

# CREATING A MODERN DIGITAL TRADE ECOSYSTEM

## CUTTING THE COST AND COMPLEXITY OF TRADE

Reforming laws and harmonising  
legal frameworks

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**UNITED KINGDOM**

## Summary

### Findings

- » The post Brexit and Covid export recovery has been more challenging for small companies:
  - » The value of UK exports has not recovered to the pre-pandemic levels
  - » The number of export shipments from UK ports recovered well from the pandemic up to November 2020 but has fallen back by more than a half since
  - » Medium-sized exporters have fared relatively well over the last 12 months - their numbers, revenues and employment have all grown, but there are fewer microbusinesses exporting than 12 months ago - their revenues have fallen by 9.1% and employment by 0.4%
- » Brexit and Covid have increased cost and caused greater complexity for exporters – especially SMEs.
- » Brexit paperwork has increased the amount of time taken crossing borders by an estimated 7% but time savings associated with border crossing and paperwork could be reduced by nearly 81% through digitalisation.
- » Aligning with MLETR could deliver £250 billion in extra trade by 2026.
- » When legal reforms come into force in 2022, the UK stands to reduce trade transaction costs by approximately 75%.
- » More work is needed to prepare industry to capitalize on the benefits of a fully digitalised trade ecosystem - only 4% UK companies use Legal Entity Identification [LEI] despite it being a building block for successful future trade.
- » Greater incentives are required to encourage more SMEs to use LEIs and scale up the existing system.
- » The UK is not in the top five countries for sustainable trade in any positive SDG product but is in the top five for two negative SDG products.
- » UK trade associated with positive SDGs is nearly 10% lower than its trade associated with negative SDGs.
- » Digitalising the trade ecosystem offers the potential to track products through Bills of Lading so the scope for linking ESG and digital goals offers huge possibilities.

## Making the case for the digitisation of Electronic Transferable Records

ICC is calling on national governments to create a modern digital trade ecosystem by reforming laws to digitise trade documentation and align legal frameworks to the UNCITRAL Model Law on Transferrable Records (MLETR). This supports the [G7 Framework for Collaboration on Electronic Transferable Records](#) call to do the same, the work of [UNCITRAL](#) in promoting MLETR, the [Framework Agreement on Facilitation of Cross-border Paperless Trade](#) in Asia and the Pacific of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and the ambition of [The Commonwealth Connectivity Agenda](#) to increase intra-Commonwealth trade to \$2 trillion by 2030.

A modern digital trade ecosystem fit for the 21st century requires national laws to recognise all trade documents in digital form, and legal systems to be aligned to enable digital information to move seamlessly across borders and between stakeholders – buyers, sellers, financiers, insurers, shippers, logistics and customs. Whilst great progress is being made to digitise trade facilitation and customs documents, most jurisdictions around the world still require documents that transfer the possession of goods (transferable records) to be presented in paper form. Examples of such documents in international trade include bills of exchange, bills of lading, warehouse receipts and letters of credit.

The digital trading system currently operates on antiquated systems and laws, in some cases dating back centuries. A typical trade transaction involves up to 27 documents, 9 of which relate to the transfer of possession, can cost \$80,000 per transaction and take up to 2-3

## Making the case for the digitisation of Electronic Transferable Records

months to process. In total, 4 billion documents move across the trade ecosystem at any given time creating inefficiencies that slow trade down and hamper growth and innovation. Through undertaking necessary legislative reform we can create an enabling legal environment for paperless trade that will enhance SME participation in trade and underpin the economic recovery.

Such legislative reform will contribute to a modernised trading ecosystem that is simple, efficient, and interoperable – where trade happens in hours and days, not weeks and months – and where costs are lower, especially for SMEs. This will help make countries more attractive to digital foreign direct investment and, with faster connectivity, will improve the digital competitiveness and capacity of firms to trade internationally.

The optimal way to achieve this is to reform national laws and align them with the UNCITRAL MLETR.

This report was commissioned by ICC United Kingdom in partnership with ICC France and Germany and the ICC Digital Standards Initiative to set out the economic case for harmonising legal frameworks and provide analysis on the preparedness of the UK market in relation to use of digital identification.

# ICC Digital Trade Roadmap

## TODAY

### HEAVILY PAPER-BASED PROCESSES

4 billion documents circulating in the trade system

### LIMITED ACCESS TO FINANCE

US\$1.5 trillion trade finance gap persists

### OUTDATED LAWS

National laws not accepting title documents in digital form

### NO STANDARDS

Lack of standardized information, processes and systems

## NEXT 5 YEARS

DIGITISE THE FLOW OF INFORMATION IN TRADE

REDUCE THE COST OF TRADE

UPDATE AND ALIGN LAWS AND REGULATIONS

DEVELOP DIGITAL STANDARDS

## FUTURE

### AUTOMATION

All trade documents handled in digital form

### INCREASED FINANCIAL INCLUSION

Cost of finance attainable to all stakeholders

### REVISED LEGAL FRAMEWORK

No legal barriers and aligned legal systems

### INTEROPERABILITY BETWEEN SYSTEMS

Seamless trade flows between different technology platforms and stakeholders

# Building Blocks for Success

## LEGAL REFORM (Governments)

- Update national laws to accept title documents in digital form
- Align legal frameworks to MLETR

## STANDARDISATION (ICC Digital Standards Initiative)

- Work with international institutions and industry groups to establish international interoperable digital standards
  - » Build on existing standards
  - » Create new standards where they don't exist

## INDUSTRY ADOPTION & TRANSFORMATION

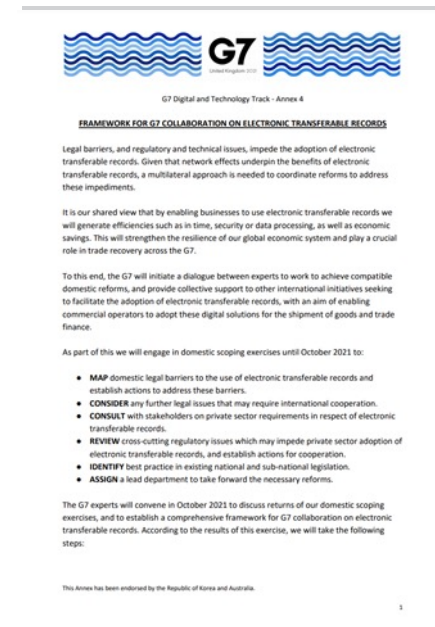
- Support industry to modernise digital infrastructure
- Make the internal business case for digital transformation
- Promote technology solutions

“Paper-based transactions, which still dominate international trade are a source of cost, delay, inefficiency, fraud, error and environmental impact. It is our shared view that by enabling businesses to use electronic transferable records we will generate efficiencies and economic savings. This will strengthen the resilience of our global economic system and play a crucial role in trade recovery across the G7.”

## G7 Digital and Technology Ministers, 28 April 2021



Digital and Technology Ministerial Declaration



Framework for G7 Collaboration on ETRs

## Definition;

# Transferable Records

Transferable documents or instruments are paper-based documents or instruments that entitle the holder to claim the performance of the obligation indicated therein and that allow the transfer of the claim to that performance by transferring possession of the document or instrument.

Transferable documents or instruments, sometimes called 'documents of title' typically include:

- **airway bills**
- **bills of exchange**
- **bills of lading**
- **cargo insurance certificates**
- **marine insurance policies**
- **promissory notes**
- **seaway bills**
- **ships delivery orders**
- **warehouse receipts.**





## The Global Framework

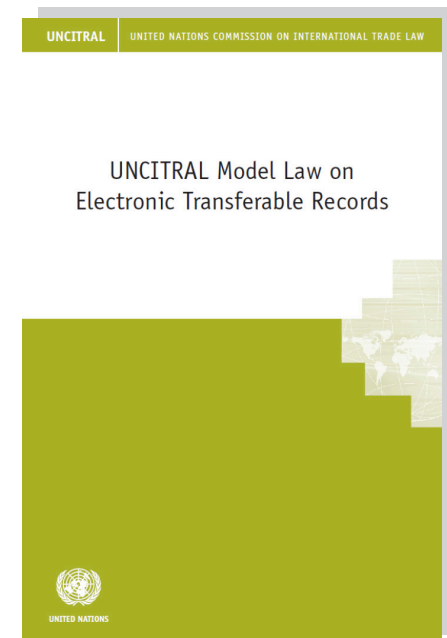
# UNCITRAL Model Law on Electronic Transferable Records (MLETR)

The MLETR creates an enabling legal framework for paperless trade. It provides an international framework to align national laws and enable the legal use of electronic documents of title both domestically and across borders.

The MLETR builds on the principles of non-discrimination against the use of electronic means, functional equivalence and technology neutrality underpinning all UNCITRAL texts on electronic commerce. It enables the use of modern technologies including registries, tokens and distributed ledgers.

Aligning national laws to MLETR enables digital information to move seamlessly across borders and between stakeholders – buyers, sellers, financiers, insurers, shippers, logistics and customs

UNCITRAL is the United Nations Commission on International Trade Law, a subsidiary body of the U.N. General Assembly responsible for helping to facilitate international trade and investment.



# Economic Case For Legal Reform & Alignment

## UNCITRAL Model Law on Electronic Transferable Records (MLETR)

According to a 2021 study commissioned by ICC United Kingdom, modernizing laws in the UK will unleash SME growth and:

- Generate **£25 billion** in new economic growth: **25%** extra SME trade by 2024
- Reduce the number of days needed for processing documents by up to **75%**
- Free up **£224 billion** in efficiency savings which can be recycled into the real economy
  - » £171 billion from bills of lading
  - » £26 billion from bills of exchange
  - » £27 billion from promissory notes
- Generate **£1 billion** to tackle the trade finance gap

### CREATING A MODERN DIGITAL TRADE ECOSYSTEM

The economic case to reform UK law and align to the UNCITRAL Model Law on Electronic Transferable Records (MLETR)

**ICC** UNITED KINGDOM  
INTERNATIONAL  
CHAMBER OF COMMERCE  
The world business organization

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## Enabling SMEs

### to participate in trade

- Digitalisation will dramatically reduce the cost and complexity of trade and enable more SMEs to participate in global trade.
- Modernising antiquated systems and processes will enable SMEs to operate more efficiently through the smarter use of technology solutions.
- Harmonized systems will help SMEs scale their businesses into international markets at lower cost and better access supply chain opportunities.
- Safer, more secure digital systems will reduce fraud and criminal activity reducing exposure to risk and disputes.
- Greater access to trade finance solutions will address 50% of the global trade finance gap and help SMEs grow into international markets.



## Promoting Sustainable Trade

The digitalisation of trade, when combined with investment digital in infrastructure and skills will help ensure no one gets left behind, particularly in the emerging economies.

Legal reform and harmonisation is a fundamental building block to a successful modern digital trade ecosystem. Without reform, the cost of trade will remain high and solutions will be unable to scale across borders. It is also a pre-requisite to implementing international digital standards, another key building block that remove the fragmentation that currently exists in the trading systems and enable systems and processes to talk to each other and information to flow in digital form.



**LEAVE NO ONE  
BEHIND**

# SDG

## Sustainable Development Goals



Digitization helps alleviate poverty by promoting more trade and shared prosperity between nations. Trade reduces consumer costs, improves choice, increases access to investment and opportunity, creates good jobs and improves living standards.



On average, 5 of 6 digital businesses are led by women. Digital trade enables more SMEs to participate across the whole economy reducing regional, sectoral and international inequalities.



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## Scaling Reforms and Maintaining Momentum

The opportunity now exists to rapidly scale up legal reforms to harmonise legal frameworks worldwide and remove a key barrier to the growth of digital trade. In the context of the economic recovery, this exercise presents itself as a low cost, high return activity for all governments seeking to reduce the cost and complexity of trade and increase SME participation to drive the recovery.

However, this isn't a given. More business cases and economic data are required to demonstrate the value of reform and ensure that the momentum generated by the G7 in 2021 is sustainable and long term. The business cases provided by this project will generate the evidence to ensure this happens.

The reports will be published at the same time as G7 governments provide a full report back in October 2021 on legal barriers and a roadmap for reform.

## **Legal Reform 2022**

A new Electronic Trade Documents Act is expected to come into force mid-2022 making the UK, the first G7 economy able to fully digitalise trade ecosystems. This will remove existing legal barriers to the digitalisation of electronic transferrable records and align English law to MLETR framework. Once enacted, industry is expected to move quickly to digitalise systems and processes to capitalise on the benefits of reform.

## **UK Trade Corridors**

The UK government is actively engaged in digital dialogues with a number of countries as part of its programme to expand free trade agreements worldwide. Putting in place the building blocks for successful future trade includes alignment to the MLETR framework and use of open, interoperable ICC digital standards. The UK-Singapore trade corridor is expected to become the first fully digitised, interoperable trade corridor in 2022 setting a new benchmark for modern trade.

## **Government Systems**

Work has begun to assess how to establish an open, interoperable environment across the 35 government agencies interacting with UK borders and enable data and information to flow across G2G/G2B systems and processes. The UK-Singapore programme will play a key role in informing decision makers on next steps.

## **Scaling Up Reforms**

The UK government has been a global leader championing legal reform and alignment through its G7 Presidency. It is also actively supporting and championing modern digital trade ecosystems through its extensive trade networks at bi-lateral, plurilateral and multilateral level including G7 and The Commonwealth. ICC is working closely with the government in a supportive capacity and acting as an independent industry convener and advisor.

# Industry Preparation

The ICC Digital Trade Roadmap set out three pillars of work; legal reform, standardisation and industry adoption and transformation.

With momentum growing on legal reforms and standardising trade ecosystems, more work is needed to support businesses to adopt new standards and capitalise on the economic benefits of legal reforms.

ICC is working with a range of industry bodies to identify barriers to adoption and ensure all businesses are informed on where cost and complexity can be removed.





## Context

(from over 100 media sources)

Our first report 'Creating A Modern Digital Trade Ecosystem; The economic case to reform UK law and align to the UNCITRAL Model Law on Electronic Transferrable Records (MLETR)' made the case for legal reform to position the UK as the first G7 economy to align with MLETR:

- **£25 billion in new economic growth**
- **25% additional SME trade by 2024**
- **£224 billion in efficiency savings**
- **£1billion generated to tackle the £2 billion UK SME trade finance gap**

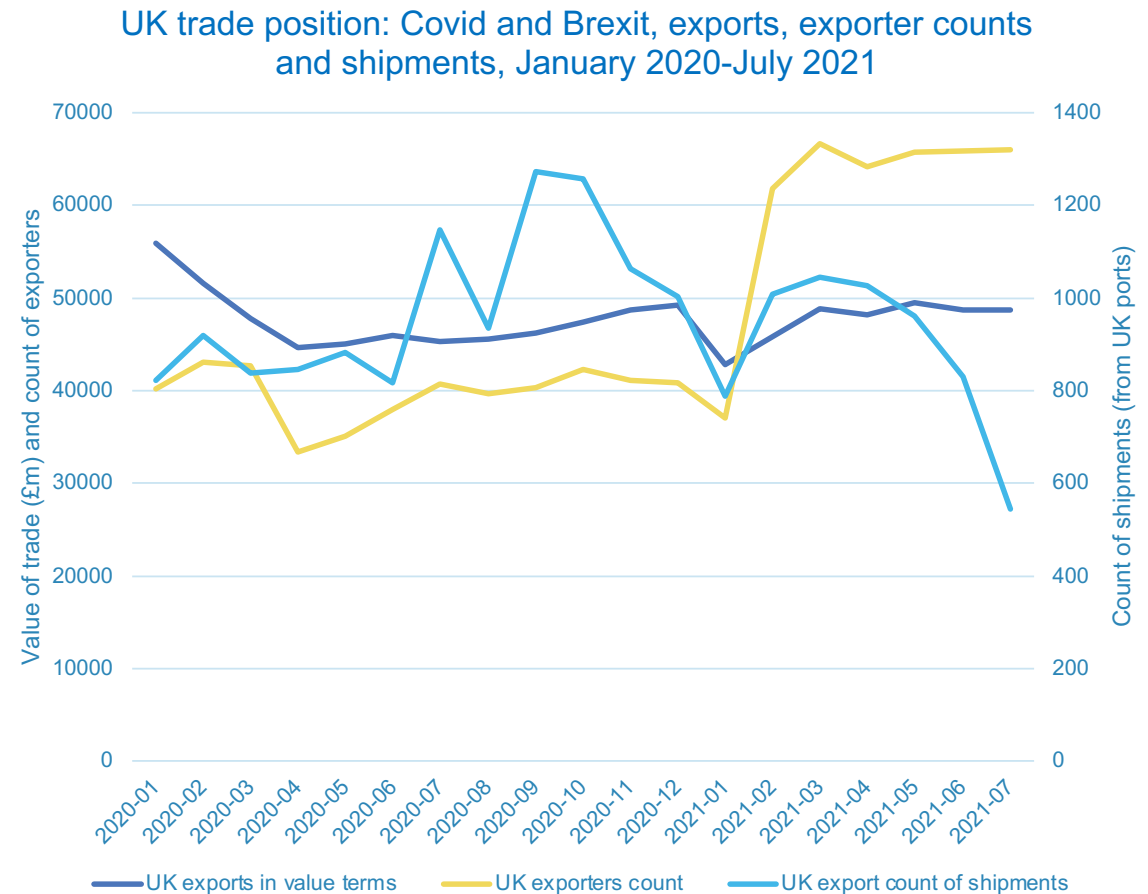
This second report provides more granularity:

- **Reduce border compliance time by nearly 81%**
- **Reduce trade transaction costs as a share of a company's trade by 75%**
- **Generate an additional £10 billion in exports by 2026 taking the total impact from MLETR alignment on UK exports to £250 billion**
- **The wider digital trade ecosystem needs more development - specifically the use of legal entity identification**

# Pandemic & Brexit

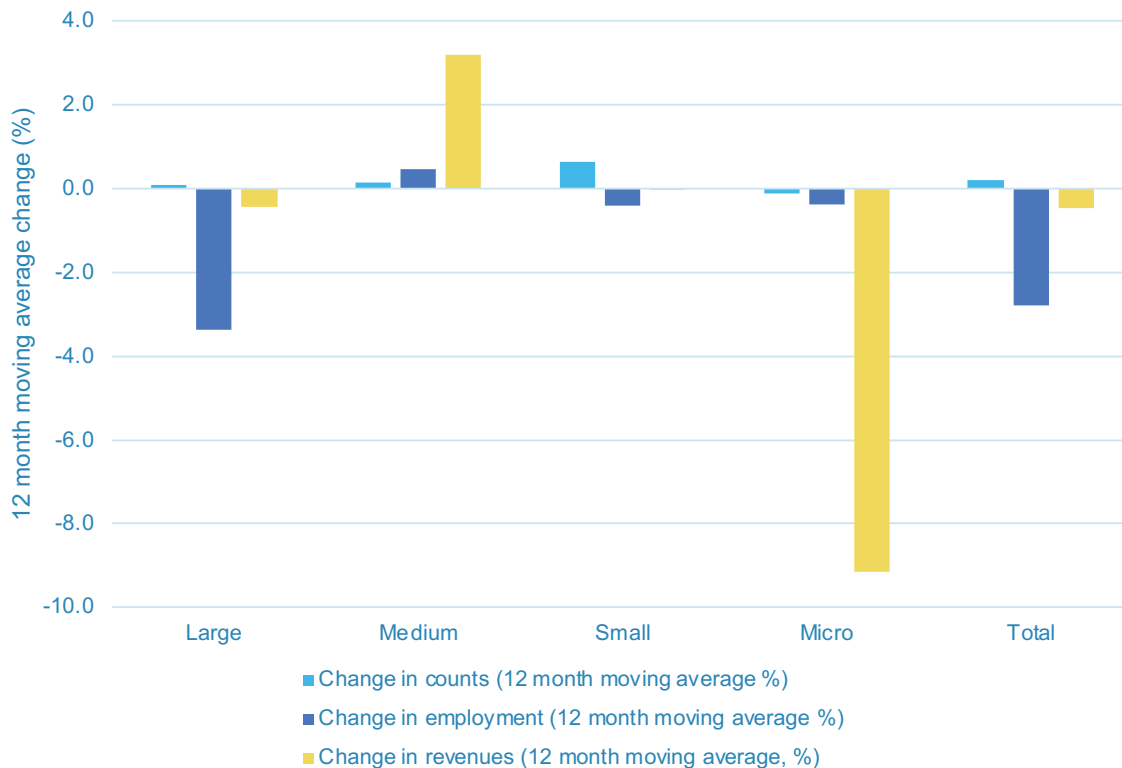
## impacts on exports

- The value of UK exports has not recovered to the pre-pandemic levels
- There was a 60% spike in the number of exporters between January 2021 and March 2021 due to new customs and excise regulations post Brexit
- The number of export shipments from UK ports recovered well from the pandemic up to November 2020 but has fallen back by more than a half since
- There is a global drop in the number of shipments but the decline for the UK is particularly severe



# Larger businesses have reduced employment relative to revenues

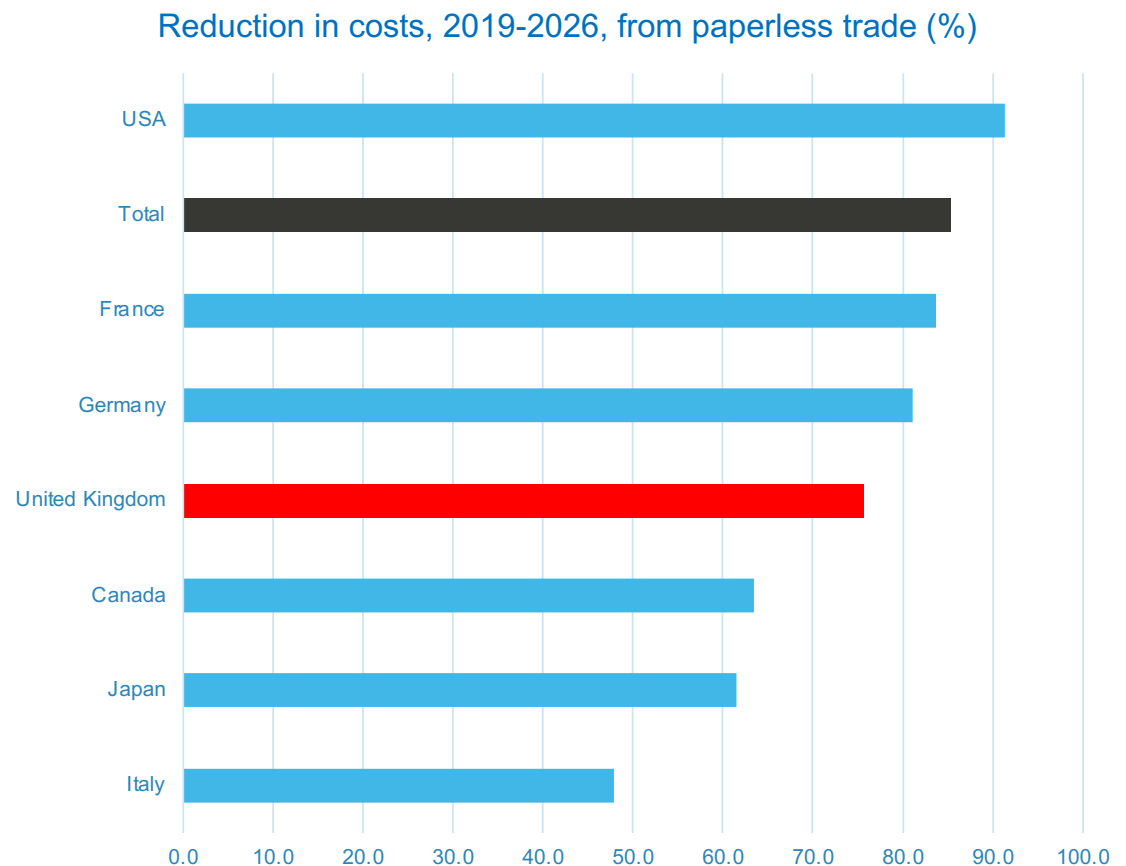
UK exporters - change in counts, revenues and employment between August 2020 and August 2021 (12 month moving average, %)



- Medium-sized exporters have fared relatively well. Over the last 12 months, their numbers, revenues and employment have all grown
- While there are more small exporters, their revenues are static and their employment has fallen back by 0.4%
- There are slightly more large businesses exporting but revenues have fallen over the last 12 months by 0.4% and employment by 3.4%
- There are fewer microbusinesses exporting than 12 months ago, revenues have fallen by 9.1% and employment by 0.4%
- Small and micro businesses cannot restructure employment as readily

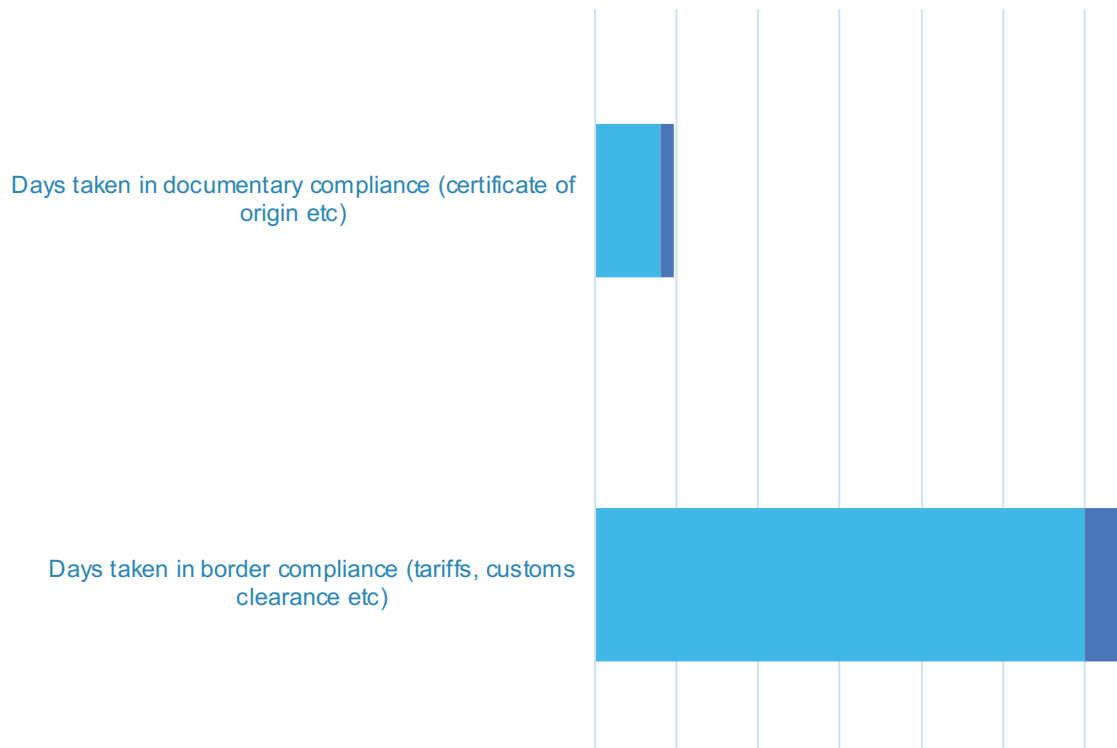
## Trade transaction costs could be reduced by 75%

- The pandemic and Brexit have caused greater cost and complexity for exporters – especially SMEs
- Digital trade ecosystems help address complexity by allowing digital information, documentation and data to move seamlessly across borders
- Digitalising all trade documents helps enable digitally enabled transactions
- Digitalising electronic transferrable records allows documents such as Bills of Lading, Bills of Exchange or Promissory Notes to be handled in digital form reducing trade transaction time and costs and access to finance
- When legal reforms come into force in 2022, the UK stands to reduce trade transaction costs by approximately 75%



# Time savings associated with border crossing and paperwork is nearly 81%

Time savings for UK exports from paperless trade across borders

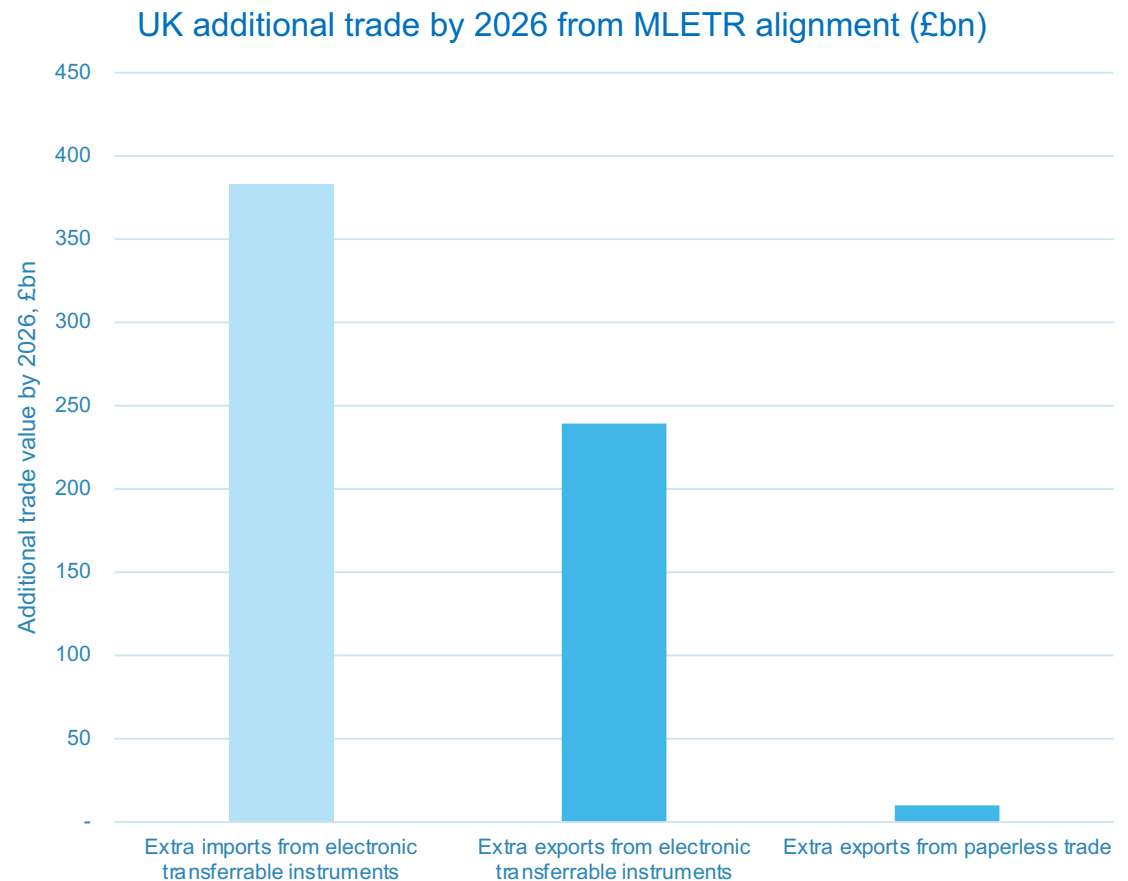


- Brexit has increased the amount of time taken crossing borders by an estimated 7%
- Paperless trade enables digital original documentation and speeds up the process significantly
- The technology exists and experts interviewed assessed that the reduction in the number of days on average would be between 75% and 85%
- Based on the Ease of Doing Business data for the UK, and estimates of the impact of Brexit, the figure is around 81%

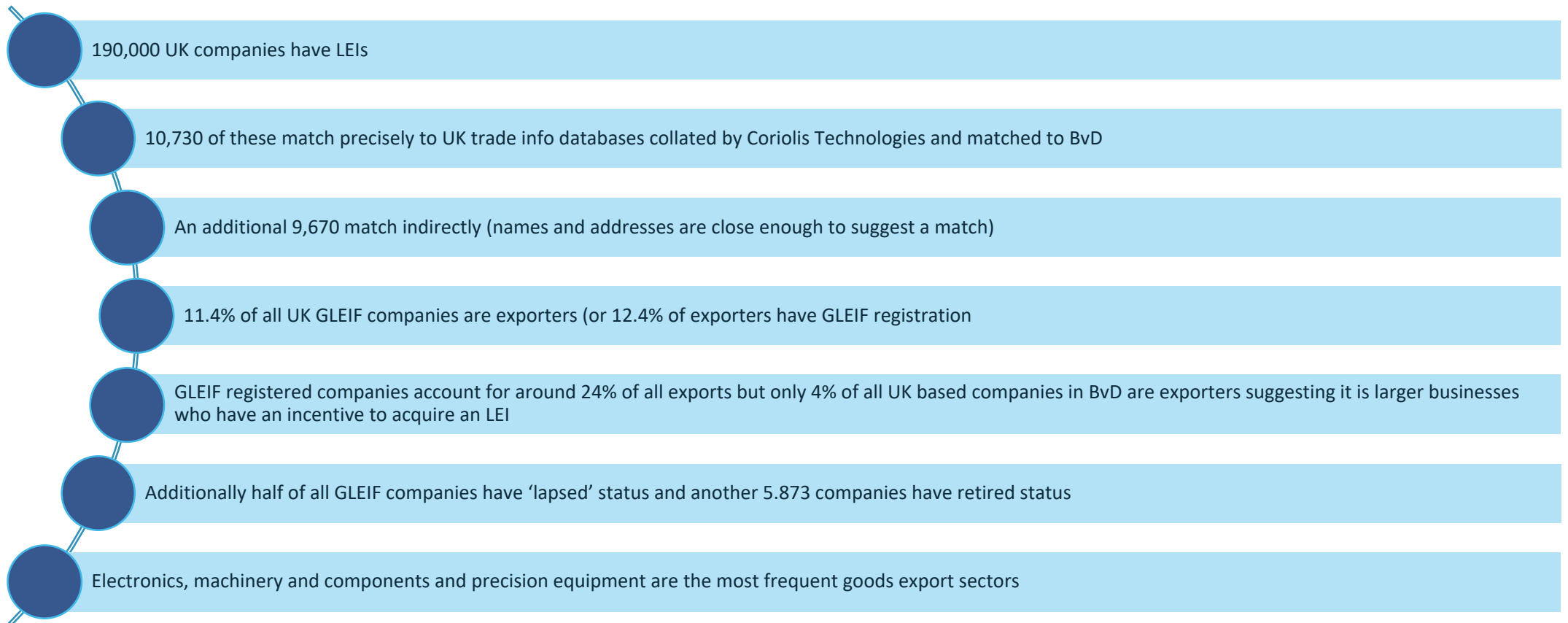
## Aligning with MLETR

could deliver £250 billion extra trade by 2026

- As the UK has a higher number of imports, the impact on import values is higher but this will also help exporters in supply chains
- £240bn extra exports by 2026 increases the value of UK trade by 78% if MLETR alignment can be implemented by the end of 2022
- The impact of digital trade facilitation on exports is significantly lower at just under £10.5bn but will help SMEs proportionately more



# Only 4% UK companies use Legal Entity Identification [LEI] despite it being a building block for successful future trade



GLEIF is the Global Legal Entity Identifier Foundation set up by the G20 Financial Stability Board in the wake of the 2008 financial crisis.

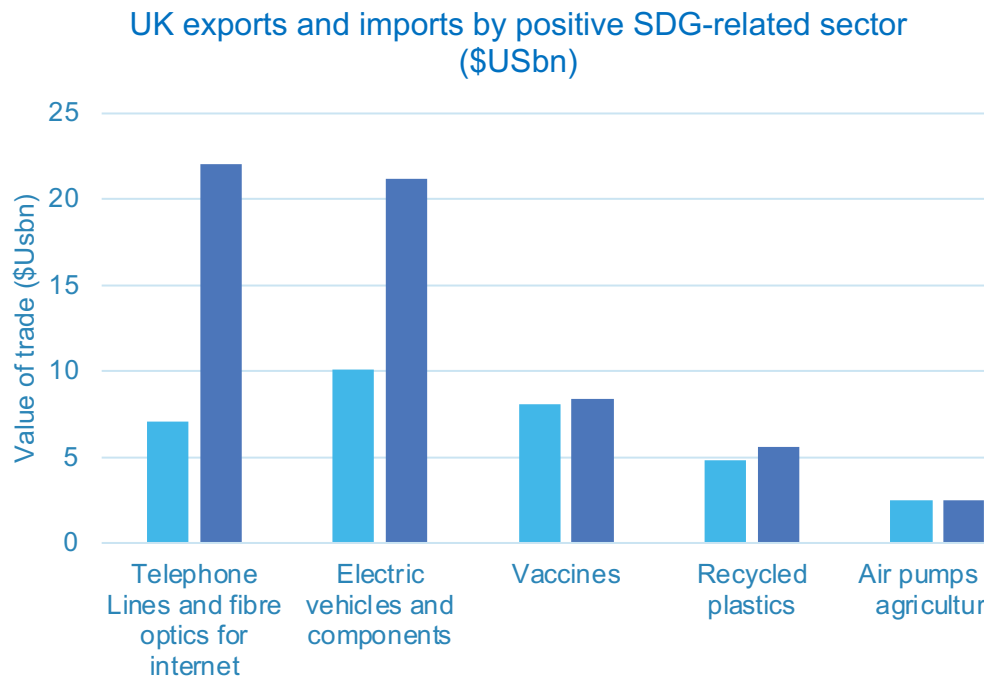
## Sustainability can go digital

- The UK's trade associated with positive SDGs is nearly **10% lower** than its trade associated with negative SDGs
- **Oil** and **coal** are big areas of non-SDG-related trade
- The UK is the **fifth largest exporter** of vaccines in the world, but other has lower trade in other SDG-related products in that sector such as core medical ingredients and therefore does not rank amongst the top five overall
- However, the UK's digital leadership means that it can play a **key part** in making supply chains sustainable:
  - » **The UK's GTAG taxonomy for sustainability will require monitoring ESG products, sectors and activities at a transactions level through supply chains**
  - » **This requires a digital solution as it is too complex to be done manually**
  - » **Digitalising the trade ecosystem has the potential to track products through Bills of Lading so the scope for linking ESG and digital goals offers huge possibilities**

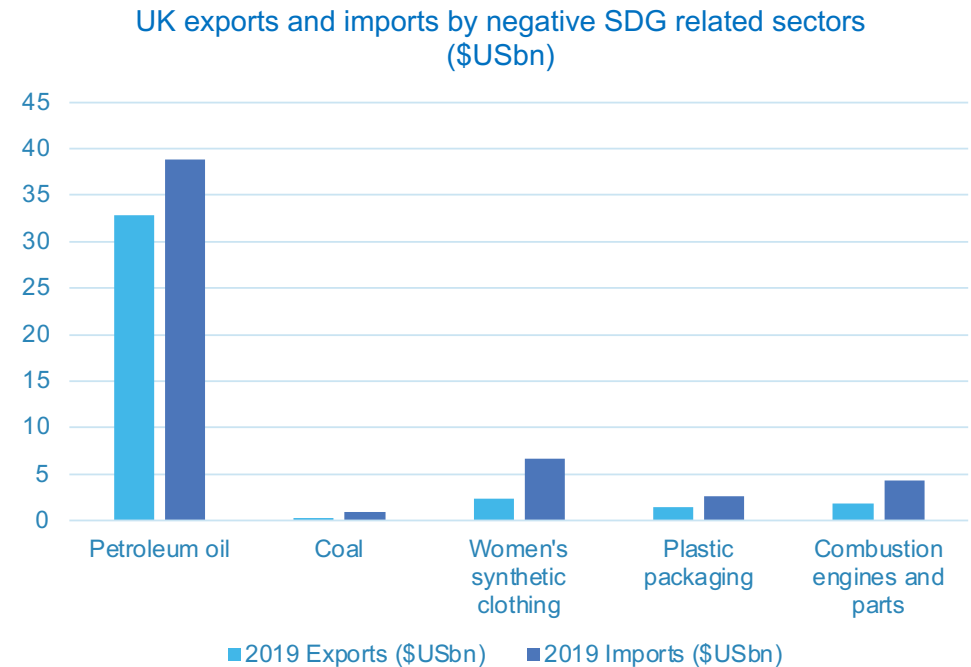


# The UK is not in the top five countries for sustainable trade in any positive SDG product but is in the top five for two negative SDG products

## UK trade in top five positive sustainability sectors



## UK trade in top five negative sustainability sectors



# APPENDIX

## Method Glossary

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- The UK was taken as a base for costs and time savings over time for digital trade for banks and businesses using the ICC United Kingdom survey of 55 global banks
- World Bank Ease of Doing business data was used as a base for export and import costs (<https://www.doingbusiness.org/en/rankings>). This provides information about the costs in terms of dollar values per shipment and costs of border crossings and border compliance for base estimations and replaced the need for a dedicated survey approach as was conducted in the UK. This was used as the basis of the paperless trade analysis
- UNCTAD transportation costs were used as a baseline for creating an index of transport and freight costs in international trade <https://unctadstat.unctad.org/EN/TransportCost.html>
- Only exports are analysed to assess the costs and time savings associated with paperless trade to avoid double-counting on bilateral relationships
- The assessment of the impact on trade of electronic transferrable records on trade was based on the UK case study published by the ICC in May 2021 which included a survey of 55 international banks. This study gave estimates from that survey of the total benefits to banks' trade finance businesses of a move to electronic transferrable records.

- A typical shipment was valued at \$25,000. UNCTAD and the OECD estimate costs on the basis of a typical container of 20 ft that weights between 1.8 and 2.2 metric tonnes. We assumed 2.2 metric tonnes and used trade volume data from the United Nations Comtrade database to estimate the “typical value” of that shipment using the Coriolis Technologies MultiLateral platform’s mirroring approach (<https://comtrade.un.org/> and <https://www.coriolis-data.com/dashboards>)
- Costs by country were derived from the Ease of Doing business indicators ( a more accurate and recent estimation of costs than is currently available in the East of Doing business data which was last published for 2019
- The value of trade by \$25,000 for each country to get a unit value of trade in 2021 for each country. The total cost for each country (compliance + documentation + transport) was multiplied by the number of units to get a total cost of transportation, border compliance and documentary costs
- The percentage of total trade accounted for by trade costs was calculated.

- Cost and time savings were taken from the documentary research, expert interviews and discussions with trade professionals (approx. 20 in total) and the ICC UK survey of 55 banks. There were assumed to be no impacts on costs in the first year after legal reform so growth in line with trend forecasts was calculated for 2022. Benefits were estimated to accrue from 5% in the first year and exponentially thereafter.
- Coriolis Technologies creates a momentum forecast of trade to give a base line picture of how trade will grow over the following five years. The cost elasticity of trade was derived from a meta-analysis of academic research on the subject using cross—country analysis ([https://www.nber.org/system/files/working\\_papers/w16796/w16796.pdf](https://www.nber.org/system/files/working_papers/w16796/w16796.pdf). And <https://core.ac.uk/download/pdf/6224614.pdf> for example) and the country elasticity from this analysis was used as a coefficient to create uplifts in trade forecasts between 2021 and 2026 using an upper-bound and a lower bound estimate given the estimated expectation of changes in trade costs from paperless trade
- Cost changes year-on-year were estimated assuming a gradual reduction from 10% in 2024 to 15% in 2025 and 25% in 2026 if regulations are implemented in the next 18 months This gives the base forecast and the lower and upper bound estimates for 2025. The acceleration in impact is because of the multiplier effect as legal reform is implemented before 2024. However, this is substantially below the estimated costs savings in the documentary research because these tend to be unquantified

## Methodology

### documentary research

- Documentary research covering 600 media sources, speeches and third-party documentation across the G7, Europe, Asia, Africa, North America and South America was analyzed using Python-based Natural Language Processing tool.
- Approximately 1.1 million words in appropriate documents were analyzed.
- Documents were analyzed for the frequency, context and content of key words associated with trade digitization, paperless trade facilitation and related legal reform.
- The results were grouped into specific categories and themes related to legal reform, electronic transferrable instruments, and digital trade facilitation.
- The documentary research was supplemented by 20 expert interviews with trade practitioners, in particular covering SME impact and sustainability.

## Methodology

### ESG Calculations

- All goods exports and imports are classified by a standardised customs and excise code – the HS code
- This HS code is mapped to sustainable development goals (SDGs) using the UN concordance: <https://www.unescap.org/sites/default/d8files/knowledge-products/SDG-HS-NTM-Concordance.png> algorithms based on the UN Concordance)
- This yields the five largest sectors contributing positively to SDGs in global trade flows and the five largest sectors contributing negatively to SDGs in global trade flows
- The number of times a G7 country is counted amongst the top five importers or exporters in each of these five sectors is recorded

## GLOSSARY

- » Paperless trade: this is digital cross-border trade facilitation measures to mean “Trade taking place on the basis of electronic communications, including exchange of trade-related data and documents in electronic form across borders” ([https://www.unescap.org/sites/default/d8files/knowledge-products/FAQ%20on%20the%20Framework%20Agreement\\_Dec%202020.pdf](https://www.unescap.org/sites/default/d8files/knowledge-products/FAQ%20on%20the%20Framework%20Agreement_Dec%202020.pdf))
- » Electronic Transferrable Records: “electronic transferrable records that are equivalent to transferable documents or instruments.” In other words, these are electronic versions of often paper-based transferable documents that entitle the holder to claim the performance of the obligation indicated in the documentation- for example payment or delivery. ([https://uncitral.un.org/en/texts/ecommerce/modellaw/electronic\\_transferable\\_records](https://uncitral.un.org/en/texts/ecommerce/modellaw/electronic_transferable_records), [https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/mletr\\_ebook\\_e.pdf](https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/mletr_ebook_e.pdf)).
- » Border compliance: “captures the time and cost associated with compliance with the economy’s customs regulations and with regulations relating to other inspections that are mandatory in order for the shipment to cross the economy’s border, as well as the time and cost for handling that takes place at its port or border.” (<https://www.doingbusiness.org/en/data/exploretopics/trading-across-borders/faq>)
- » Documentary compliance: “captures the time and cost associated with compliance with the documentary requirements of all government agencies of the origin economy, the destination economy and any transit economies.” (<https://www.doingbusiness.org/en/data/exploretopics/trading-across-borders/faq>).
- » Digital trade: digitally enabled transactions in goods and services ([https://www.oecd-ilibrary.org/trade/digital-trade\\_524c8c83-en](https://www.oecd-ilibrary.org/trade/digital-trade_524c8c83-en))



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A special thank you to Huawei Technologies Ltd. for funding the project and Coriolis Technologies Ltd. for undertaking the independent economic research.



**NOTE:**

*This project is part of wider, ICC global programme making the case for legal reform. The programme has multiple research commissioners, project funders and institutional partners.*