GREATER**LONDON**AUTHORITY

REQUEST FOR DIRECTOR DECISION – DD1179

Title: Procurement of Second Generation London DataStore Platform

---

Executive Summary:

When it was launched in 2009, the original London DataStore (LDS) was a highly innovative first step into open data for London and the UK. In the intervening period, a number of other cities around the world have copied the GLA. Digital technology and the open data agenda have also advanced significantly in this time. The GLA is now seeking to develop an up-to-date LDS, through which the following key features and benefits will be provided:

- integration of data with the main london.gov.uk website;
- automatic, less labour intensive, gathering of data from other data stores and catalogues;
- modern interfaces, better able to provide data in machine readable formats (for use by web and app developers);
- better data search and management tools, making it more user friendly for Londoners and technical developers and easily updateable;
- opportunities to share our investment and intellectual property with the London boroughs and other cities through Open Source development.

This is in line with the development objectives set out in the Mayor's Smart London Plan, in particular to "create a 'next generation' London Datastore that will aggregate disparate data sets and increase the co-creation of services to meet Londoners' needs". It also supports proposals for data and visualisations to feature more prominently in the relaunched London.gov.uk website.

Decision:

That the Executive Director approves the expenditure of up to £60,000 for 2014/15 to procure a contract to deliver an enhanced London DataStore.

AUTHORISING DIRECTOR

I have reviewed the request and am satisfied it is correct and consistent with the Mayor's plans and priorities.
It has my approval.

Name: Jeff Jacobs

Position: Head of Paid Service and Executive Director for Communities and Intelligence

Signature:

Date: 2. 4. 04

PART I - NON-CONFIDENTIAL FACTS AND ADVICE

Decision required – supporting report

1. Introduction and background

Data is becoming an increasingly important building block for the planning, design, and the operation of cities. The Mayor's Smart London Plan states we are to "promote 'smart' approaches through London's planning system" so that we can "maximise the use of data to guide the planning and design of London, including in London's opportunity areas. We will also encourage developers to adopt a more consistent approach to deploying digital infrastructure to future proof new developments."

The same plan puts a revamped London Datastore at the heart of the move from static 'open' data, which has grown out of public sector record sources (e.g. economic and population statistics) to a new period of significant growth in the monitoring and recording of transport, environment and personal information drawn from infrastructure sensor networks) known as 'Big or Smart Data'.

The Smart London Plan explicitly sets out as a measure of success that we will:

- Evolve the London Datastore into a global exemplar platform by 2016.
- Double the number of visitors (currently 35,000 per month) on the Datastore and Dashboard by 2018.

The data challenges London faces in the future are:

- Continuing to improve the transparency of government workings (with the aim of streamlining processes and reducing waste);
- Accessing disparate sensor networks and sources of across the city and beyond, being able integrate seamlessly multiple data formats and sources;
- Progressing 'Open Data' as a technical and change programme in collaboration with the London Boroughs and private sector;
- Realising the wider benefits of data as evidence to support predictive analysis and decision making are widely used by politicians to make better informed judgements; and
- Simplifying and personalising the manipulation of data such that it becomes secondary to the ease of asking the question.

The current London DataStore

The DataStore has been highly successful. It receives up to 17% of the traffic to the GLA's website and despite not being updated since early 2010, still has an excellent reputation amongst researchers, local and health authority analysts and consultants. The London City Dashboard, which it contains, is also well used by the public it is designed to attract. However, it has not benefitted from any development in this time and is now in need of updating so that it competes with other world cities such as New York. It does not:

- Provide opportunities to link automatically with other data stores and catalogues
- Provide data in the forms most useful to App and website developers
- Allow for feedback and comments from users to create a continuous improvement loop
- Allow partner organisations (e.g. the London Boroughs) to upload and maintain their own datasets

Updating the Datastore will allow London to catch up in terms of functionality with projects such as the national 'data.gov.uk' which has raised the standard of data integration, searches, and automated management. This activity will also mean that London can actively participate with new agendas in data usage and openness being set by organisations such as the Open Data Institute and Open Knowledge Foundation.

Procurement and delivery process

New guidance and best practice has been developed by the Government Digital Service. Learning lessons from past failures of IT projects, a key element if this guidance is the agile development methodology. This approach was used successfully in the delivery of the current London DataStore. A central tenet of the agile approach is that the development should take place in controlled short bursts delivering finished code that can be reviewed frequently by stakeholders. In this way, any problems or misunderstandings can be identified and rectified at an early stage.

In accordance with these principles, it is proposed to build a platform that:

- Provides the ability to embed relevant infographics throughout the GLA website to complement the testing of alpha prototype GLA Website (DD1154) and the Web Credible designs (MD1193);
- Supports the development of data standards to allow the exchange of data from different teams within the GLA and with other organisations (including boroughs and agencies);
- Allows the DataStore to better serve the needs of developers through the creation of feeds and APIs
- Provides more advanced search and filtering tools for users (including the ability to search for information just about their neighbourhood);
- Provides tools for data management (important as the number and variety of datasets grows) including
  - streamlined processes for GLA staff to upload data
  - an overview of the data sets and when they were last updated
  - discrete areas for users or groups of users to securely upload and maintain data (for instance staff from a partner organisation) without opening up the rest of the DataStore
  - version control and the ability to archive data.

The GLA reviewed the Digital Services framework for DD1154 identifying and noting that there are insufficient well-qualified companies with experience of developing Data Stores linked to Drupal websites available to meet the requirements of the GLA. In light of this, it is proposed that the procurement for the development of the enhanced London DataStore be through a standard competitive process.

2. Objectives and expected outcomes

The following objectives and outcomes are expected:

- The successful appointment of a supplier for the provision of a Senior and Junior Developer for 13 weeks from 1st May 2014;
- A system supplied, tested and documented ready for the GLA to populate with datasets from the current LDS and which allows the LDS to grow into a city hub for the whole of London based on the detailed functional requirements as set out in the Invitation to Quote;
- A new DataStore launched in September 2014.

Key benefits of the second generation London DataStore will include:
i.   integration of data with the main GLA website – data, maps and visualisations feature prominently in the designs for the re-launched london.gov.uk website. The second generation DataStore will be able to serve out data in a way that it can then be used by a wider group of Londoners;
ii.   automatic, less labour intensive, gathering of data from other data stores and catalogues – by adopting more advanced technology and standards, the London DataStore will be able to sit at the heart

of a network of connected DataStores and catalogues, supporting current discussions with London boroughs, national partners such as the Met Office and ultimately the private sector;

iii. ability to serve web and app developers – modern interfaces and APIs will allow third parties to use and combine data in new stimulating and useful ways, (based on data in machine readable formats);

iv. better data search and management tools - making the DataStore more user friendly for Londoners and technical users and also more easily updateable by GLA staff;

v. opportunities to share the cost of our investment and intellectual property - with the London boroughs and other cities through Open Source development

3. Other considerations

3.1 key risks and issues

Compatibility with other data stores and catalogues

The enhanced DataStore will use internet standards and open data standards to ensure that it is able to harvest data from other data stores and catalogues regardless of their software platform.

Long development times, stability of the platform, ongoing support

Although in 2009, the London DataStore was at the leading edge of City data stores, a number of tried and tested platforms have emerged in the intervening years. It is the intension of this project to adapt, customise and build on an existing platform that already has live examples running.

In the spirit of 'Openness' the GLA will wish to continue the philosophy of open source code and the development of open skills capabilities.

Capacity and resilience of infrastructure

In line with the approach recommended by TG for the GLA website, the enhanced London DataStore will be hosted at the TfL data centre in Woking, with City Hall providing backup (the opposite is true at present). City Hall will continue to provide the development environment.

- The growing consensus is that the organisation closest to a data set should host it. The DataStore will therefore link to original datasets where suitable and continue to actually host data created by the GLA or where alternatives are not viable;
- The future will require the storage and management of genuine big data, this by definition will require a much higher specification of infrastructure than the GLA has at the moment. The intention of the enhanced DataStore is to expand the range of data sources to disseminate data that has already been processed (for instance by a partner such as UCL);
- Hosted Cloud services will be used for public facing interactive web maps as this provides the most cost effective solution for the GLA, whilst allowing for temporary spikes in demand (for instance after the Schools Atlas was reported in the Evening Standard)
- Live Feeds of near 'Real-time' data require the greatest call on resources, however, much of the London DataStore's data changes on a monthly or even annual cycle. If the GLA moves more into this area, then the infrastructure will need to be reviewed accordingly.

3.2 links to Mayoral strategies and priorities

Smart London Plan

Delivery of an enhanced London DataStore directly fulfils the following 'Measures of Success':

- Evolve the London Datastore into a global exemplar platform by 2016;
- Double the number of users on the Datastore and Dashboard by 2018.

It also supports the Smart London Borough Partnership in its work to encourage boroughs to free up London's local level data – either by harvesting data from borough data stores or by providing a ready-made platform for boroughs to use if they wish.

Section 6: "We want London's innovative technology entrepreneurs to help City Hall develop new approaches to service delivery, so we will use digital technology to raise awareness of City Hall's spending priorities, and continue to open up GLA contracts and supply chain opportunities to SMEs."

Long-term Infrastructure Investment Plan (draft recommendations)

- Prepare a Masterplan for the Building of London as a smarter city - placing data at the core of the solutions, showing a plan for open data release and sharing;
- Create a set of Open Data guidelines that will include definitions of data interface, protocol for notifying sources of the wish to include, privacy protection standards;
- The City will make available performance, consumption and environmental data as open data (energy, water, waste, pollution) – private sector suppliers will be encouraged to share data;
- We will establish a Smart London Borough Partnership board to engage boroughs in freeing up London's local level data and create, maintain and utilise common data standards.
- City Hall will develop the next generation London Datastore and dashboard analytics to help increase understanding of the city, and to provide evidence in support of change (e.g. policy and services);
- Open Data will be easily accessible from centrally from the GLA and at local level via virtual Borough sites across a variety of desktop and mobile devices; and
- Londoners will be encouraged to understand and use Open Data, they will also be encouraged to provide personal data on a transparent basis to increase our collective knowledge of the city and its citizens for the purposes of better planning and operational running of the services.

Supporting Open Source

The GLA has a strong track record in using Open Source software (for instance Drupal for the main GLA website) and we are continuing to move away from proprietary software to open source (e.g. moving to Postgres). This approach is economically advantageous to the GLA, avoids 'vendor lock-in' and supports the SME / high-tech community.

3.3 impact assessments and consultations.

The current DataStore is well used with up to 35,000 visits a month (and 17% of the GLA website hits). Development of the enhanced DataStore should not be allowed to affect the performance of the current platform. To mitigate against this risk and allow the project to take full advantage of technical developments in open data platforms, the enhanced DataStore will be built from the ground up.

Consultation on the functional requirements has taken place across the Intelligence Unit (who use and maintain the current DataStore on a daily basis) and more widely across the GLA. Through the Future Cities Catapult, we have also consulted with other UK cities, including Birmingham, Cambridge and Ipswich.

Consultation on the interaction with the main GLA website and the GLA's infrastructure has taken place with the GLA Technology Group.

4. Financial comments

4.1   Approval is being sought for the Intelligence Unit to carry out a competitive procurement with qualified suppliers to provide a Senior Developer and Junior Developer to develop the enhanced London DataStore.

4.2   The total estimated cost of the contract is £60,000 which will be funded by a £50,000 contribution from 2014-15 Central Programme Budget (approved by the Central Programme panel, 3rd March 2014) and £10,000 from External Affairs budget approved as part of the 2014-15 budget process. Cost has been estimated on the basis of a winning supplier providing a Senior Developer for 60 days @ £550/per 7.5hr day (£33,000) and a Junior Developer for 60 days @ £450/per 7.5hr day (£27,000). The estimate has been provided by programmers who delivered the national data.gov.uk.

4.3   Any changes to this proposal, including budgetary implications will be subject to further approval via the Authority's decision-making process. All appropriate budget adjustments will be made.

4.4   The Intelligence Unit within the Communities & Intelligence Directorate will be responsible for managing this contract and ensuring that all expenditure and associated activities comply with the Authority's Financial Regulations, Contracts & funding Code and Expenses & Benefits Framework.

5. Legal comments

5.1   The foregoing sections of this report indicate that the decisions requested of the Director fall within the GLA's statutory powers to do such things considered to further or which are facilitative of, or conducive or incidental to the discharge of its principal functions (promotion of: economic development and wealth creation; social development and the improvement of the environment, in Greater London). In formulating the proposals in respect of which a decision is sought officers have complied with the GLA's related statutory duties to:

- pay due regard to the principle that there should be equality of opportunity for all people;

- consider how the proposals will promote the improvement of health of persons, health inequalities between persons and to contribute towards the achievement of sustainable development in the United Kingdom; and

- consult with appropriate bodies.

5.2   All supplies and services required for the proposed development of the London Datastore must be procured by Transport for London Procurement (who will determine the detail of the procurement strategy to be adopted) in accordance with the GLA's Contracts and Funding Code. Officers must liaise with Transport for London Procurement in this regard and in order to ensure that an appropriate contract is put in place between and executed by the GLA and the successful bidder before the commencement of the supplies and services in question.

6. Planned delivery approach and next steps

Activity	Timeline
Invitation to Quote	4th April 2014
Invitations to Quote returned	29th April 2014
Procurement of contract [for externally delivered projects]	5th May 2014
Delivery Start Date [for project proposals]	15th May 2014
Project Closure: [for project proposals]	8th August 2014

Appendices and supporting papers:

None

Public access to information

Information in this form (Part 1) is subject to the Freedom of Information Act 2000 (FOI Act) and will be made available on the GLA website within one working day of approval.

If immediate publication risks compromising the implementation of the decision (for example, to complete a procurement process), it can be deferred until a specific date. Deferral periods should be kept to the shortest length strictly necessary.

Note: This form (Part 1) will either be published within one working day after approval <u>or</u> on the defer date.

Part 1 Deferral:

Is the publication of Part 1 of this approval to be deferred? YES
If YES, for what reason:
Contains information which may be commercially sensitive – publication to be deferred until procurement complete.

Until what date: 15 May 2014 until the procurement process is complete (estimated)

Part 2 Confidentiality: Only the facts or advice considered to be exempt from disclosure under the FOI Act should be in the separate Part 2 form, together with the legal rationale for non-publication.

Is there a part 2 form – NO

ORIGINATING OFFICER DECLARATION:	Drafting officer to confirm the following (✓)
Drafting officer: Paul Hodgson has drafted this report in accordance with GLA procedures and confirms that:	✓
Assistant Director/Head of Service: Andrew Collinge has reviewed the documentation and is satisfied for it to be referred to the Sponsoring Director for approval.	✓
Financial and Legal advice: The Finance and Legal teams have commented on this proposal, and this decision reflects their comments.	✓

EXECUTIVE DIRECTOR, RESOURCES:

I confirm that financial and legal implications have been appropriately considered in the preparation of this report.

Signature *M. J. Bell*   **Date** 2. 4. 14

8