planning programme proposal looks to build upon the previous successful work by further developing the Nottingham 3D environment to enhance and increase participation and collaboration in the planning process through a number of immersive 3D engagement and consultation channels. The below diagram gives a pictorial representation of this.



To support more effective collaboration during the pre-application assessment process, a detailed 3D city scale digital platform and assessment tool using ESRI core technology, and a 3D data framework using a blend of commercial and in-house data sources has been established. Capabilities established during the Planning Pathfinder has enabled data modelling and additional planning data from IDOX and ESRI applications to be seamlessly integrated and utilised within this 3D environment. This approach has led to quicker, more informed decision making in relation to the pre-application assessment and approval of major planning proposals. The digital and technological approach deployed has also enable Nottingham to integrate existing systems and data, thus maximising the value of its investment.

Using the knowledge and learning acquired so far and that from this proposal, we will work with suppliers, partner LPAs and other stakeholders to co-create produce a range of resources in the form of enhanced 3D tools, 3D data, demonstrators, and support and learning material that will enable the majority of LPAs to develop this capability using existing resources and maximise their existing investment in technology.

During the programme we will work with a number of LPA partners who have an established desire to modernise planning processes through 3D deployment, and who have also made some progress with adopting a similar approach to 3D utilisation. This co-creation and partnership approach will help inform development of the 3D engagement and consultation channel outputs, test and validate of the learning outputs, enable one or more other LPAs to establish an operational 3D environment, and ultimately increase the opportunities to monitor and evaluate the effectiveness of 3D engagement with users of the planning system.

A key outcome is to support and evidence to the majority of LPAs that they have the core digital components necessary to enhance the experience and increase participation of users of the planning system, and demonstrate value across planning process with 3D.

3.2 Local authority context and opportunities [guide 300-350 words]

- What is the current or anticipated challenge that you are experiencing relating to the scalability, interoperability, useability or visualisation of consultation data and/or digital engagement platforms?
- How much time and resource do you estimate you and your team are currently spending on this process?
- How is this currently affecting your policy/housing/infrastructure delivery and other planning timelines?
- How do you expect this issue is also experienced by other local authorities and stakeholders seeking to enable faster consultations and policy delivery?
- What scaleable project learnings / outcomes do you anticipate being useful for you and other LPAs?

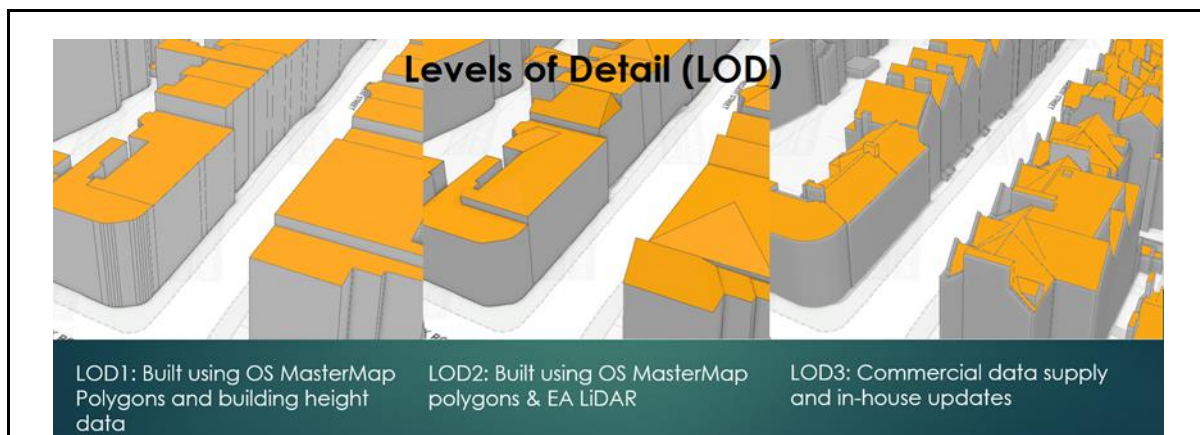
There is evidence nationally that people are not fully engaging with the planning process and decision making can be difficult and slow. It has long been recognised that 3D models can significantly enhance understanding, assessment and engagement across a large number of different business domains, particularly in relation to planning. Interest in utilising 3D in this manner has increased dramatically, as the recent emergence of new specific 3D site assessment tools to the market demonstrates. Like Nottingham initially, many have or are considering investing in these tools but without due consideration for interoperability and leveraging the capabilities of existing planning systems, or giving adequate consideration to what can be achieved by utilising the technology investment which has already made, particularly within GIS software.

Experience to date and a lack of deployments is a good indicator that establishing a 3D capability is a challenge for beginners, and even seasoned users, to comprehend and implement. Digital transformation is challenging and time consuming but is critical to all planning authorities to support the modernisation of the planning system. These challenges include understanding the data inputs and framework, the processing required to create and store a city-scale model, the tools to share this model on the web and the ability to design and implement appropriate assessment, viewing and engagement tools for planners, developers and for citizens to engage in the planning process. So much time and effort can be wasted without a comprehensive understanding of these components prior to implementation.

It has taken Nottingham considerable time to develop a 3D environment and assessment tool using GIS. From our many years of experience and general discussions with other local authorities, there are a number of challenges facing local planning authorities that stop them taking a leap forward into the 3D planning world, namely;

- lack of awareness of what is possible technically (software & data)
- understanding business benefits in respect of the various processes of the planning system
- the cost of procuring commercially available detailed LOD3 data
- ability to generate a 3D model that is sufficiently detailed to support planning processes
- technical skills to create data and applications to support the various use case scenarios

Around 260 (65%) Local Authorities already have access to ESRI Technology and with no or minimal investment would be able to host and deliver online 3D data models, and deploy tools to produce 3D assessment, information and consultation capabilities. As previously stated, the technology components already exist but data of suitable quality to support assessments and engagement is still an area of challenge.



Cost can be a major factor which prohibits local authorities from acquiring suitably detailed 3D data such as LOD2 or LOD3 data. Although all LPAs have access, through the Public Sector Geospatial Agreement (PSGA), to a variety of spatial datasets which can be used to generate basic 3D LOD1 data models these have limited business value due to its simplicity in representing real-world feature e.g. flat roofs shown on image above. Our experience and belief which will be evaluated during the programme, is LOD2 is an essential ingredient needed to ignite the use of 3D by LPAs.

Nottingham have used and evaluated a 3D data generating tool provided by ESRI to produce LOD2 models to some considerable success but the consistency and quality needs improvement for this to be effective tool e.g. rooflines, particularly of adjoining properties, are inconsistent in successfulness of generation. For smaller LPAs that cannot afford LOD3 commercially procured data, and for areas of an authority outside of the urban core, this LOD2 generation from freely available (PSGA) data would be the perfect solution to utilising 3D to support their planning process.

Additionally the programme will be looking to support engagement with the planning process not just through a traditional online 3D Engagement Hub but also through Augmented Reality (AR) to bring developments and proposals even more to life. AR integrated with 3D building models is potentially a challenging area of development due to placement issues and is at an earlier stage in the product life cycle for this type of application.

To support inclusivity and engage with those that who don't have strong digital skills or ability to process information in this format, we will work with the University of Nottingham to translate our digital 3D model into a physical 3D model, and look to apply and evaluate the use of Projection Augmented Relief Models (PARM) to support planning engagement activities (see picture below). This technique has been tested, evaluated and proved successful in terms of demonstrating how the 'natural language' offered by a 3D physical model has proved effective in museums, visitor centres and schools, so there is a good opportunity to deploy the same technique to increase understanding and participation for public engagement around local planning.



The project will be enhanced by the University of Nottingham's £25 million investment in Digital Nottingham, a major strategic initiative bringing researchers, businesses and civic partners together at the University's new city-based campus (Castle Meadow), connecting digital and data science innovation to

place-based challenges. PARM, and city-based digital twinning, is a priority area for Digital Nottingham in pioneering 'city as lab' as a model for collaborative, transdisciplinary research and civic engagement.

In the past planning discussions for major schemes at pre application stage could be a drawn out process. Nottingham introduced the process change that major schemes should be accompanied by 3D models submissions to aid the understanding of all involved. This process change has seen efficiency improvements as conversations between developers and the LPA can happen at speed, planners can trust in the model submissions as they are 'dropped in' a city owned model, scheme revisions can often happen dynamically as part of the conversation, and developers feel engaged in the process which is much more cohesive. Enhancement work as part of this project, improving both the current 3D application for the city centre, and widening this by creating data authority wide, as well as creating enhancements so the model can be utilised by a wider audience including the public will ensure a much wider engagement with planning and the advantages a 3D environment brings. Additionally we have found that using a 3D / interactive solution as part of the consultation brings in much wider engagement. A recent consultation including 3D elements and interactive maps on our major Broadmarsh Shopping centre redevelopment garnered over 7,000 responses. From experience the inclusion of 3D to enhance the realism of developments or other activities such as heritage and conservation, should see an increase in engagement for both operation and strategic planning processes.

Nottingham City has high housing delivery targets, being one of 20 urban areas with a 35% uplift in housing delivery. Many of the housing schemes would be within the city centre, potentially in the form of high-rise accommodation. In this instance a 3D assessment of the impact of each scheme alongside planning and constraint data integrated from the GIS data holdings and development management system is even more critical and enhances conversations with developers and any wider public consultation, and should speed up the planning assessment process. We also use 3D to share our development timeline, showcasing current and completed schemes. This helps to drive investment into the city, and deliver our infrastructure targets around housing and employment sites.

It is envisaged that many LPAs do not have the time and resource to investigate the creation of 3D models and associated engagement tools. This project will open up the opportunity for a much greater number of LPAs to undertake this without the need for huge research or major investment by each individual LPA, and ultimately quicken and make the process more inclusive and engaging.

This project will help to address the problem of capacity, expertise and resources experienced by all local authorities. It will aim to provide simple tools or solutions, instructions and guidance, based on the most widely available data and platforms, to enable a huge proportion of local authorities to have the ability to create a 3D model and planning consultation platform for themselves.

Prior to the start of the project we have already established the core elements of a 3D digital data framework and a 3D assessment tool established as part of our pre-application business process. This not only gives us a strong foundation on which to extend and develop engagement capabilities but puts us in a unique position to helping active project members such as Bradford and those that wish to engage with us on this journey to replicate this approach. This reduces the risks and costs, and enable them to help support subsequent engagement focused develops and furthers the opportunity to test and evaluate the tools as part of the programme.

The project will provide a blueprint for future planning engagement and consultation activities utilising 3D GIS to bring the engagement and collaboration to life.

4. Delivery plan

4.1 Summary of your proposed project outputs, project plan and outcomes [guide 400-450 words]

Please detail how you plan to deliver the digital engagement project, including:

- A list of your key proposed outputs and deliverables (e.g. specific tech solutions, integrations, roadmaps or guidance documents)
- Key project milestones (please include a timeline with key dates)
- Where applicable, details of engagement activities or planning milestones against which this solution could be tested (this may include upcoming consultations and/ or engagement activities)
- What anticipated outcomes could be achieved for planners, stakeholder teams and/or communities intending to simplify and fast track the plan making process

A summary of the proposed outputs and deliverables are outlined in the table below.

OUTPUTS	DELIVERABLES	BENEFICIARIES
Programme Coordination	Coordinate programme, active stakeholder engagement and point of contact	Project partners All LPAs
Programme promotion	Workshops, blogs, conference events etc	All LPA
3D Data Generation	Software tool development & deployment Evaluation report and future development roadmap	Project partners All (ESRI) LPAs
3D Public Engagement Hub	Software tool development, integration & deployment Evaluation report, guidance & learning, and future development roadmap	Project partners All (ESRI) LPAs
3D Augmented Reality	Software tool development, integration & deployment Evaluation report, guidance & learning, and future development roadmap	Project partners All (ESRI) LPAs
3D Physical Model & Projection Augmented Relief Models (PARM)	Physical model development and deployment Evaluation report, guidance & learning, and future development roadmap	Project partners All LPAs
Public engagement activates utilising 3D immersive environments	Evaluation report, guidance & learning,	Users of the planning system (citizens, develops, planners etc) All LPAs
3D Assessment workflow improvements	Software tool development & deployment Evaluation report, guidance & learning, and future development roadmap	Project partners All (ESRI) LPAs
Guidance and learning material	Business value and workflow Establishing a 3D data framework	All LPAs
Business Case	Report on the use and value of 3D modelling to the UK LPA Sector	All LPAs

Key project milestones are outlined in the attached detailed delivery.

To date we have discussed the proposal with a range of colleagues across our planning department including our Director of Planning and officers from development management, policy, urban design and regeneration to seek their professional support. We have spoken at length with our software and data providers to outline our objectives, and the associated outputs, feasibility, timescales and costs. We have had initial discussions with a selection of local planning authorities to determine their readiness, appetite and capability to be active project team members. Bradford City Council, whom we already have a good knowledge transfer partnership in place, have confirmed their commitment as an active local authority partner.

The individual tools themselves will be evaluated as information provision tools to determine if they aid understanding and are more engaging than the traditional methods e.g. a publicly facing tool sharing the major developments timeline will be published. This includes an assessment of the physical model through an MSc research project. The University of Nottingham has confirmed that from September 2023 there will be at least one permanent PARM display (physical model) at their new Castle Meadow Campus which could be used to test applications and reactions to PARM which could form a test bed before wider rollout to stakeholders within planning environment.

Although specific planning consultations cannot be identified at this stage, given some of the tools are yet to be developed, there is commitment from planning colleagues to utilise these techniques once available.

Further discussions will be had with partner LPAs, whereby feedback will be provided on both the guidance material for ease of use and replication, for the tools themselves, and hopefully further consultation opportunities will arise that will help further testing of the tools and techniques developed as part of this project.

Technical based outcomes include:

1. Development of Nottingham's 3D framework, digital platform and assessment tool to support and enhance public engagement activities by providing a selection of immersive 3D experiences (web, augmented reality and a physical model) for citizen and local community engagement that are based upon a common 3D data framework.
2. Engage, support and produce guidance and universal tools to enable other local planning authorities to explore and exploit the data and GIS tools available to them to create a similar 3D assessment and engagement workflow and capability.
3. Consult and work with other local planning authorities, and through user engagement, identify any additional shared limitations and business requirements that would enable more effective delivery and usability of 3D for public engagement and consultation in the planning realm.
4. Potentially identify key additional datasets that could be built into the Geospatial Commission PSGA in order for Local Authorities to enhance their ability to engage and consult through a 3D platform.

Within the Planning system the use of 3D should enhance and speed up the planning process as decisions should be reached more quickly, for example on major applications where a 3D model is supplied conversations can be undertaken more quickly and dynamically, easily understanding the visual impact of a development. A focus group with planners from all participating LPAs could determine if this has been the case in practice, and will feed into a business base on the ROI of 3D to UK planning sector.

5. Project team

5.1 Summary of your proposed project team [guide 250 words]

Please detail who will be involved in delivering the project, including:

- Proposed team and project roles
- Detail the time commitments and responsibilities of each team member and how these correspond to the proposed funding
- How you will ensure engagement and sign off from senior stakeholders and subject matter experts
- If there are multiple LPAs, do you have any experience working together already? What is your approach to collaboration and governance across LPAs?
- Stakeholder engagement - other groups (internal and external) you propose to work with to ensure project success and enable user centred design

Organisation	Team Member	Role	Responsibilities	Time Commitments
Nottingham City Council	Paul Seddon	Director of Planning	Senior Stakeholder	as required
	Mick Dunn	GIS Service Manager	Solution advisor	as required
	Laura Pullen	GIS Business Development Manager	Funding lead and NCC team manager	0.1 FTE
	New Position (Project Funded)	3D Strategic Development Manager	Project management, stakeholder engagement and further research	0.6 FTE
	Molly Jones	3D Modelling & Data Officer	3D data (NCC)	0.4 FTE?
	Benjamin Abbott	GIS Technical & Infrastructure Specialist	3D technical architecture	0.4 FTE?
	Nigel Turpin	Heritage and Urban Design Manager	Heritage and Urban Design advisor & specialist	as required
	Martin Poole	Senior Planning Officer (Development Management)	Planning advisor & specialist	as required
	Karen Shaw	Planning Policy Manager	Planning advisor & specialist	as required
	Jon Rea	NCC Engagement & Participation Lead Officer	Engagement & participation specialist	as required
University of Nottingham	Gary Priestnall	Associate Professor Faculty of Social Sciences	Physical model development inc engagement and evaluation	as required
	Dr Jasper Donelan	Digital and Technology Services	Digital research and evaluation	as required
	Professor Paul Grainge	Academic Director, Digital Nottingham	Digital research and evaluation	as required
Bradford City Council	Adrian Walker	Transformation Manager	Partner LPA	as required
University of Bradford	Professor Andrew Wilson	Chair in Forensic & Archaeological Sciences,	Specialist advisor	as required
	Prof Chris Gaffney	Pro Vice Chancellor Research & Innovation	Specialist advisor	as required
	Thomas Sparrow	Senior Scientist in Visualising Heritage	Specialist advisor	as required

The project will be led by senior managers within the Nottingham GIS team on behalf of the lead authority project sponsor (Planning Director). They will support a dedicated fixed-term resources (3D Strategic Development Manager) to lead on the daily management of the project, liaise with project team, direct technical and data resources within the GIS team in support of the project, stakeholder engagement and conducting further research and capturing additional business benefits.

To ensure that the outputs and outcomes of this programme have a high degree of success and are deliverable within the timeframe and funding requested, key stakeholders, project team members and subject matter experts will continue to be engaged, consulted and have inputted into all aspect of the

programme. The project are committed to the success of the programme and active engagement will continue throughout the programme as highlighted in the delivery plan.

The GIS team has responsible for business systems across the planning department including the management and develop of IDOX, GIS and 3D provision. This also includes working with Planning officers to develop digital products and services to support information sharing and engagement with users of the planning system. Discussions have taken place with the senior sponsor to ensure the proposal fits with the team and department's modernising aspirations and existing transformation activities. A request for regular updates have already been made by the senior sponsor.

The GIS Team have a long history and good track record of working with local planning authorities across Nottinghamshire in relation to the development and management of a range of data centric spatial applications and services.

We have an established collaboration and knowledge sharing arrangement around 3D with Bradford Council, collaboratively sharing through in-person meetings and virtual meetings. We would like to expand on this arrangement more formally through this project proposal and co-design the various outputs.

The 3D Strategic Development Manager will work with all project members in an agile and collaborative manner, with regular meetings to ensure the project meets the objectives outlined, and supports the sharing of knowledge so other local authorities can dive into the world of 3D to support the planning life cycle.

Our core users of the service are planning colleagues, developers, elected members, wider planning consultees (both internal and external) and the public. To build the data, tools and applications to date we have spoken mainly to our planning team and elected members, as well as much communication with data and software providers.

Engagement with users is undertaken whenever possible in product development, and through agile development practices we include users from inception through to delivery. We also regularly monitor product use and encourage open feedback from end-users.

We aim to hugely change the user experience, bringing the public into the 3D planning space so they can better engage with planning consultations, understanding what is proposed in their local area or within the cityscape more easily, either through an online digital platform, a 3D physical model or augmented reality. We would hope through these increased consultation methods we would see a marked increase in participation and perhaps reaching previously excluded audiences.

This programme hopes to change the user experience of other local authorities in being able to set up a 3D environment to support their planning processes. By undertaking the research and techniques to create such an environment on widely available data and through a widely available software platform we hope to bring the use of 3D to a much larger group of local authorities so the advantages of this can be experienced much more widely across the country. We would use this project to fully support other local authority to undertake this progression, and create the tools and guidance for this to be shared openly.

6. Working with suppliers

6.1 Summary of supplier(s) [guide 400-450 words]

Please summarise what supplier(s) you expect to work with, and what solutions they will work to deliver with you. Please include detail on:

- Who are your current front and back end software/tech/platform suppliers (in the specific areas you are looking to test/solve) and what services are they procured to provide for your LPA(s)? If known, please state or ask how many LPAs they are currently working with on engagement in the UK.
- Where you are already working with a supplier(s) in this space, what has been delivered and what has your experience been so far? Where you are looking to work with new/additional supplier(s), what is your expected plan for procurement?
- What kind of solution do you anticipate to design and/or develop with suppliers with the benefit of this Round 3 funding? What discussions have you had with them to inform this strategy and how confident are you in their capacity to work alongside you?
- How would this help resolve barriers for other LPAs looking to adopt digital citizen engagement tools?
- Product development strategies - how do you propose to work with your supplier(s) in the open to develop tech solutions and capabilities that could be scalable to other local authorities?
- User testing and feedback - how will you and your appointed supplier(s) ensure a user centred design approach to designing and developing tech solutions?
- Are there any other solutions you are planning to explore that are not dependent on suppliers but bringing in different skills sets and/or ways of working into the team?

The main supplier we will be working with on this project will be ESRI UK. They are the leading GIS supplier in the UK market. They provide our front and back end GIS platform.

Previously we have worked with ESRI on a number of successful projects over the last 20 years. Most recently in 2022 on one of ESRI's 3 nationally chosen planning pilot projects. This was to enhance the creation and use of 3D within the planning space. Together using an agile approach we were able to make significant progress in data creation and deployment. This included testing the potential for utilising a GIS environment to deploy 3D within planning, and enabling us to enrich the 3D environment with our vast geographically related data holdings.

We established key links with other partner organisations such as Ordnance Survey as a data provider, as well as the University of Nottingham on the use of 3D in a physical environment as a consultation tool.

This DLUHC sponsored project will allow us to further extend and enhance this work. Potentially making it transferable to all other Planning Authority customers whom the majority are already ESRI customers and in the wider Authority.

We will be utilising an approach we have taken previously with improving ESRI's product offer through a adopting a decision gateway approach, which takes the form of 3 stages.

1. **GIS and wider project team assessment** - utilising our skilled in-house GIS Team (a team of 12 GIS experts in various fields including a 3D data modelling officer and an ESRI specialist web developer) to undertake an assessment of the ESRI tools currently available to support each element of the project. We will deploy the currently available products in each element (LOD2 data generation tool, Hub consultation tool, AR capabilities etc), explore their capabilities and limitations
2. **ESRI product development** - Where limitations are found we will have conversations with ESRI to determine whether they can improve the tools to an acceptable level to support the planning consultation needs.
3. **Wider exploration of solutions** - If we are not confident ESRI are able to undertake this product improvement we will look to use alternative suppliers either where we already have a partner that is interoperable with ESRI, or we will speak to DLUHC about finding a suitable PropTech to support this element of the project.

We are confident in ESRI's ability to deliver on the early products within the programme due to previous experience of working with them and also extensive conversations we have had in order to build up this

current application. They are committed to these developments and timescales and have already produced draft specification documentation in order to ensure tight timescales can be met for the LOD2 generation tool. They also have the opportunity to pull on their parent company, ESRI Inc, knowledge if needed.

We intend to develop tools that can be utilised by a vast proportion of other local planning authorities. Our methodology is to create solutions that would become part of ESRI standard offering available to all customers in Local Government i.e. productising the data creation and consultation platform tools. This, alongside the documentation and procedures created as part of the project, should break down barriers for other LPAs who currently do not have 3D data and consultation tools. This project is very much focused on developing and sharing generic tools for widely deployed use, and using ESRI technology means the products are scalable to many local planning authorities.

As with our project last year we intend to use an agile approach to product design with regular meetings and iterations of specifications to ensure the tools developed meet user needs and are tested along the development pathway. Additionally the programme includes a dedicated 3D Strategic Development Manager to ensure that the project timelines and deliverables are met, the relationships with partners, suppliers and stakeholders are well managed and the outcomes shared widely to ensure most value from the project.

Other suppliers that we will be working with on some elements of the project include;
 Zmapping - our highly detailed (LOD3) 3D model supplier, who have already confirmed they are happy to work with us on the external publication of detailed data and have identified a number of solutions to this for consideration.

Bluesky International - a leading aerial survey and geographic data company. Their products enhance the 3D environment to make it more engaging and realistic. Metrovista (a photogrammetric mesh model) is in its early product stages and we would like to explore with Bluesky the added value this can bring to engagement with 3D models. Bluesky have committed to being a supplier with us on this project. We have worked with them in the past, and we were early adopters of Aerial Photography products, before this became a standard product delivered to across the public sector under the Public Sector Geospatial Agreement (PSGA) and we see there could be merit in this approach with data products for 3D for all authorities in the future.

ConsultingWhere – will support evaluation of programme success and through additional research to determine the return on investment of 3D to the UK Planning Sector.

7. Proposed budget

Use this section to explain how funding will be spent (e.g. software development, upskilling, licence fees, etc). Please state the assumptions that have gone into your proposed budget.

Where funding is proposed to be spent on the backfilling of roles, please provide justification for this based on how that resource will be required to go over and above their business as usual role to achieve the goals of the pilot.

Upon successful appointment, DLUHC will work with LPA teams and their suppliers to confirm budgets and specifications of the proposed solution.

Budget Item	Description	Estimated Amount (£)	Assumptions
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Dedicated project lead (NCC)	3D Strategic Development Manager	60,000	Significant level of coordination & research
Partner contingency (Bradford +1)	Need further discussion with partners and what they might need	80,000	Partners backfill or data component
Software development (ESRI)	3D Data Generator tool (Proof of concept)	20,000	Existing tool can be improved
Software development (ESRI?)	3D Data Generator tool (Product)	30,000	Gateway 2 is passed
Software development (ESRI?)	Develop 3D web consultation tool	25,000	Need for embedded surveys etc
Software development (ESRI?)	Develop AR 3D App & workflow	25,000	Gateway 2 is passed
Software development (ESRI?)	3D Scene Template(s) for planning	25,000	
Data Product (University of Nottingham)	3D physical model printed (city sample)	20,000	
Equipment (University of Nottingham)	Projection & engagement equipment	20,000	
Data Publishing (Zmapping and Bluesky International)	Investigate & resolve challenges of 3D LOD3 data publication (commercial sensitivity) and products to enhance model realism	11,000	
Business Case (ConsultingWhere)	3D Assessment & Engagement - Return on investment (ROI) for the UK Planning Sector	10,000	Positive programme outcome
Engagement	Communications and marketing	10,000	
Overheads	Business expenses such as travel, accomodation etc	5,000	
Contingency	10% contingency	34,000	

Where you are proposing to utilise this funding to support your own initiatives in this space, please specify this below.

LPA Funded Budget Item	Description	Estimated Amount (£)	Assumptions

8. Monitoring & evaluation

Please showcase the baseline data below you are planning to benchmark against in order to evidence clear qualitative outcomes at the end of the funding programme. If you do not currently have this data please detail your approach to establishing your baseline and/or benchmarking. This should include detail on how you intend to test new tech capabilities and processes, with activities such as user testing, consultation events and/or upcoming planning milestones to validate product development **[guide 250-300 words]**

Monitoring of individual projects and how these are contributing to the overall programme will be undertaken by the project lead, who will report to the programme board at regular intervals. The majority of project outputs, as outlined in the delivery plan section, have an associated evaluation component to determine their success and/or impact.

As some project technical developments are dependent upon successful completion of others, or are required to be developed as a proof of concept to moving to the next stage, evaluation will be formed on the basis of project gateways which will be agreed during the initiation period.

A key delivery objective of the project is to share the learning, knowledge and operational examples which package the experience of the practical, technical and business implementation that Nottingham and Bradford have gone through for 3D integration into planning. Working with another LPA such as Bradford will enable us to road test the learning outputs as one method of validating that they provide a valuable resource to others. Through LPA engagement activities we will encourage use of these products and closely monitor feedback to evaluate the effectiveness of these outputs to achieve the desired outcome, namely an increase of 3D across the planning sector. We will also look to gain feedback from some statutory consultees such as Environment Agency and a major developer(s) in the LPA areas.

The value of this approach has been evidenced in cities in other parts of the world such Helsinki and Queensland. Using evidence derived from evaluating Nottingham and Bradford, a business case looking at the return on investment (ROI) for the UK Planning Sector will be produced. This would provide a key influence on the speed at which the proposed tools could be rolled-out by successfully articulating the business case to adoptive authorities. The project would include the creation of a template business case that can be populated using standard statistics such as size of population, numbers of planning applications, revenue, and expenditure. The financial model underpinning the business case would be based upon an evaluation of the benefits realised in a sample of different authorities chosen to encompass both city and district planning authority scenarios. The approach taken in the recent study by EuroSDR into the Value of 3D Geoinformation would be followed to ensure credibility

Success for this project can be identified in a number of ways.

- The creation of operational tools, to be able to be used by any ESRI local authority to allow for 3D data creation for any local authority area, utilising openly available data either under the PSGA or through open data publication
- Ability to replicate a 3D consultation platform to publish planning developments or plans alongside other GIS data and integrated generic planning tools to support site assessment and wider planning consultations.
- Package of guidance and support materials to enable other local authorities to replicate what we've achieved in 3D space
- Support for another local authority(s) to utilise the materials and guidance and have 3D capability that is ready to deploy as required and their feedback to enhance the materials
- Evaluation of the various immersive techniques deployed throughout the duration of the project.
- If opportunity arises, and tools are ready, to test the new tools and techniques in a live planning consultation.

The University of Nottingham have committed to undertaking an evaluation of the physical model and associated projection techniques. Further areas of evaluation have been outlined in response to Question 4.

Throughout the project the 3D Strategic Development Manager will endeavour to explore other potential planning uses of the tools, and evaluate their success. We already have an interest from Nottingham's Heritage and Urban Design Manager to explore the use of the tools to consult on Heritage Assets at risk. We will also explore with any partner LPAs their evaluation of the 3D tools for engagement and consultation within various stages / areas of the planning process.

9. Spatial context of local authority

Please tell us the type of context, or area type that applies to the local authority/authorities (e.g. whether the local authority is Urban or Rural, a district, unitary, borough or other type of council and your regional location) **[guide 50 words]**

Nottingham City Council is an urban unitary authority in the East Midlands. It has a population of 323,700 and is tightly bounded, covering an area of 75 km².

In 2022 it received over 2,400 planning applications. Its annual housing target according to the standard methodology at April 2022 is 1,773 homes per year. This includes a 35% uplift imposed on 20 urban local authorities. The authority will be expected to deliver a total housing need of 28,368 from 2022-38.

City of Bradford Metropolitan District Council is a unitary authority in West Yorkshire. It has a population of 547,000 and covers an area of 370 km². It is also one of the 20 urban local authorities with a 35% uplift in housing delivery expectations.

9. Additional team contact details (for joint applications only)

Please include one Primary Contact and one Senior Stakeholder from each authority. You can add more lines as needed; there is no maximum on the number of LPAs that can work together. This section will not be assessed but will be used to keep all participating LPAs updated on the application status.

Project Contact List				
Partner Local Authority	Role (Primary Contact or Senior Stakeholder)	Name of contact	Job Title	Email
Bradford City Council	Primary contact	Adrian Walker	Transformation Manager	adrian.walker@bradford.gov.uk
Bradford City Council	Senior stakeholder	Christopher Eaton	Assistant Director of Planning, Transportation and Highways	Chris.eaton@bradford.gov.uk

10. Programme Support

Please let us know what assistance you may require from DLUHC to procure suppliers and / or deliver your project. This section will not be assessed, it will simply help us understand how best to support the programme. **[guide 150 words]**

If existing suppliers are unable to achieve a positive outcome to pass through a project gateway we would welcome support engaging with and selecting alternative suppliers.

We would welcome support from DLUHC to share information about the product with a wide audience to ensure the most value is gained from the project deliverables. Their assistance to leverage conversations with key data suppliers may also be appreciated, e.g. it is envisaged that perhaps additional datasets might be seen to enhance 3D consultation tools and conversations may be had to consider their future inclusion to the PSGA for wider local authority use.

The project team would welcome involvement in DLUHC project support groups for the duration of the project, as well as supporting any publicity DLUHC sees as necessary during and on completion of the project.

11. Agreements with the Department for Levelling Up, Housing and Communities (on behalf of your organisation)

3.1 Confirm that you commit to delivering the project outputs listed in the table below	<i>Tick box to agree</i>
We have signed the Local Digital Declaration and agree to follow the 5 core principles throughout the work on Round 3.	<input checked="" type="checkbox"/>
Our Section 151 Officer consents to the funds being carried over and ring fenced for this project the next financial year (March 2023-24) and beyond if deemed necessary in project budget planning.	<input checked="" type="checkbox"/>
We agree to commit staff time to all relevant PropTech Engagement Fund team meetings and events where possible. This includes workshops, show and tells and ad hoc engagement initiatives that support knowledge sharing and collaboration across the programme.	<input checked="" type="checkbox"/>
We agree to work with DLUHC to publish all outputs, quotes and case studies from this project with a view to any organisation accessing them freely.	<input checked="" type="checkbox"/>

Annex A - Privacy notice

The following is to explain your rights and give you the information you are entitled to under the General Data Protection Regulation 2016 and Data Protection Act 2018.

1. The identity and contact details of the Department for Levelling Up, Housing and Communities (DLUHC) and our Data Protection Officer

DLUHC is the data controller. The Data Protection Officer can be contacted at dataprotection@levellingup.gov.uk

2. Why we are processing the data

The government is undertaking a programme of pilots with local authorities to test the use of digital engagement tools for consultations in the planning system. We are asking Local Authorities to submit an expression of interest. Your personal data is being collected in order for the Digital Planning team to have a point of contact for the pilots project.

3. What personal data of mine is being collected and how is it used?

The personal data that we will be collecting is name, role, contact email, and phone number.

4. Legal basis for processing the data

The data protection legislation sets out when we are lawfully allowed to process your data. The lawful basis that applies to this processing is that it is necessary for the performance of a task carried out in the public interest.

5. With whom we will be sharing the data

This data will only be shared internally within the Digital Planning team at DLUHC.

6. For how long we will keep the personal data, or criteria used to determine the retention period.

Your personal data will be held for 6 months following the completion of the project.

7. Your rights, e.g. access, rectification, erasure

The data we are collecting is your personal data, and you have rights that affect what happens to it. You have the right to:

- a. know that we are using your personal data
- b. see what data we have about you
- c. ask to have your data corrected, and to ask how we check the information we hold is accurate
- d. complain to the ICO (see below)
- e. In some circumstances you may also have the right to withdraw your consent to us having or using your data, to have all data about you deleted, or to object to particular types of use of your data. We will tell you when these rights apply.

8. Sending data overseas

Your personal data will not be sent outside the UK.

9. Automated decision making

We will not use your data for any automated decision making.

10. Storage, security and data management

Your personal data used to contact you to take part in the pilots will continue to be stored in DLUHC's IT as per our wider Privacy Charter.

11. Freedom of Information Requests

Please note that your e-mail or any correspondence you have made to the Department could be released to a third party, if for example, a request is made under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004. Should the content be released, your name, address and any other personal or identifying details will be removed in order to comply with UK Data Protection legislation.

12. How do I complain?

The processing of your personal data will be in accordance with the law, including the Data Protection Act 2018 and UK General Data Protection Regulation.

If you are unhappy with how we are using your personal data, you should first contact dataprotection@levellingup.gov.uk

If you are still not happy, or for independent advice about data protection, privacy and data sharing, you can contact:

The Information Commissioner's Office

Wycliffe House

Water Lane

Wilmslow, Cheshire,

SK9 5AF

Telephone: 0303 123 1113 or 01625 545 745

<https://ico.org.uk/>