

A CHIEF DIGITAL OFFICER FOR ALL LONDONERS

Defining and scoping the role

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FIRST

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CONTENTS

MEETING THE GROWTH CHALLENGE	2
LONDON'S STARTING POINT	3
THE ROLE OF THE CHIEF DIGITAL OFFICER	5
POLICY ADVICE AND DIGITAL EXPERTISE	7
CHAMPIONING DIGITAL TRANSFORMATION ACROSS LONDON GOVERNMENT	8
SEEKING OUT AND SHARING BEST PRACTICE	11
CONCLUSION AND SUMMARY OF RECOMMENDATIONS	13

MEETING THE GROWTH CHALLENGE

London is more successful now than at any time in its history. The economy is thriving and its population is rising - reaching 10 million by the mid-2030s, if not earlier.¹ The UK economy is boosted by £145 billion a year from digital technology, and London is at the forefront with a booming tech sector which in recent years has attracted more venture capital and created more companies valued over \$1 billion than any other European city.²

Rapid growth has created challenges for London's government; house prices and rents are rising and London is experiencing increased congestion across its transport network. Responding to these challenges requires a cross-departmental approach. At the same time, the world is in the early stages of seeing the impact of major disruptive technologies, which have the potential to transform the economy and society.

A key issue for London and the Mayor is how digital transformation and the use of new technology (e.g. data analytics, mobile and embedded devices) can help London's government better manage some of its growth challenges, improve efficiency and support economic development.

Private firms are increasingly responding to the opportunity of digital transformation by appointing Chief Digital Officers (CDOs), or equivalent, to provide a focus for improving productivity, and delivering efficiency and service improvements. A number of cities have followed this model by creating posts for technology leadership, with a range of demonstrable results.

With these precedents, London stands to benefit from the Mayor's commitment to creating a Chief Digital Officer for London. Centre for London and London First, working closely with Bloomberg Associates, and in consultation with a wide range of business interests have produced this paper to look in more detail at how the role might support growth in London. It builds on the report London's Digital Future³ by Centre for London, Tech London Advocates and techUK.

1 Mayor of London. (2014). London Infrastructure Plan 2050. Retrieved at <https://www.london.gov.uk/file/19038/download?token=1Zj5uQZf> and Oxford Economics (2015), London 2030

2 <http://www.techcityuk.com/investors/>

3 <http://centreforlondon.org/wp-content/uploads/2016/01/London-Tech-Manifesto-PDF.pdf>

LONDON'S STARTING POINT

As a CDO looks to harness digital transformation for the benefit of all Londoners, London's active and engaged tech community and the private and public sector organisations supporting growth in the sector will be valuable assets (see Table 1). As a result of this community's work there is a well-established set of initiatives and activities that in aggregate support London's position as the hub for technology:

- TechCityUK and Tech London Advocates have been created to promote London's tech sector for investment and to lobby Government to create the regulatory and investment environment that supports growth.
- London Tech Week, run by London and Partners, now attracts 43,000 attendees representing over 80 countries through 228 events over 7 days.⁴
- Transport for London's (TfL) digital strategy makes live data available to developers, businesses and media owners to facilitate the development of apps and services to help Londoners use the transport network more efficiently. To date 6,000 developers, 460 apps, 200 API elements have been developed as a result of the scheme, generating significant value.⁵
- The London Data Store⁶ is already ahead of many other global cities. This site, run by Greater London Authority (GLA), provides free access to a number of data-sets from the GLA and its functional bodies as well as national statistics.
- Smart London⁷, the GLA's London Technology Plan, was launched in 2013 by the Smart London Board with a view to establishing a strategy⁸ to ensure digital technology is effectively used to improve London.
- And at the borough level, a number of local authorities, including Camden, Islington and Tower Hamlets, have developed their own digital strategies. London boroughs are also part of a Local Digital Coalition⁹ to share initiatives and promote digital leadership.

4 <http://londontechnologyweek.co.uk/assets/uploads/2013/07/LTW-15-infgraphic.png>

5 https://www.london.gov.uk/sites/default/files/gla_smartlondon_report_web_4.pdf page 38

6 <http://data.london.gov.uk/>

7 <https://www.london.gov.uk/what-we-do/business-and-economy/science-and-technology/smart-london>

8 https://www.london.gov.uk/sites/default/files/gla_smartlondon_report_web_4.pdf

9 <http://www.localdigitalcoalition.uk/>

Table 1: Key London organisation supporting tech growth in London*

Organisation	Description	Established
London Datastore	Free and open data sharing portal releasing public data through the GLA	2010 (relaunched 2014)
Tech City UK	Publicly funded organisation originally supporting the Old Street cluster, now expanded to support digital technology businesses and entrepreneurs to thrive across Greater London and the UK's digital economy	2010
London & Partners	Not for profit public-private partnership for city promotion, to attract overseas businesses, events, congresses, students and visitors to London and help London businesses go global	2011
London Enterprise Panel (LEP) Working Groups	London Enterprise Panel Working Groups act as a forum for London's businesses, boroughs, the Mayorality, Transport for London, and other key stakeholders to discuss the key levers and investment requirements for private sector growth in London. Several working groups have a specific Digital and Tech focus	2012
Smart London Board	Public sector led strategy and board of leading academics, businesses and entrepreneurs to advise on how London can put digital technology at the heart of making the capital an even better place to live, work and invest	2013
Tech London Advocates	Private sector led coalition of individuals setup to champion London's potential as a world-class hub for tech and digital businesses	2013
London Tech Ambassadors Group	Chaired at Deputy Mayor level, charged with promoting London as a global technology hub through trade missions and advocacy	2014

*Other London and UK wide organisations such as the Open Data Institute and the Catapult centres are also active in supporting the London Tech Sector.

Many of these initiatives have been very successful. But there is scope and potential for greater coordination led by a CDO; to focus on what really matters in order to deliver value through digital transformation. The Mayor's manifesto pledges (particularly around economic development, housing and transport) provide the logical focus for this prioritisation.

THE ROLE OF THE CHIEF DIGITAL OFFICER

A CDO, or equivalent within city government, will bring the numerous activities, outlined earlier, together. The CDO must act as an enabler, breaking down barriers, joining up conversations and convening partnerships across private enterprise, public sector stakeholders and the wider tech community.

The role should complement and not duplicate organisations and initiatives that already champion London as a hub for the digital economy. The key focus is to drive digital transformation across the GLA group and deliver digital transformation in public services for London. The result of this - a London which is digitally connected, inclusive, and efficient - will benefit citizens and businesses alike. To achieve this, the role needs to be cross-departmental, working with senior officers at the GLA and its functional bodies to deliver the Mayor's priorities. Where appropriate some existing functions may be folded into the role.

Other cities with similar functions have demonstrated that, in order to be effective, the CDO needs to be appointed at a senior level, with sufficient influence and authority to work across the key city agencies and authorities.

Key work areas of the Chief Digital Officer role

In consultation with local, national and international organisations we have concluded that there is no single model for a CDO, rather we have focused on the key themes of the role and the expertise that a CDO should provide:

Provide policy advice and digital expertise:

- Lead the provision of policy advice and policy direction on behalf of the Mayor, in relation to digital transformation;
- Anticipate impacts of disruptive and transformative technologies and respond in timely and appropriate ways through policy, regulatory and legislative action;
- Advise the Mayor on strategy and budget issues relating to digital transformation such as common London data standards;
- Support innovation, for example through open standards and inter-operability requirements, search for efficiencies and improve service delivery;
- Set an ambitious standard of public service delivery that goes beyond digital by default and leads a strategy that opens up the city to innovation in areas such as the use of data, smart cities technologies and the 'internet of things.'

Champion digital transformation across London government:

- Mobilise digital transformation across the various GLA agencies to support the delivery of the Mayor's priorities;
- Convene other branches and levels of government, including central and local government, along with the private sector to share knowledge, understanding and best practice;
- Ensure that key policies relevant to the digital economy - digital jobs & growth, digital skills, connectivity and inclusion – are championed by the appropriate directors and deputy mayors.

Seek out and share best practice:

- Bring together best practice of digital transformation from leading global businesses and cities including establishing partnerships and collaborations to deliver new services and initiatives;
- Establish and lead a network of public and private sector CDOs CTOs CIOs and political leads across the London boroughs;
- Represent London's digital ambitions, nationally and globally;
- Communicate the potential benefit of digital policies publicly, and recognise the need to address public scepticism and concern about issues such as digital security, privacy and trust.

In the following sections we consider these work areas in more detail and make a number of recommendations about how best to tackle them.

POLICY ADVICE AND DIGITAL EXPERTISE

Technology disrupts current models of working, the CDO will need a deep understanding of the potential disruptive impacts of technology in order to advise the Mayor on how best to deliver digital transformation.

To begin with, the CDO should conduct an Innovation Review to help identify the services and facilities most liable to technological disruption. The Government's Science and Innovation Audit, currently piloted in 5 UK cities, offers a template for this process¹⁰. The purpose of this exercise is two-fold:

Highlight current strengths where there are significant opportunities to deliver greater value;

In transport for example, London is experiencing congestion across all of the main modes of transport. At the same time, funding from central government is shrinking, putting increased pressure on TfL's operational efficiency, and strengthening the incentive on TfL to raise revenues from commercial activity.

TfL are already using data to meet this challenge and bring greater insight to the impact of demand and disruption, enabling better and more coherent planning. However, there is a need to continuously improve the extent and quality of data and analysis.

The CDO should work with TfL to help identify gaps, opportunities and options for maximising use of existing data.

Horizon-scan to detect early signs of potentially important opportunities and threats

The CDO should help develop robust and thorough evidence based regulatory responses to disruptive technologies which recognise the benefits of being open to innovation while protecting customers. Such an approach may avoid reactionary responses such as the recent Private Hire Regulations Review from TfL¹¹. The opportunity is to stay ahead of global competition by developing strategies to anticipate future developments and thereby taking an earlier lead in developing and deploying new technologies.

¹⁰ <https://www.gov.uk/government/news/business-secretary-selects-5-pilot-areas-for-uks-first-innovation-audits>

¹¹ <https://consultations.tfl.gov.uk/tph/private-hire-proposals>

CHAMPIONING DIGITAL TRANSFORMATION ACROSS LONDON GOVERNMENT

The nature of London's government means that the potential for delivering digital transformation is dispersed - some functions are delivered by city-level agencies (such as TfL), while others are localised across the boroughs who vary in the focus they place on different issues. For example, some boroughs target online council transactions, others focus on tackling digital exclusion.

The CDO must be able to identify allies and champions across London's government and to convene the GLA, London boroughs, and GLA agencies such as TfL, The Mayor's Office for Policing and Crime (MOPAC) and the London Fire and Emergency Planning Authority (LFEPA).

The CDO role must be one that supports and leads, rather than one that duplicates and supplants. The role should be about providing the tools, knowledge and expertise to support the boroughs. The CDO will be responsible for identifying opportunities that would benefit from digital transformation.

The CDO should develop a thorough understanding of London's current approach by working alongside existing individuals, activities and organisations focussing digital transformation in London. A key part of meeting the digital challenge will be to understand where city-level action, such as promoting open standards and interoperability, supports borough initiatives, or can unblock barriers and enhance successful programmes.

The challenges and opportunities that can be addressed by the CDO are wide and varied. Addressing these will involve working alongside departments and individuals across London's government covering issues such as access, education, economic development, and civic engagement. However, some areas will require more direct strategic leadership by the CDO, including improving connectivity, and in developing the use of open data. These two priorities are explained in more detail below.

Open data provision

Through the leadership of the CDO, the Mayor should set the standard for clear, transparent and intelligent uses of public data by developing an Open Data Charter for London and an Office for Data Analytics.

The [London Data Store](#) has brought city-level data into policy discussions to enable better understanding of the issues facing London, including population growth and its impact on housing or transport demand. Yet there is significant unexploited value in London data, which could be further unlocked. Building on the recommendations in the London Tech Manifesto this could be achieved through the CDO.

Spearheading the delivery of a London-wide Open Data Charter

New York's Open Data Charter helped to make huge amounts of public data organised, interoperable and useful – allowing timely snapshots of city performance, long term planning and fact driven decision making.

If all the boroughs were to move towards a similar common standard it would improve data quality, providing a city-level data lake for developers, businesses and citizens. Recent developments by the London Borough Data Partnership¹² are encouraging and should be built on with urgency.

Establishing a London Office for Data Analytics

London can build on the experience of New York City where the Office of Data Analytics helped make use of data to make better decisions - providing quantitative support to the city's public safety, public health, infrastructure development, economic development, disaster preparedness and response, legislative, sustainability, and human services efforts.

Connectivity

Much of the required investment in digital infrastructure is provided by the private sector. This has generally worked well in London – the capital leads Europe in many measures of broadband connectivity (particularly business-grade services like Ethernet), but some pockets of London still suffer from slow and unreliable broadband.

There is also widespread availability of free to access WiFi networks across London but which operate on a variety commercial terms often requiring subscription before they can be used. This variety of networks provides no interoperability or automatic device authentication. Mobile coverage is also mixed with London recently ranked 13 out of 16 most populous metropolitan areas in the UK for overall network performance.¹³

There is a complex array of challenges in the capital, ranging from geographical and built environment limitations to issues around the time and cost of securing a new connection. The priority must be to ensure London is a world leader in speed and reliability, and is constantly looking to future requirements such as 5G. The role of London's government is to support the private sector in rolling out infrastructure by removing barriers and setting consistent regulations.

The CDO should review existing communications infrastructure capability and map this against future needs.

12 <http://data.london.gov.uk/data-for-london/> and <http://data.london.gov.uk/blog/small-steps-towards-a-london-office-of-data-analytics/>

13 <http://www.rootmetrics.com/en-GB/content/2015-2h-metro-ranking-uk>

SEEKING OUT AND SHARING BEST PRACTICE

There is evidence both nationally and internationally that city governments have been successful in digitally transforming public services. London needs a clear centre of gravity to ensure that technology can serve all Londoners. London's CDO should work collaboratively with other cities and private enterprises, both in the UK and globally, in order to identify best practices and bring them to the attention of the Mayor.

New York leveraged greater value through coordinating activity through a CDO. In the first 90 days of her appointment, New York's first Chief Digital Officer created a Digital Roadmap. This provided a comprehensive snapshot of the city's technology efforts and digital achievement to date, and chartered a course for realising the city's potential across pillars of access, education, industry, open government and engagement (see Textbox). We suggest the Mayor should embark on a similar review as they appoint a new CDO for London.

NYC Chief Digital Officer

New York City made the Chief Digital Officer an ambassador to the public, businesses, educational institutions and to all agencies of government to build opportunities to collaborate, including:

- **A Reinvent Payphone design competition, connecting engineers, designers, students and business to reconceive New York City's 11,000 public pay-phone booths with touchscreens, streaming cameras and WiFi hotspots.**
- **Hosting 6 hackathons, including one to kick off the redesign of the city's website NYC.gov.**
- **Created public-private partnerships with tech companies to offer free training to small businesses on how to use digital tools to market and promote their products and services.**
- **Published 3 annual Digital Roadmaps outlining the city's strategy to becoming a premiere digital city, and embarking on a public listening tour to all NYC boroughs to share and discuss key priorities.**
- **Fostered support of 40 digital learning programs that served over 1 million New Yorkers.**
- **Tripled the city's social media audience, and created an emergency management protocol to ensure timely, accurate and unified citywide messaging.**

In Los Angeles, a Chief Technology Officer has been in post since 2014, shifting the city from one of the poorest performers to one of the top cities in the world for open data, and bringing with it significant improvements to public services.

In London the CDO should work collaboratively with boroughs and private enterprises to identify best practice and establish a network of CDOs (and equivalents). In the longer-term, the CDO should forge such similar connections with other global cities. A parallel can be drawn with the creation of the C40¹⁴ in 2005, whereby the Mayor of London convened representatives from a number of global cities to commit to a reduction in greenhouse commissions. The C40 currently acts as a network promoting best practice and sharing expertise between megacities.

There are other examples where international public and private actors are coming together to share best practice, such as the Global Cities Business Alliance¹⁵. There is a great benefit in convening cities of varying sizes and those who have been early adopters and those who are just getting started.

14 <http://www.c40.org/>

15 <https://www.businessincities.com/about/governance-structure/#.chair-and-committee-of-co-chairs>

CONCLUSIONS AND SUMMARY OF RECOMMENDATIONS

This paper has been written to outline the essential elements of the role of a Chief Digital Officer to ensure that London can take full advantage of the digital transformation already underway in the capital.

Policy advice and digital expertise

- The CDO should conduct an innovation review to help identify the services and facilities most liable to technological disruption in line with the Government's Innovation Audit.

Championing digital transformation across London government

- The CDO should establish a network of digital leads from London's key delivery bodies, including the LEP, MOPAC, LFEPA and TfL.
- The CDO should develop a thorough understanding of London's current approach by working closely with existing individuals, activities and organisations delivering digital transformation in London.
- In particular the CDO should focus on benchmarking how London is currently performing on the provision of open data and connectivity.

Seek out best practice

- The CDO should work collaboratively with boroughs and other global cities to share best practice and should consider establishing a network of CDO (and equivalents) along similar lines to the C40 network.

London has made great progress as a global tech hub. Within government much has been done to address the digital skills gap and consider how technology can improve services and benefit all Londoners. When the Mayor appoints a Chief Digital Officer he will ensure this momentum continues to fuel a bright future for London.