Digitalisation in trade: The situation report

John Bugeja, Managing Director at Trade Advisory Network explores the current landscape on trade digitisation in depth. Where are we now, why is digitisation necessary and where are we heading?

What Is digitalisation?

Digitalisation is the use of electronic records to drive processes through the use of interfaces or through integration. The precursor to digitalisation was the use of telex and cable to initiate transactions in place of paper-based communications between banks. This began to change in 1973 when SWIFT was formed by 239 banks from 15 countries. In order to improve efficiency, eliminate re-keying errors and achieve 'straight through processing' functionality, banks quickly started to build interfaces connecting their processing platforms to their SWIFT gateways.

The challenge and the business benefits

The challenge for finance providers now is to use data produced in corporate supply chains to drive financial interventions. Currently, much of this data is printed to paper and then presented to banks who then enter the data into their own systems to create new electronic records used in transaction processing. At Trade Advisory Network, we are frequently approached by Fintechs who purport to have solved some element of this challenge. Our first question is typically: 'what problem are you trying to solve?' We can categorise the potential business benefits under a number of headings:

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1) Efficiency gains

This is a legitimate, though somewhat bank-centric, business benefit. By avoiding the use of paper, banks can streamline operations processing, speed up transaction execution, minimise delays and reduce costs. Paper documents generate huge costs. They are printed and amended multiple times, each time adding cost and creating a version-control challenge. They are moved from one party to another – often several times and across several continents. The have to be stored, indexed, retrieved and archived. Certain paper documents confer rights upon the holder and are, as a consequence, 'valuable' in their own right (e.g. negotiable payment instruments and documents of title) necessitating further costly measures to protect against loss and fraud.

2) Increased credit availability

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Digitalisation promises to deliver the benefits of documentary trade finance. If paper documents were to be replaced with electronic records and the data contained therein used to drive automated decision-making technology, it would be possible to replicate the benefits of documentary trade finance (i.e. visibility, control and security) without the labour and cost associated with paper.

In addition, through the use of digital marketplaces, secondary markets and distribution channels, the available liquidity pool could be broadened, benefiting both borrower and traditional lenders with capital or funding constraints.

3) Innovation

Digitalisation will facilitate innovation. The aim should not be to merely digitalise existing processes, but to find new, more efficient ways to meet clients' financing and risk mitigation needs, exploiting the functionality that digitalisation brings. For example, a digital negotiable payment instrument could be integrated into a paperless workflow to create a more effective insurance backed finance solution.

4) Sustainability

The movement of goods across the globe between producers, manufacturers, distributors and retailers in different countries is bound involve a significant carbon footprint.

Times are, however, changing. In addition to heightened awareness of the impact of trade on climate change, political factors are also challenging the status quo. Increased protectionism is eroding low labour cost benefits due to the imposition of tariffs and non-tariff barriers, as is the increased use of robotics in manufacturing, further eroding any labour cost advantage.

These factors appear to be driving a move towards on-shoring and near-shoring. It is probably naïve to suggest that the changing trends in global trade are being driven primarily by environmental concerns, but the effect should nevertheless be beneficial in terms of carbon footprint.

Trade finance is also a carbon footprint offender. The documentation associated with trade is often excessive with the same data being repeated in multiple different paper documents. The environmental impact is huge. At every stage in the process, there are carbon implications, including:

- use of paper
- movement of paper between parties on a global basis
- storage of paper
- disposal of paper

Digitalisation offers the potential to eliminate these carbon-heavy processes as electronic records can easily be created and transferred between parties.

5) Fraud prevention (and AML, WMD and non-proliferation compliance)

Fraudulent paper documents are very easy to create and very difficult to spot. In recent years fraud has become a major cause of loss in trade finance, particularly in respect of commodities trading where fraudulent bills of lading and warehouse receipts have been used to secure financing. Fraud prevention often goes hand in hand with regulatory compliance, so banks are at risk of more than just incurring a loss.

Digitalisation may offer certain benefits relative to paper documents in terms of fraud protection, but caution is required at this stage given the nature of electronic records.

6) Business continuity

The disadvantages of being paper dependent have been thrown into sharp

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focus by the global pandemic. Many banks have found it impossible to transport paper documents efficiently due to resourcing challenges faced by couriers. Document checking has proven more difficult and time-consuming due to the move to working from home. The combined effect has been delays in financing and settlement of trade transactions, causing further financial stress for trading companies. The need to digitalise trade has now become a top priority business continuity issue.

The problem with electronic records

A digital signature appended to an electronic record is similar to a 'wet signature' on a paper document. Common/civil law in most jurisdictions generally recognises that a digital signature reflects the signatory's intention to be bound by the content of the record.

A conventional electronic record can, however, be replicated on multiple systems and devices so the concepts of 'originality' and 'possession' are not accommodated, even if it is digitally signed. This is a problem where possession of an original document is required, as is the case in trade finance with negotiable instruments and documents of title. In addition, there is nothing in a conventional electronic record that can prove that the content has not been changed following application of the digital signature.

The Fintech industry has developed two approaches to addressing the problems inherent in electronic records: closed user groups and digital original documents.

Closed User Group Solutions

Electronic bills of lading

The first example in trade was probably Bolero which started in the mid-1990s and continues today. Bolero delivers electronic bills of lading whereby the title to the goods is recorded in a title registry. Users agree to abide by a rulebook, making transfer of title subject to contract law rather than maritime law. This approach avoids the problem of originality and possession and is a good mitigant against fraud. The disadvantage with this model is, of course, that legal enforceability only applies to users that have signed up to the rulebook.

There are now several competitors to Bolero giving users greater choice and promoting greater acceptance of the concept. Unfortunately, the proliferation of such solutions, each using its own technology and with its own rulebook, also makes it more difficult to achieve critical mass using a common legal and technological framework.

Digital marketplaces and auction sites

The emergence of platform-based marketplaces and auction sites through which funders can be matched with borrowers is a more recent development. These sites are also membership based, restricting access to parties that have signed up. The traded assets are almost invariably receivables so, behind the scenes, the traditional process of assignment has to take place.

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These platforms would benefit from the use of negotiable instruments, such as bills of exchange or promissory notes, as they are unconditional, irrevocable and independent and are tradable in their own right, making them ideal for both the primary and the secondary markets. The independence of these instruments is key as the acceptor cannot use contractual non-performance as a defence against non-payment. In addition, common/civil law in most jurisdictions provides clear rules for transferring the title rights and benefits from one holder to another by endorsement and delivery – known as negotiation.

A conventional electronic record cannot, however, perform the function of a negotiable instrument as the concepts of originality and possession are central to the latter's enforceability.

Consortia

These are also membership-based solutions with users signing up to a set of rules governing their rights and obligations. The challenge, as with other closed user group solutions, is that each consortium is effectively a digital island where payment obligations are only enforceable amongst members.

Digital original documents

The principle here is to replicate the functionality of paper documents in digital form, including the ability to:

- distinguish between an original and a copy
- transfer ownership (and associated title rights and benefits) by delivery
- provide assurance that the content has not been tampered with in any way

The functional specification for the use of digital original documents as payment undertakings has been defined by ITFA (the International Trade and Forfaiting Association) through their DNI (Digital Negotiable Instruments) initiative.

The technology to deliver the required functionality, branded 'trace:original' has been developed by Enigio Time and is available without the need to join a closed user group. The solution is open to all whether they are members of a consortium or not. Indeed, trace:original documents can act as a vehicle for interoperability between consortia.

ITFA and the ICC are leading the effort to ensure legal enforceability of digital bills of exchange in key markets. The obstacle in the UK, for example, is the current ruling regarding possession of an intangible. As transfer of possession (by endorsement and delivery) is fundamental to the negotiability of a bill of exchange, clarity on this point is essential. The consultative process is in progress and a statutory amendment in anticipated within 12 – 18 months. In the meantime, an interim solution has been defined by ITFA allowing electronic payment undertakings with similar practical functionality to be created using this new technology.

What next?

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the inability of conventional electronic records to replicate the functionality of paper documents in respect of originality and possession. Reliance on registries or databases, whether centrally held or distributed, limits the scope for adoption to members of a common club.

The need to develop technology standards that facilitate interoperability has been recognised and is the subject of the ICC's Digital Standards Initiative (DSI). It is felt that ITFA's DNI initiative could become a key enabler in support of the ICC's DSI.

The ICC is also developing Uniform Rules for Digital Trade Transactions (URDTT) to complement their existing rules governing letters of credit, collections, forfaiting and guarantees.

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