



The City of London – an identity for the new, smarter economy

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Foreword

As Lord Mayor, my theme in office in 2023 & 2024 – ‘Connect to Prosper’ - has focused on leveraging the City of London’s strengths and connections to tackle global challenges and seize new opportunities. One initiative within ‘Connect To Prosper’ has been Smart Economy Networks (SEN). Drawing on a series of workshops and discussions with representative stakeholders from the City of London in 2023 & 2024, the Smart Economy Networks Steering Group explored the opportunities, risks, and potential actions that faced the City.

There are three reports. The first, “From Fintech to Ubiquitech”, report highlighted the opportunity for the City of London and the UK government to embrace recent advances in technology. The second, “Towards a Smart Economy”, report provided a framework around which stakeholders could convene, build consensus, and drive forward the evolution of a smart economy and requisite infrastructure.

‘Digital verification’, or ‘digital identity infrastructure’ if you will, for individuals, firms, and assets, plays a huge role in realising the benefits of a smart economy. This third report, “The City of London – an identity for the new, smarter economy”, explores how the City of London could play a central role by providing a Mutual Authentication Verification Exchange.

Over the next 20 years, the acceleration of rich, real-time and open data, alongside shared ledgers and artificial intelligence, will further catalyse a digitally ‘smart’ approach to doing business. Countries that embrace this next wave of technology to drive forward efficiency and effectiveness will prosper by increasing productivity and trust while reducing cost using Smart Economy Networks.



The Rt Hon Lord Mayor of London, Alderman Professor Michael Mainelli

Summary

In 2023 and 2024 the theme of the Lord Mayor's term in office was 'Connect to Prosper'. It has focused on leveraging the City of London's strengths and connections to tackle global challenges and seize new opportunities. One initiative within 'Connect To Prosper' has been Smart Economy Networks. This report identifies the City of London Corporation's unique suitability to convene a centre that can foster new international processes for business, personal, and asset identity in trade. It outlines how the City's history, geography, centrality, language, and 'Rule of Law', specifically common law, enables it to offer a solution to global industry in this critical, yet problematic, area of identity.

Introduction

The City of London Corporation is, as the Lord Mayor frequently notes, the world's oldest democratic workers' and residents' cooperative. Having held continuous elections for Sheriffs since the middle of the seventh century, the cooperative is nearly 14 centuries old. Four themes are discernable over that period, particularly after the rise as a financial centre in the middle of the 16th century, viz. defence & security, free trade, access to talent and skills, and the 'Rule of Law' in its widest sense.

The City of London has a unique position as a technology commissioner, particularly where international business networks are concerned. Over 14 centuries, transformations in trade have necessarily been political, economic, social, technical, and legal.

For example, the 'Big Bang' of 1986 changed the rules governing the London markets. In particular, the Big Bang unleashed international competition on the London markets, at the same time as new technology proliferated. The age of screens began. The Big

Bang multiplied the volume of business transacted on the London Stock Exchange by a factor of 4 in only 10 years.

In 1994, the US-based Netscape introduced HTTPS, the protocol which protects retail credit card transactions online by using cryptography and insurance to reliably identify vendors. This has allowed e-commerce to grow to \$4 trillion of transactions annually. Advertising physical products and services for e-commerce companies is the primary revenue source for most of the world's largest tech companies, supporting tens of trillions of market cap.

To enable a similar digital transformation in world trade, an equally effective identity and indemnification system for transacting parties is needed. The City of London Corporation is well placed to develop this, being an international, non-state actor of high regard, in line with the City-wide motto, *Dictum Meum Pactum*, 'my word is my bond'. Your word starts with who you are.

Proposal

This report proposes that the City of London Corporation convenes a centre that can foster new international processes for business, personal, and asset identity in trade. By virtue of history, geography, centrality, language, and the 'Rule of Law', specifically common law, the City of London Corporation is uniquely suited to offer a solution to global industry in this critical, yet problematic, area of identity.

Enabling regulation for the Smart Economy

A number of Acts of Parliament and normative documents laid the foundations for the Big Bang and the e-commerce revolution in the UK. An example of this near-invisible

enabling legislation is the Consumer Credit Act 1974. Its adoption was in part a response to a global effort by credit card companies to enable chargebacks, to protect consumers from fraud. 50 years later, e-commerce is still critically dependent on chargebacks as a preventative mechanism within the spectrum of dispute resolution procedures.

The UK Jurisdiction Taskforce established at the direction of the Master of the Rolls, Sir Geoffrey Vos, has been producing legal statements to clarify positions rooted in common law with regard to disputes occurring in the digital sphere. The Taskforce's view has predominantly been that common law is sufficiently equipped to deal with commercial disputes regardless of the nature of the assets under consideration.

The Law Commission has led consultations to update legislation to support evolving technologies. With the introduction of the Electronic Trade Documents Act 2023, any remaining legal impediments to the use of common law contract for electronic trade have been eradicated. It is estimated by the International Chamber of Commerce that this piece of legislation alone can unlock £225 billion worldwide annually. The Property (Digital Assets etc) Bill, which as of October 2024 is before Parliament, seeks to clarify that a digital asset can also be considered property.

Sufficient legal structures are now in place to make possible the adoption of technology solutions proposed in this report which will enable the Smart Economy, representing a significant competitive advantage for the UK.

An incremental approach to building the Smart Economy

In a City of London context the expectation is that a series of interlocking initiatives will be developed which collectively represent Smart Economy Networks, all tied together by the City's social fabric and long history of 'iterative consensus' on new working practices. Areas like global trade, real estate, including construction finance,

non-exchange commodities trading, automation of systems like parametric insurance and more may benefit from the new protocols these initiatives develop. In each area there will be a mix of common features used across fields, and field-specific initiatives which solve specific operational problems unique to that field.

In every area, the expectation is that technology will promote and facilitate the use of existing City expertise. The invariants of trade have, broadly speaking, remained in place for centuries unchanged through several distinct waves of technological, legal, and social transformation.

For lawyers, the eternal elements of a contract are offer, acceptance, consideration, and intent to create legal relations. For this, identity is integral, forming the base layer of every contract.

With trade, the pivotal act is transferring an asset from one ledger or balance sheet to another by double entry bookkeeping. A series of messages are passed between parties confirming various aspects of the deal, forming the contract, and providing protection in the event of future dispute.

Technological support for these core processes will have benefits for all transacting parties:

- identifying the parties that are going to transact;
- defining the goods or services to be delivered;
- agreed terms of payment;
- agreed dispute resolution mechanisms.

Additionally, in some instances external registers are used to reduce the paperwork burden and risk for participants. The registers are often national (land registries, ship registries) but the registers can also be private (e.g. GSMA IMEI numbers for mobile phones). Similarly, dispute resolution can be enacted either by national courts or private arbitration tribunals.

As early as 2022, Master of the Rolls Sir Geoffrey Vos expressed the view that public ledgers “will become ubiquitous in all major industrial and financial sectors, simply because it allows for the immutable recording of data, thereby reducing friction in commercial and consumer transactions and obliterating the scope for dispute as to what has occurred”.

Ongoing transformation

Each of the fundamental components of a transaction are simultaneously undergoing a variety of social, legal and technological transformations right now.

- The payments industry has evolved beyond all recognition.
- National asset registers (Companies House, Land Registry, and Ship Registry) are now online.
- For e-commerce, an ecology of independent reviews has solved product quality issues in many fields. Pages for high-value items can now contain thousands of reviews, and dozens of articles containing independent detailed technical analysis, eliminating the main barrier to growth in that sector - consumer uncertainty and mistrust.
- A wide variety of effective dispute resolution mechanisms are now available to consumers, including e-commerce and credit card companies' online procedures, as well as more formal venues including small claims.
- Consumers identify corporate entities using SSL certificates (the cryptography layer which secures e-commerce) but other than that the use of digital identities remains strictly limited. Meanwhile, identity fraud is a multi-billion dollar global industry.
- The costs of maintaining KYC AML CTF PEP OFAC status with partner institutions can be substantial, particularly for individuals and small businesses.

In some key areas the world of high value trade lags behind the consumer level systems, because, until recently, the technological support for these functions has not existed at the required level to carry high value transactions so largely-manual systems remain in use. This is in stark contrast to (for example) digital trading of financial instruments.

Moving identity forwards

Estonia runs a successful global digital identity project, the e-Residency system, which extends the Estonian national e-ID system to non-residents. The system has been running for 10 years and has more than 60,000 active users, who have founded 32,000 companies in Estonia.

X-Road is the core enabling technology for all of Estonia's e-government infrastructure. Created in 2001, X-Road is an open-source enterprise software package designed to enable government departments to work together and businesses to transact. Because X-Road is a connectivity layer between the existing enterprise software systems, it does not require parties to move their entire operation to a new platform in order to collaborate with other institutions.

This makes X-Road an ideal platform for incremental innovation and building consensus by iteration in a City of London context.

Proposing a Mutual Authentication Verification Exchange

The SEN project noted X-Road's ability to power a variety of identity systems, including Estonian e-ID and e-Residency.

The City of London might provide a commercial service, provisionally called Mutual Authentication Verification Exchange (MAVE), to accelerate ease of adoption. MAVE would be an identity authentication and verification service based on sharing information with appropriate controls and indemnities.

MAVE would:

- issue individual identity accounts/wallets where individuals owned and controlled their identity data;
- identity data would be provided by the individual and, where needed, digitally certified by third party providers such as lawyers, accountants, and financial institutions;
- asset registrars can also join the system to provide an additional interface to their registers via X-Road and MAVE;
- third party providers would be of two types:
 - unaccredited—reliance might be enhanced by a digital certificate, e.g. the digital certificate of a driver's license authority authenticating an electronic copy;
 - accredited—where MAVE validates a provider and their digital certificate, probably applicable to most private sector providers;
- users would be entities requesting verification;
- indemnity—MAVE would operate an exchange for users to purchase indemnification, where offered, from providers, for a fee. Thus providers could earn fees by accrediting individuals, but users would be compensated for mistakes. Such a system would be greatly aided by regulators setting fixed, per instance, penalties for identity compliance mistakes.

MAVE could be taken forward as a commercial project by the City of London in a variety of ways. It could be stand-alone, built largely from open source identity systems. It could be a joint venture, e.g. white-labelling Estonia's e-ID. It could be a consortium of professional and financial services firms.

Proposing a Smart Economy Sandbox

Much sandbox activity has focused on payment and financial information exchange. SEN shows the breadth of authenticated 'document' exchange needed well before financial transactions come into play, "what are we agreeing to do?" The SEN Initiative did not identify a need for more 'payment' initiatives, i.e. "how are we going to exchange value?" The Smart Economy Sandbox could well be a joint venture with an academic institution, think tank, or existing initiative such as the City's Centre for Finance, Innovation and Technology.

Conclusion

The SEN Initiative concludes that Smart Economy Networks can be expanded much further in the City of London economy. The prerequisites for such expansion are:

- digital identity infrastructure, both personal and corporate;
- further market adoption of open source data, information, and documentation exchange systems, in particular X-Road;
- wide acceptance of a variety of digital payment mechanisms.

In short, Smart Economy Networks need to improve the economy and efficiency of electronic answers to "who are you?", "what are we agreeing/have we agreed to do?", and "how are we going to exchange value?".