GREATER**LONDON**AUTHORITY

REQUEST FOR MAYORAL DECISION – MD2053

Title: Microsoft Enterprise Licence and cloud computing

Executive Summary:

The GLA's current Enterprise Agreement (EA) with Microsoft (MS) expires on 20 April 2017. The GLA and TfL are currently engaged in a joint procurement with TfL for the next version of the MS product set (including Office 365, SQL server, Project and Visio) as well as the necessary technology, technical expertise and support for moving GLA data and systems to the Cloud.

Approval is sought to enter into a 3 year agreement with the successful bidder for a 3 year EA of the MS product set and to procure the necessary services to enable a planned and controlled move of GLA data and systems to the Cloud.
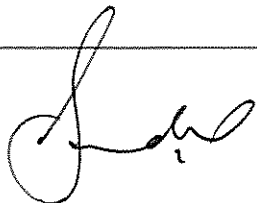
Decision:

The Mayor approves:

- Expenditure of up to £780,000 over a three-year period to renew the current Microsoft software estate and purchase additional licences for Microsoft products through a reseller.
- Expenditure of up to £120,000 over a three-year period for technical support and maintenance services for the Microsoft products purchased.
- Expenditure of up to £445,000 between 2016/17 and 2017/18 for one off and first 12 months running costs relating to the migration of GLA's user data (documents, spreadsheets etc) to the Cloud

Mayor of London

I confirm that I do not have any disclosable pecuniary interests in the proposed decision, and take the decision in compliance with the Code of Conduct for elected Members of the Authority.

The above request has my approval.

Signature:

Date: 7d/u/ll

PART I - NON-CONFIDENTIAL FACTS AND ADVICE TO THE MAYOR

Decision required – supporting report

1.   Introduction and background

Current position and context

The GLA, as well as the functional bodies, has made extensive use of the Microsoft Office suite of products since its inception. In 2012, the GLA entered an Enterprise Agreement (EA) with Microsoft for the provision of licences for both desktop and server products. This was approved by MD933. The EA was for a period of 3 years with two optional one-year extensions. The EA provided guaranteed pricing and licensing terms for a period of 5 years. It also provided the option for the GLA to install new versions of Microsoft products as these became available. This agreement will end on 20 April 2017.

The core set of desktop products comprises Windows, Word, Excel, Outlook and PowerPoint plus additional add-on desktop products such as Access, Project and Visio. The EA also provides licences for the Exchange server that provides email and calendar services through Outlook, and SQL database servers that are used for a variety of systems at the GLA.

At present, all the MS Office data and files that we use are stored on large storage systems (SANs) located either at City Hall or at a data centre shared with TfL. Users see the SANs as drive letters and folders (M drive, N drive etc). This arrangement, which has been in place since 2011 has served us well for business continuity and the ability for staff and Members to be able to use email and file services from City Hall, remote sites such as the European Office as well as from locations outside the GLA IT network through GLA remote access systems.

Office 365

When the GLA entered the current Microsoft EA, robust and widely adopted cloud-based services were not available. Microsoft has subsequently introduced the Office 365 suite of cloud-based products and services. This includes, for example, cloud-based versions of Word, Excel and Project plus Outlook/Exchange email and calendar. There is also the possibility to run SQL server databases on the Microsoft Azure cloud platform.

The procurement being conducted by the GLA and TfL specifies that the software licences provided under the new agreement will provide full access to Office 365 cloud-based services. Additionally, the GLA and TfL will be entitled to run equivalent, on premise versions of the software for the duration of the agreement. Running concurrent on premise and cloud-based versions of software is referred to as operating in "hybrid mode". It is common practice to operate in hybrid mode during a full transition to the cloud and the proposed licensing model fully supports this.

Increased mobility and flexibility for users is a major benefit of cloud-based computing. The proposed licensing model fully supports this with access to Office 365 available to users from up to 5 devices (which can be easily changed) including laptops, iPads, iPhones and Android phones. An additional source of flexibility is that users can work jointly on documents stored in the cloud, promoting collaborative working. The GLA will continue to have the right to install the latest versions of Microsoft software and plans to update to the latest version of Office introducing new features to promote ease of use, mobility and collaboration. We will also be able to take advantage of new services like Skype for business (audio and video conferencing) that will support mobile and flexible working.

A further benefit of Office 365 licences is that the licensing model is user based rather than based on the device being used. In the past it was necessary to keep track of which devices a person was using to access the system and to license these devices accordingly. This gave rise to a significant administrative overhead. It has become increasingly common for users to have more than one device (for example, a PC and an

iPhone) so the clear tendency is towards increased complexity and cost associated with device-based licensing. As indicated above, Office 365 licensing is per user who can use up to 5 devices which is far easier to administer.

Cloud computing

Until a few years ago, desktop computing in general followed a largely unchanged pattern for the GLA (as well as most organisations around the world) of software applications being installed and run from either the hard drive of a PC or, where concurrency has been required, from central servers located in the building (or latterly datacentres providing a level of added resilience). Two things in particular have changed this status quo radically; high speed connectivity through fibre optic cables and the availability of massive storage capacity relatively cheaply. Companies like Amazon were an early entrant to capitalise on this opportunity by offering organisations the ability to rent electronic storage in the very high capacity datacentres they established around the globe. This early model was so successful that the marketplace grew rapidly and technical capabilities have evolved into what is now called "cloud computing".

Over the past five or so years, the generic term cloud computing (with a growing list of synonyms) has come to mean that data (everything from Word files to Ordnance Survey datasets), products such as websites and web based systems as well as desktop software applications such as Word and Excel, can be hosted in large, secure datacentres established by Microsoft, Amazon etc across the globe and made available across either fixed fibre optic links or the internet to potentially any device with either a network or internet link.

Cloud computing can be viewed from several different points of view, primarily from the benefits that accrue to both organisations as well as users:

From an organisational perspective:

- Centralised data repository that can grow (or shrink) on demand
- The ability to set up sophisticated servers in minutes rather than hours or days in the old model, allowing GLA IT staff to focus on and have more time to continually improving services to end users.
- Software applications and data available on a variety of devices including tablets and smartphones rather than tying users to desks
- The infrastructure (servers, network, storage) being securely provided and managed by suppliers and backed by Service Level Agreements but with the client organisation retaining full control over the use of the infrastructure.
- Suppliers are focussed on providing this specialist service and so should be able to offer greater expertise that an internal IT department that has a wide range of systems to support
- Ability to contractually specify the geographical location of data, including backup data. This is an important protection for the GLA, to oblige providers to hold data in countries with similar data protection and security regulations to the UK.
- ongoing costs charged on a usage basis (i.e. only pay for what you use). This negates the need for a large capital funding allocation every 3-5 years to replace servers in favour of a more predictable, efficient and evenly spread financial model based on growth (or shrinkage) of data and user count. Given the continued growth of data storage at the GLA (which tends to double every two years) this represents a considerable benefit. The gaps between major investments have been getting shorter – each implementation takes up technical resources (usually about 2 staff for much of a year) with infrastructure costs of about a million pounds. As a result of this change the GLA will avoid having to spend about a million pounds every two years.

From a user perspective, the following factors are important:

- Providing a clear, simple, fast and consistent user experience, irrespective of the device, location and the system / service being used.
- Having the minimum number of steps to access the system / service required
- Being able to access all required data rather than subsets
- Being able to use a variety of devices, including the user's own devices.

- interoperability between software applications e.g. using only a smartphone, copy text from a GLA email and a spreadsheet on a GLA network drive and paste it to a Word document which can then be emailed using Outlook.

Office 365, Microsoft software and Cloud computing

The GLA / TfL procurement of Office 365 services will also include the ability to migrate the GLA to using MS Office software and data from the cloud environment provided by Microsoft, called "Azure".

Moving the MS Office data (including email data) from the current SANs to the Azure cloud means that users have full access to data and software such as Word, Excel and Outlook from multiple devices and any location with an internet connection.

We are not just confined to moving the GLA's data on the SANs. Azure can be used to host a vast number of software applications and databases that are currently only available from within the GLA network. This "joining-up" of software and data will start to meet the objectives set out above. Indeed, Office 365 and Azure should be seen as inexorably linked in the synergistic benefits that each brings.

Microsoft Support

The planned transition to cloud-based services is technically complex. Detailed technical planning and testing will be essential in order to avoid disruption to day-to-day IT services.

Historically, the GLA has procured Microsoft technical consultancy services on an ad hoc basis when the required level of technical expertise was not available from in-house staff. This approach has proven to be cumbersome since a separate approval and procurement process is required each time a requirement arises.

It is already known that external technical expertise will be required for the transition and embedding of new cloud-based services. Furthermore, lessons learned by London Boroughs that have already implemented Office 365 indicate that access to entirely up to date technical knowledge is essential. Cloud-based service offerings are still undergoing rapid technical development. Hence technical changes and challenges may arise unexpectedly at short notice.

Unlike the GLA, TfL already has in place contractual arrangements for support of Microsoft products. In the current procurement, TfL is seeking to consolidate these into a support arrangement with a single supplier, called a Licensing Solution Provider (LSP) as part of the overall package of EA arrangements.

The GLA wishes to establish a similar Microsoft support arrangement with the LSP reseller. This will include elements such as proactive and reactive support, onsite consultancy, system health checks, performance assessments and so forth. The estimated cost is £40,000 per year.

Procurement

TfL also has a Microsoft EA that is finishing at the end of November 2016. The GLA and TfL are conducting a joint procurement in order to achieve shared benefits and economies of scale. The procurement is being carried out with assistance from Crown Commercial Services and is due to be completed before the end of November.

Following a successful procurement, a (LSP) will be appointed. An LSP is a large, authorised Microsoft reseller working with large, corporate customers. The GLA and TfL will sign separate contracts with the appointed LSP but under the same umbrella terms and conditions negotiated during the procurement.

As a large customer, TfL is seeking through the procurement to negotiate a number of value added services from the LSP such as advice about products, licensing and costs, and help with the software audit and reconciliation process. The GLA will be subject to the same umbrella contract and hence will also benefit from this range of value added services.

The GLA is under no obligation to enter into an agreement with the selected LSP. However, the purpose of this document is to seek approval to enter into such an agreement following a successful procurement process.

Unforeseen Urgency

The GLA involvement in this process has become urgent due to unforeseen circumstances. According to the initial timeline, the GLA only needed to sign a contract with the appointed LSP before the end of the current GLA EA in April 2017. However, at the end of October Microsoft announced price rises for customers paying in Sterling of 13% for on premise software and 22% for cloud-based services. The price rise is effective from 1 January 2017. A number of other US IT vendors, including Apple, have also announced price rises due to the falling value of Sterling.

Transition from the current position to the new one

Pilot Project and preparation work

At present, a pilot project (with a Board that includes the Executive Director of Resources and the Executive Director of Secretariat) is in progress aimed at gathering information from a user, infrastructure and services perspective. Included in this pilot are a set of GLA staff teams (around 90 users) who are using the Office 365 product set and email services from the Azure Cloud.

The GLA is also working with London Grid Ltd, a public sector consortium, which includes all London Boroughs, to make use of additional network bandwidth through fibre optic links to connect City Hall to the Azure (and other) cloud storage. This last workstream will also provide the added benefit of the GLA (particularly the Intelligence Unit) being able to exchange secure information with Central Government departments.

Rollout

Once approval is granted and agreements signed, the GLA will proceed as follows:

- Between January and March 2017 to plan and prepare for the installation of Office 365 across the GLA and commission the services necessary to commence the migration of data and other services to the Azure cloud.
- From mid-April 2017 until June 2017, the Office 365 installation will take place.
- From May 2017 onwards, starting with email data, the move to cloud computing will commence
- Whilst detailed planning has not yet been completed, it is anticipated that, by mid-2018, the majority of data used by GLA staff and Members on a day-to-day basis will be via the Cloud.

Estimated Costs

Office 365

The table below provides EA costs for 2016/17 plus estimated costs for 2017/18 based on the same number of users. It must be noted that the EA is dependent on the number of users and devices at the GLA during any year and will thus vary from one year to the next.

	Current annual EA (2016/17)	New annual EA (2017/18)	3 Year costs for the EA
Desktop products (The Office 365 collection of applications)	£73,000	£120,000	£720,000
Add-on products (Project, desktop management and monitoring software [SCCM] and Visio)	£88,000	£73,000	
Servers (SQL, Windows servers)	£56,000	£47,000	
Technical Support agreement	N/A	£40,000	£120,000
Windows server maintenance licences*	£20,000	£20,000	£60,000
EA TOTALS	£237,000	**£300,000**	**£900,000**

*Windows server maintenance is currently paid outside of the EA. It is more cost-effective to do this due to certain complex software licensing considerations. It is proposed to continue with this existing arrangement.

Cloud computing

Cost item	Likely cost (to March 2018)	On-going Cost element Per annum	Supporting notes
Microsoft Technical consultancy for Cloud services	£150,000		This will include expertise in: - Architecture - Security - Connectivity - Storage management - User interface design and implementation
Internal resources	£80,000		This will include additional temp staff to provide assistance to the Technology Group Live team
Data migration	£75,000		Microsoft expertise to migrate GLA SAN data to the Azure cloud
Usage charges	£80,000	£80,000	This will be for the initial 12 months of using GLA's migrated data from the Cloud
Fixed link	£30,000*	£10,000	This will be for both the implementation and initial 12 months running costs for a dedicated link from City Hall to the Azure cloud, to provide the fastest speeds.
Contingency	£30,000		This will allow for any unforeseen costs to be met
Total	**£445,000**	**£90,000**	

*In the first 12 months we are expecting to pay £20K set-up fees and £10K on-going costs.

Funding

This has been proposed as part of the 17/18 budget process and will be included subject to the approval of this MD.

2.   Objectives and expected outcomes

Objectives

- To establish a new EA with Microsoft providing on premise and cloud-based software licences, plus a technical support contract to assist with the move to cloud-based services.

- To procure the services required to migrate the GLA to Office 365 and cloud based working
- To implement Office 365 software across the GLA and commence the managed and controlled migration of MS Office data to the Azure cloud
- To provide all appropriate training, communication and assistance required by Staff and Members to make the transition and continue "business as usual".

Outcomes

On the completion of the full project, all GLA staff will be able to make use of the most up-to date Office software and have access to both software products and their data from a wider geography and set of devices than ever before. Also, the GLA's Microsoft server estate will be fully up to date.

3. Equality comments

The products comprising Office 365 have an ever increasing number of accessible features that Microsoft is developing on an ongoing basis. Chief amongst these features is the wider implementation of voice based services to augment the traditional keyboard and mouse. The new product interfaces have been re-designed with accessibility in mind and offer more high contrast options to assist visually impaired users.

Office 365 and cloud based computing support more flexible working arrangements from a range of different locations. This can benefit a range of people who require special working arrangements or those with carer responsibilities. This is particularly true in relation to new conferencing and collaboration services that are being developed.

4. Other considerations

Mayoral Priorities

The move to Office 365 fully supports the work of the Mayor and the Assembly in having staff who have new capabilities, increased flexibility and greater collaboration in carrying out their work.

Risks, issues and consultations

There is a risk that delays might result in the signed contract documentation being provided to the selected Microsoft reseller after 14 December 2016. In this case, the GLA will miss the cut-off point for establishing new contracts before the Microsoft price increases take effect on 1 January 2017, with a potential additional cost of £45,000 per year for the life of the new EA.

Moving to a new model of working with GLA data being on the cloud prompts a large number of immediate questions relating to risks. A central aim of the pilot project was to identify these questions and examine the acceptability of residual risks (i.e. the remaining risk once mitigations were put in place). Wide ranging research, consultation (including the GLAs' Governance Team) and investigations have taken place to assess the risks posed, amongst other things by:

- Cloud storage being accidentally or maliciously compromised leading to data loss
- Data in transit (from user device to the cloud) being intercepted
- Cloud data being moved to locations not protected by appropriate data protection regulations.
- Any increased likelihood of viruses or malicious software (malware) damaging GLA data.

In all cases, the project team's conclusion was that moving to cloud based computing:

- Reduced the risk by using the following measures:
  - Data in transit can be fully encrypted making it nearly impossible to intercept data travelling between user devices and cloud storage.
  - Mobile device storage can be encrypted in case of theft and remotely wiped and

- o A contractual stipulation and technical measures to specify that no data (including backup copies) can reside in geographical locations or regions other than those specifically authorised by the GLA.
- Transferred the risk. Cloud service providers such as Microsoft have extensive intrusion prevention and malware protection services operating 24 / 7 / 365 that are offered by default.

5. Financial comments

The expenditure of up to £1.345m as detailed within the body of this report will be resourced from the existing TG budget. Once the annual expenditure profile has been confirmed, the budget will be adjusted to reflect this accordingly. The on-going costs of £90,000 a year will need to be included within the budget for 2018-19 and future years

The Enterprise Agreement will be in effect from 1 May 2017 to April 2020, after which there will be a further request for resources.

6. Legal comments

6.1 The foregoing sections of this report indicate that:

6.1.1 the decisions requested of the mayor (in accordance with the GLA's Contracts and Funding Code) fall within the GLA's statutory powers to do things facilitative of and conducive to the discharge of its general functions; and

6.1.2 in formulating the proposals in respect of which a decision is sought officers have complied with the Authority's related statutory duties to:

- pay due regard to the principle that there should be equality of opportunity for all people (further details on equalities are set out in section 3 above) and to the duty under section 149 of the 2010 Act to have due regard to the need to eliminate unlawful discrimination, harassment and victimisation as well as to advance equality of opportunity and foster good relations between people who share a protected characteristic and those who do not[1];

- 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.

6.2 Officers have indicated that the procurement of the required services are being carried out jointly with Transport for London procurement who have determined the procurement strategy to be adopted in accordance with the GLA's Contracts and Funding Code and that the services are being procured through a CCS Framework which is accessible to both TfL and the GLA.

Officers should ensure that appropriate 'call-off' documentation is put in place and executed by the successful bidder and the GLA before the commencement of the services.

6.3 The mayor may, under section 38 of the Greater London Authority Act 1999, delegate the exercise of the GLA's functions to the Executive Director of Resource.

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[1] The protected characteristics and groups are: age, disability, gender reassignment, pregnancy and maternity, race, gender, religion or belief, sexual orientation and marriage/ civil partnership status.

7.   Planned delivery approach and next steps

Activity	Timeline
Procurement of contract [for externally delivered projects]	November 2016
Announcement [if applicable]	December 2016
Signed GLA contract documentation provided the selected reseller (latest deadline to avoid price increases)	14 December 2016
Delivery Start Date [for project proposals]	December 2016
New EA comes into effect	May 2017
Final evaluation start and finish (self/external) [delete as applicable]:	N/A
Delivery End Date [for project proposals]	April 2020
Project Closure: [for project proposals]	April 2020

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 or 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: The GLA is currently carrying out the procurement for the LSP and it may commercially disadvantage the GLA for contents of this document to be publicly available ahead of the successful conclusion of the procurement process.

Until what date: (a date is required if deferring) OR *AT CONCLUSION OF PROCUREMENT PROCESS* 1 February 2017, *AS LONG-STOP DATE*

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: Duminda Baddevithana has drafted this report in accordance with GLA procedures and confirms the following:	✓
Sponsoring Director: Martin Clarke has reviewed the request and is satisfied it is correct and consistent with the Mayor's plans and priorities.	✓
Mayoral Adviser: David Bellamy has been consulted about the proposal and agrees the recommendations.	✓
Advice: The Finance and Legal teams have commented on this proposal.	✓
Corporate Investment Board This decision was agreed by the Corporate Investment Board on the 28 November 2016.	✓

EXECUTIVE DIRECTOR, RESOURCES:

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

Signature   **Date**   28.11.16

CHIEF OF STAFF:

I am satisfied that this is an appropriate request to be submitted to the Mayor

Signature   **Date**   28 /11 /2016