



**International
Centre for Digital
Trade and Innovation**

SMART ECONOMY NETWORK CAPABILITY INTERNATIONALLY AND IN THE UK



5 December 2024

Introduction

The International Centre for Digital Trade and Innovation (*iC4DTI*) is a Community Interest Company (CIC), being formally launched at an event on 5th December 2024. iC4DTI is the spin out of the Centre for Digital Trade and Innovation (C4DTI) from ICC United Kingdom. Its mission, aim and purpose are to accelerate the digitalisation of world trade. This includes the implementation of the policy, legal, data and technical environment to support an open, interoperable trade economy.

iC4DTI will operate internationally and in the UK. The iC4DTI brings an established CIC with legal structure, a desire for leading practical change in trade processes, good and wide channels into both other jurisdictions and world bodies such as ICC, UN, WTO and Commonwealth, links into governments in the UK and globally and established consultation groups from banking, corporate and tech supplier communities.

In a separate but linked and parallel development, the Smart Economic Networks Initiative (SEN Initiative) has grown out of the work of a group of experts assembled by former Lord Mayor Professor Michael Mainelli, who commissioned a paper setting out a vision for how the City of London can be a catalysing force in the development of smart economic networks (SEN) in the UK for domestic and international use. The experts brought knowledge, experience and access to the resources of the City of London and participating organisations, scalability of solutions through participation by the Linx Foundation and the Digital Financial Market Infrastructure (DFMI) Consortium, strong links into the finance, insurance and legal services markets of which the UK and City is a global leader and wide regulatory, compliance and legal experience.

The two groups consider their work to be complementary both in objective and in delivery mechanisms. While the focus of the iC4DTI has been and will continue to be international involving the leveraging of existing international channels for delivery, that of the SEN Initiative is more domestic and has a focus on the City of London and its long-established capability in the fields of digitalisation, especially in the financial sector.

On 25 October 2024, the SEN experts issued, under the aegis of Mr Mainelli, the “SEN Paper”, together with other papers substantiating project to implement the Smart Economy Networks Initiative as part of his vision for the broader “Connect to Prosper” overarching theme. These are a March 2024 report, “*From Fintech To Ubiquitech: Accelerating the wider UK digital economy*”, by a working group led by Dr Ruth Wandhöfer, and “*The City of London—an identity for the new, smarter economy*” by Mattereum. The SEN Paper proposed the following.

1. The creation of systems/protocols, i.e. a foundation layer that can run on different platforms for the smooth implementation of trade finance. It envisions the creation of a robust digital identity and data-sharing infrastructure, exemplified by the Mutual Authentication Verification Exchange (MAVE) and using open-source technologies like Estonia's X-Road.
2. The development of strategic partnerships with support from major organizations, including Microsoft and IBM, LINKX for infrastructure and integration, as well as the DFMI Consortium for financial and human resources.
3. The need to move quickly. Partnership with the iC4DTI means the SEN initiative can commence forthwith, with a projected completion over the time of this Parliament. The CIC will work independently of public bodies but will engage with authorities as needed, promoting regulatory alignment and public benefit.

Bringing this to life is the “SEN Initiative”.

The SEN Initiative is an initiative in and the UK workstream of the iC4DTI. SEN has a representative on the CIC board, a SEN Advisory Committee and have/share joint branding (and other) rights.

A joint iC4DTI and SEN Initiative approach to financing the effort is viewed as being more powerful than separate efforts. As a first step, on 4 November 2024, the DFMI Consortium committed in writing to fund the SEN Initiative and provide human resources for the attainment of the statutory objectives.

CONTEXT

The SEN Initiative, the UK activity of iC4DTI, intends to harness the capabilities and global influence of the City of London as a global leader in the next wave of economic development by fostering smart economic networks based on AI, open data, and shared ledgers. These networks will prioritize data ownership, allowing individuals to control and share their data securely, promoting innovation and personalized services. An early example is open banking, enabling real-time access to financial data for millions in the UK, which sets a foundation for broader applications.

Future smart economic networks will combine diverse data sources for targeted solutions, such as using energy and financial data to fund SME Net Zero transitions. International standards are essential for global trade and interoperability, positioning the UK to influence international standards in open data. This infrastructure, built on shared data spaces and smart ledgers, will drive efficiency across sectors including payments, government services, trade, finance, and audit.

Key benefits include streamlined payment systems, real-time audits, enhanced supply chain tracking, and smarter risk assessments for insurers. As legal and financial markets digitize, smart contracts and tokenization will increase capital efficiency. The initiative aligns with UN Sustainable Development Goals, aiming to pilot standards with interested institutions using frameworks like the Nordic X-Road infrastructure.

The SEN Initiative proposes digital identity frameworks and secure exchanges, like the Mutual Authentication Verification Exchange (MAVE), enabling individuals to control identity data verified by trusted third parties. Using open-source X-Road technology, SEN aims to facilitate global digital identity solutions and secure, efficient business interactions.

Separately, a proposed Smart Economy Sandbox will further explore digital document and identity exchange, paving the way for modern trade practices. This expansion would enhance digital identity infrastructure, data exchange systems, and payment mechanisms, strengthening the City's role in global trade with efficient solutions to the questions, "Who are you?" "What are we agreeing to do?" and "How do we exchange value?" Separately, efforts are underway to coordinate the linking of the UK Digital Securities Sandbox with proposals set forth by SEC Commissioner Hester Peirce and other foreign regulators.

FROM FINTECH TO UBIQUITECH

The Ubiquitech Report emphasizes a critical shift for the UK's digital economy, moving beyond Fintech to create an all-encompassing digital framework—Ubiquitech—powered by universal technologies. Following the 2021 Kalifa Review's insights on Fintech, Ubiquitech proposes an integrated, secure, and accessible digital economy requiring investment, collaboration, and new regulations. Key recommendations focus on enhancing cyber security, building robust networks, ensuring verification and authentication, promoting digital skills, and digitizing international trade systems. The Center for Finance, Innovation, and Technology (CFIT) projects that Open Finance alone could save £30.5 billion, highlighting potential widespread efficiencies from adopting Ubiquitech.

With the Data Protection and Digital Information Bill (DPDI) and recent legislation, the UK is well-positioned to lead in setting global digital standards, supported by its expertise in regulatory frameworks and a strong financial sector. The report underscores the importance of secure digital identities, reliable networks, and efficient fraud controls to foster trust in digital transactions.

By addressing these elements, Ubiquitech aims to drive economic growth and position the UK as a global digital leader, emphasizing the need for immediate action to avoid falling behind other digitally ambitious nations. The UK's legal, regulatory, and financial advantages present a "Carpe Diem" opportunity to lead in this digital transformation.

TOWARDS A SMART ECONOMY PAPER

The SEN Paper outlined a vision for transforming the UK economy into a Smart Economy, emphasizing the need to evolve the infrastructure that underpins global trade, finance, and commerce. Historically, trade has been facilitated through contracts, physical paperwork, and manual processes. However, advances in digital technology, like distributed ledgers and AI, now offer the potential for more resilient, efficient, and automated systems, all part of what we can label as known as SEN.

SEN aims to address inefficiencies in global trade, particularly in *cross-border transactions* and *trade finance*. Traditional methods, laden with paperwork and manual verification, lead to delays and increased costs. A smart network would use digital trade documents, enabling real-time information sharing and reducing errors, fraud, and administrative burden. The network would streamline customs and regulatory compliance and allow tracking of goods throughout their journey, enhancing transparency and trust.

The City of London, with its historical position as a global financial hub and reputation for innovation, is identified as a leader in fostering this smart transformation. The document suggests establishing *a robust, interoperable network of systems to support seamless, secure data-sharing between trade participants, financial institutions, and government entities*. It also proposes using digital identity frameworks to streamline AML (Anti-Money Laundering) and KYC (Know Your Customer) processes, supporting real-time transaction settlement in international payments and addressing financial stability risks.

The SEN architecture calls for an *open, interoperable model similar to the internet's open standards*. Estonia's X-Road, a secure data exchange system, is highlighted as an example. Key considerations include establishing open governance, standardizing data formats, and implementing robust security and encryption. The architecture would employ distributed transaction and storage models, ensuring resilience and reliability while enabling a unified data infrastructure essential for the digital economy.

The City of London Corporation will endorse SEN. The City of London will have a prominent role in advancing the SEN Initiative by hosting working groups and collaborating with international bodies to establish standards and compliance frameworks. Adaptive governance strategies would address rapid technological and geopolitical shifts. The SEN Initiative can encourage industry-government partnerships to align digital transformation goals and support policy changes to create a trusted, integrated cross-border supply chain ecosystem.

The CIC will drive SEN implementation and bolster the reputation of the City of London as digital transformation leader. By adopting these strategies, the City can help build a resilient, efficient, and inclusive global financial architecture aligned with liberal trade values and ready to leverage the full potential of a smart economy.

THE SEN INITIATIVE AND THE IC4DTI

With the background of this analysis, the SEN Initiative is to build.

The IC4DTI has already developed a suite of materials to enable it to function:

1. a roadmap for delivery of how international trade and trade finance can be delivered over the term of this Parliament;
2. a narrative linking digital trade to growth and government priorities;
3. a directory of systems already deemed to be capable of delivering digital trade and trade finance services;
4. a basic guide, especially aimed at SMEs to be able to access digital trade processes.

The CIC intends to have the following Directors:

1. Chris Southworth, Secretary General, ICC United Kingdom;
2. Oswald Kuyler, Asia Development Bank / former MD, ICC Digital Standards Initiative;
3. John Carroll, Head of Trade Finance, Santander / current Chair, [UK] Advisory Board, Centre for Digital Trade and Innovation;

4. Nick Davies, Director of the ICC United Kingdom Centre for Digital Trade and Innovation and Technology Lead at HMRC [being confirmed];
5. Mark Berman, CEO CompliGlobe Ltd, and the SEN Initiative;
6. Lars Karlsson, Maersk [being confirmed];
7. Chintan Ganatre, former KPMG [being confirmed].

The CIC will have three main work programmes each supported by an advisory board: ASEAN, Commonwealth and UK. The Commonwealth programme supports Commonwealth Connectivity Agenda, Legal Reform and Advisory Working Group. The UK programme is overseen by a UK Advisory Board.

The SEN Initiative will be implemented under the UK (domestic) programme of the CIC.

FINANCES

Until sustainable funding for the iC4DTI is established, those involved in the creation and management of both UK and International strands and in the implementation of its activities will work on a pro bono basis. Several companies have pledged their financial, technical and human resources support to this initiative.

The Directors will pursue funding mechanisms from public, private and philanthropic sources. As and when that is available and enables the appointment of full-time officers, that will be an option for the Board. Any investment from whatever source will, by the terms of the Articles of the CIC, not result in any control by the investors over either the CIC or any IP generated during its activities.

Over time, revenues may be generated by the CIC by licensing these standards/protocols, but they will be reinvested in the activities of the company.

CIC, DFMI, MICROSOFT, IBM, ETC

The DFMI Consortium, represented by paywith.glass, committed financial and human resources support for the implementation phase of this initiative. The Consortium is made up of leading financial institutions, including commercial banks, payment providers, telecommunications platforms, FinTechs, NFT ecosystems and cryptocurrency exchanges.

LINX: is an internet exchange company with almost thousand members which span all major cloud, data communications, telecommunications, financial, and enterprise companies across more than 85 countries worldwide. It will provide the necessary infrastructure.

Microsoft: Microsoft will work closely with the CIC to provide the user interface for trade finance solutions deriving from the activities of the CIC and will act as a strategic integrator.

IBM: will provide the necessary infrastructure for the implementation of the initiative.

INTELLECTUAL PROPERTY

According to the Articles of Association, the CIC will own any IP deriving from its activities.

TECH STACK

One of the key aspects of this endeavour is that the CIC does not want to re-invent the wheel. The CIC will identify the target architecture for the delivery of its products and services. Most likely, all the key ingredients for the final product (described below) to be created exist already. So, a preliminary phase of the CIC operations will be a stock-taking exercise to make an inventory of what's already available and what's missing.

The initial task of the newly formed CIC will be a recognition of the technological inputs available for the implementation of its objectives.

PRODUCTS AND DELIVERABLES

The IC4DTI exists to enable the use by traders globally digital means of trading that make it simpler, cheaper and faster, and enables more sustainability to be designed into the processes controlling global trade and trade finance. Our working assumption is that many of the technical components we need to make that happen already exist. The role of the IC4DTI is more about leadership and coordination than heavy IT build.

The proposed architecture would be a unified digital asset and real-time payments network, integrating: (a) tokenization of assets including currencies and electronic trade documentation; (b) real-time peer-to-peer and programmed transactions; (c) real-time compliance, AML/KYT/CFT and anti-fraud technologies. This architecture needs to be compatible with legacy networks and Web3 ecosystems through modular extensibility. This extensible infrastructure minimizes costs, enhances privacy and positions itself for interoperability with the emerging digital asset landscape.

That interoperability may, require the creation or at least the designation of the necessary architecture of standards and protocols, i.e., a foundation layer that can underpin the different platforms that will operate in a future digital global trade environment so that traders will not need to worry about the originating or destination platforms of their transactions; they will have a consistently digital, paperless experience regardless of their size, location or commodity. Its intention is to implement what has been called the “Betternet” or “Finternet” or Web 3.0 for the exchange of money, value and title over the internet via a digital identity protocol.

The IC4DTI CIC does NOT intend to produce a global platform for the running of international trade or trade finance globally or in the UK.

Immediately after launch the Centre will develop more detailed work plans for each of the strands for 6, 12, 18 months etc and will establish accountabilities for the work to the steering committees established for that purpose.

TIMELINE

We launch on 5 December 2024 and expected work in the UK to be completed by the end of this Parliament.

RELATIONSHIP WITH PUBLIC AUTHORITIES

The CIC will aim at taking a coordination and leadership role to mitigate the market dysfunction whereby no one is willing to take the first move and where network effects are slow to be realised. The CIC will build on established relationships with public bodies - government departments the Bank of England, FCA and City of London Corporation - while remaining independent of them. Nonetheless, the CIC will actively seek the support of those bodies in support of the implementation of some of its activities. The CIC will liaise with public authorities on an ad-hoc basis.

PRESENTATION AND PUBLICITY

The CIC will be presented at the event ‘*Re-imagining the future of trade*’ that will take place from 3pm to 8pm on 5 December 2024 at Clifford Chance, 10 Upper Bank St, London E14 5JJ. This event is open to all and an opportunity to hear the latest insights and developments on how we scale up the benefits of trade digitalisation and a chance to engage with leading industry, institutional and government experts heading up some of the largest initiatives in world trade.