Tech Challenge
Digitising Trade Finance
Information Pack

Managed by
Deloitte
Collaborative efforts to understand trade finance pain points, with a view to identify FinTech Solutions.

and the journey begins
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Introduction to TechChallenge

Co-organisers

Innovation Hub | BIS | HONG KONG MONETARY AUTHORITY

Managed by

Deloitte. AP Blockchain Lab

Supporting organisations (in alphabetical order from left to right)

ADB | TSFP | CargoSmart.ai | 香港金融管理局

International Chamber of Commerce | IIF | MarcoPolo

the Wolfsberg Group | Trade Finance Global | TradeLens

In collaboration with

Global Fast Track Programme
A

Introduction to TechChallenge

This TechChallenge is a joint initiative of the BIS Innovation Hub (BISIH) and the Hong Kong Monetary Authority (HKMA), designed to showcase the potential for new innovative technologies to resolve problems in trade finance (TradeTech). It is supported by the Asian Development Bank (ADB), the International Chamber of Commerce (ICC), the International Institute of Finance (IIF), the People’s Bank of China (PBOC), and the Wolfsberg Group.

Prior to embarking on the TechChallenge, the HKMA conducted a survey to which over 120 banks responded. More than 70% of the respondents expressed that global trade finance needs are not adequately addressed. This is consistent with the published findings of the ADB that the global trade finance gap persistently remains at around USD1.5 Trillion¹ (See Figure 1).

Figure 1: Global Trade Finance Gap (USD Trillion), 2014-2018

![Global Trade Finance Gap Chart]

Based on this survey, and key pain points derived from it, the Bank for International Settlements Innovation Hub and the HKMA invite global innovators to participate in a trade finance digitisation TechChallenge. We have formulated three Problem Statements to which we invite private firms, research institutes and academia to develop technology solutions.

TechChallenge Overview

Trade finance is a complex topic with insufficiently harmonised digitisation across the value chain. By the same token, there is no single solution that can solve all the pain points. To leverage the diversity of innovation and digitisation under way on this topic globally, solution providers are free to suggest any technology approaches they consider suitable to address one or more of the problem statements, including decentralised approaches based on blockchain/Distributed Ledger Technologies (DLT).

While potential technology solutions are included for illustrative purposes under each problem statement, technology providers may propose other technology solutions to digitise trade finance. Additional points will be given for transformational proposals, open-sourced technology, and technology that can become part of core infrastructure or otherwise become a public good\(^2\) of one or more jurisdictions or of the central banking community.

Though such is not a requirement, solution providers may leverage international initiatives such as the Digital Standards for Trade Initiative which works to develop digital standards for the trade ecosystem; the Global Legal Entity Identifier (LEI) system which issues unique identifiers for large and small firms at low cost and helps to improve transparency on anti-money-laundering and know-your-customer concerns; and the United Nations efforts to enable electronic commerce and signatures\(^3\).

\(^2\) In economics, a public good refers to a commodity or service that is made available to all members of a society. Often, though not always, these services are administered by government authorities and paid for through public funds. In the context of this TechChallenge, public goods include Technology Solutions that can be administered and paid for by government(s) and/or central bank(s) to enhance the functioning of the financial system. Public goods could also include technology solutions placed in the BIS Innovation Hub cloud for use by the Central Banking community or open-sourced technology. The following podcast contains more detail of the BIS Innovation Hub mission in this regard: [https://bispodcast.libsyn.com/bis-innovation-hub](https://bispodcast.libsyn.com/bis-innovation-hub).

TechChallenge Overview

The TechChallenge commences on 3 August 2020, and submission will close on 7 September 2020 Hong Kong Time. The detailed timetable is below.

<table>
<thead>
<tr>
<th>Key Date</th>
<th>Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 August</td>
<td>TechChallenge commences</td>
</tr>
<tr>
<td>7 September</td>
<td>Last day to submit your proposal in the Application Form</td>
</tr>
<tr>
<td>September – October</td>
<td>Proposals will be reviewed by the judges; shortlisted participants will be invited for a presentation in a Dragons’ Den style</td>
</tr>
<tr>
<td>12 – 15 October</td>
<td>Presentation (10 min/ 5 min fire round from the judges) in the Dragons’ Den style</td>
</tr>
<tr>
<td>November</td>
<td>Different prize categories will be available. Winning proposals will be featured during the Hong Kong FinTech Week. Cash sponsorship will be offered. Selected winners will be taken forward to prototype development.</td>
</tr>
<tr>
<td>Mid-2021 or earlier</td>
<td>Complete prototype development in sandbox and showcase to the public, central banks, banking industry and related trade and trade finance stakeholders in the HKMA-ASTRI FinTech Innovation Hub. In addition, selected winners will have a chance to participate in future initiatives including proofs of concept or development projects.</td>
</tr>
</tbody>
</table>

More explanation and details are provided in the Application Form and the Frequently Asked Questions found on TechChallenge.finnohub.org.
Profiles of the Judges
(In alphabetical order by surname)

Steven Beck

Head of Trade and Supply Chain Finance at Asian Development Bank

Steven Beck has managed the exponential growth of ADB’s Trade Finance Program, and implemented its first supply chain finance business. Prior to joining ADB, he worked for the Canadian Imperial Bank of Commerce and was an advisor to the Canadian Minister of Finance. Mr. Beck played a key role in the start-up of the Black Sea Trade and Development Bank, and was a consultant for USAID in Southern Africa and for a start-up financial institution in Armenia. Mr. Beck is on the Advisory Board of the International Chamber of Commerce Banking Commission, and a member of the WTO Working Group for Trade Finance.

David Bischof

Deputy Director, Finance for Development at International Chamber of Commerce

As Deputy Director, David Bischof oversees areas of the International Chamber of Commerce (ICC) Finance for Development Hub, a global forum for the trade finance community. David is responsible for a wide range of special projects aiming at digital transformation of the trade and trade finance industry and positioning ICC as authoritative voice on blockchain and digitalisation. In this capacity, David set up and is running ICC’s working group on digitalisation of trade finance. He is also part of the founding team of ICC’s digital trade standards initiative (DSI) aiming at leading efforts to digitise trade, notably by the creation of open trade and technology standards to promote interoperability among the numerous blockchain networks and technology platforms.
Profiles of the Judges
(In alphabetical order by surname)

Brad Carr
Managing Director, Digital Finance at The Institute of International Finance
Brad Carr is the Managing Director of Digital Finance at the Institute of International Finance (IIF). He leads the IIF’s program on data policy, machine learning, digital identity, transformation, RegTech, cloud and digital currencies.

Neil Chantry
Specialist Consultant
Neil spent 43 years with the HSBC Group, half on their international management and half in the Group Head office in London specialising in trade finance. He retired at the end of 2015 as global head of policy and compliance, Global Trade and Receivables Finance. He was also the former head of the ICC Banking Commission Executive committee and chair of the Financial Crimes Compliance group and former chair of the Wolfsberg Group Trade Finance working group.
Marvin Erdly
Head of TradeLens, IBM Blockchain

Marvin Erdly is a technology and management consulting executive with deep expertise in the Travel & Transportation industries. As a Partner at PricewaterhouseCoopers and IBM, Mr. Erdly has advised executives and delivered transformative projects across a variety of technology and business operations domains. Currently, Mr. Erdly leads TradeLens for IBM, a platform jointly developed with A.P. Moller-Maersk to apply blockchain to the world’s global supply chain. TradeLens (www.tradelens.com) is an open and neutral industry platform that will promote faster, more efficient and secure global trade. Underpinned by blockchain technology, the TradeLens platform brings together all parties in the supply chain to drive true information.

Ziyang Fan
Head of Digital Trade at World Economic Forum

Ziyang Fan is an attorney and policy-maker with over a decade of experience from both the public and private sectors, with a focus in the Asia Pacific region. He is an expert in digital trade, e-commerce, cross-border data flows, sharing economy, and TradeTech. Former positions include Senior Legal Counsel, Airbnb; Assistant General Counsel, US Trade and Development Agency; and Corporate Associate, law firm of Shearman & Sterling. He currently runs the Digital Trade program at the World Economic Forum Center for the Fourth Industrial Revolution in San Francisco.
Profiles of the Judges
(In alphabetical order by surname)

Emmanuelle Ganne
Senior Analyst of Economic Research and Statistics Division at the World Trade Organization

Emmanuelle Ganne is Senior Analyst in the Economic Research and Statistics Division of the World Trade Organization (WTO) where she leads work on SMEs and Blockchain. She is the author of a recently published book entitled “Can Blockchain Revolutionize International Trade?” and is a regular speaker at blockchain events.

Mu Changchun
Director-General of the Digital Currency Institute at the People’s Bank of China

Mu Changchun is the Director-General of the Digital Currency Institute, People’s Bank of China, since July 2019. Mr. Mu joined the People’s Bank of China in 1995. From 2004 to 2006, he was appointed as Senior Advisor to the Executive Director of the Constituency Office, representing Canada/China/Korea/Kuwait/Spain in the African Development Bank. In 2006, he rejoined the International Department. From 2010 to 2017, he served in several positions, including Assistant to the Governor and the Deputy Director-General of the Executive Office. In 2017, he was appointed Deputy Director-General of the Payment & Settlement Department. He is a member of the CPMI, FSB Financial Innovation Network, and IMF High-level Advisory Group on Finance and Technology.
Profiles of the Judges
(In alphabetical order by surname)

Tracy Paradise
Executive Secretary at The Wolfsberg Group
Tracy Paradise is the Executive Secretary of the Wolfsberg Group, a position she has held since 2003. Her role involves defining and leading the group’s day to day strategy, book of work, engagement, and outreach with both the private and public sectors.

Deepesh Patel
Editorial Director at Trade Finance Global
Deepesh leads efforts in developing TFG’s brand, relationships and strategic direction in key markets, including the UK, US, Singapore, Dubai and Hong Kong. Deepesh regularly chairs and speaks at international industry events with the WTO, BCR, Excred, TXF, The Economist and Reuters, as well as industry associations including ICC, FCI, ITFA and BAFT. Deepesh is the host of the ‘Trade Finance Talks’ podcast and ‘Trade Finance Talks TV’. He is co-author of ‘Blockchain for Trade: A Reality Check’ with the ICC and the WTO, alongside other industry research. In addition to his work at TFG, Deepesh is a Strategic Advisor for WOA, and a Board Member of ITFA’s Emerging Leaders Committee. He also sits on the Fintech Working Group of the Standardised Trust.
Profiles of the Judges
(In alphabetical order by surname)

Leon Scott
MD and Regional Head of Asia Pacific Japan and Middle East
at Trade IX & the Marco Polo Network
Leon has spent his entire career in the trade & supply chain industry, in banking and financial technology - both early stage and mature. Prior to joining TradeIX, Leon was based in London as a Director of Funding at PrimeRevenue where he led the team managing bank partnerships in Europe, the Middle East and Asia. Leon also held senior roles at HSBC in Hong Kong and London where he focused on product strategy and structuring for trade & commodities finance.

David Shrier
Associate Fellow with Saïd Business School, University of Oxford and a Lecturer at the MIT Media Lab
David Shrier is a globally recognized fintech expert and innovation catalyst. He is an Associate Fellow with Saïd Business School, University of Oxford and a Lecturer at the MIT Media Lab. His online classes for MIT and Oxford have engaged more than 15,000 government officials and fintech innovators in over 140 countries to transform financial services. David has founded or co-founded four MIT spinouts that leverage AI, and advises governments and corporations globally on fintech, AI, and blockchain. His books include Basic Blockchain (Little Brown, 2020), Trusted Data (MIT Press, 2019), New Solutions for Cybersecurity (MIT Press, 2018), and Frontiers of Financial Technology (2016). His next book, Augmenting Your Career: How to Win at Work in the Age of AI, will be published by Little Brown in February 2021.
Romney Wong

Chief Technology Officer at CargoSmart – Technology Solution Provider of Global Shipping Business Network (GSBN)

Romney Wong is experienced in providing software solutions in the container transportation industry using cloud, AI, IoT, and blockchain. He worked with Global Shipping Business Network (GSBN) consortium, and led the design and delivery of blockchain base infrastructure for the consortium with strong privacy protection and policy driven access control.
Motivated by the fact that in recent years, while the total value of trade in Hong Kong has risen steadily, the size of the trade finance business in the banking sector has not risen by the same proportion, the HKMA conducted a survey among local and international financial institutions in Hong Kong to understand the pain points of the trade finance industry. Over 120 responses were received from the majority of banks who offer trade finance.

It was found that while 55% of surveyed banks reported that the supply of trade finance lending is adequate in Hong Kong, over 50% of the banks allocate less than 20% of their loan products to trade finance loans (See Figure 2). Although respondents identified their business priorities as corporate loans, trade finance loans, mortgage loans, SME loans, and personal loans, most surveyed banks place a higher weighting on corporate loans, which includes lending to property market developers. As such there is an apparent disconnect between the weighting of loan products and the business priority.

Figure 2: Apparent disconnect between Weighting of Loan Products and Overall Business Priority

<table>
<thead>
<tr>
<th>Overall Business Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Corporate loan</td>
</tr>
<tr>
<td>2. Trade finance loan</td>
</tr>
<tr>
<td>3. Mortgage loan</td>
</tr>
<tr>
<td>4. SME loan</td>
</tr>
<tr>
<td>5. Personal loan</td>
</tr>
</tbody>
</table>

Source: Hong Kong Monetary Authority
Based on the survey results, a trade finance gap was identified, along with pain points that surveyed banks find most challenging in the trade finance business. In the following, we use the survey results to identify important pain points, which are also reflected in research reports issued by the supporting organisations to the TechChallenge.

1. Credit Risk Assessment Complexity

The majority of the respondents to the HKMA survey (90%) stated that the unavailability of counterparty information is a major cause for rejecting trade finance applications (See Figure 3). This closely interlinks with several of the other identified high-ranked reasons for trade finance rejection, including counterparty concerns and trade authenticity.

Figure 3: Top Reasons to Reject Trade Finance Applications (Percentage of responses)

Source: Hong Kong Monetary Authority Survey
Notes: Highlighted areas in the graph refer to the specific issues being discussed
Similarly, 70% and 65% respectively of the respondents to the HKMA survey identified that the default risk and lack of information for counterparty credit assessment are the key factors that might hinder banks from providing trade finance. To address the high exposure to credit risk in trade finance lending, banks must invest a lot of time in acquiring counterparty information for credit assessment, which increases the cost of transactions. 75% of respondents regarded high transaction costs as a barrier to trade finance business engagement (See Figure 4).

Figure 4: Barriers to Offering Trade Finance Lending (Percentage of responses)

Connecting trade finance platforms, each of which at present operate as digital islands without maximising network effects, or otherwise making them more interoperable may improve counterparty risk assessment, while also increasing network effects.
D

Research and Survey Findings
(Refer to the Bibliography section for a detailed list of reference materials)

2. KYC/ AML/ CTF Compliance Complexity

The ADB found that the largest impediment to bridging the trade finance gap are AML and KYC requirements (See Figure 5)⁴. This viewpoint was backed by 76% of responses in the ADB 2019 survey.

Another survey conducted by the ICC revealed that almost one-fifth (18%) of trade finance rejections arose in 2017 on account of incomplete or failed due diligence checks, especially correlated to KYC requirements⁵. The IFC also found that the cost of due diligence increases with the complexity of rules: the more jurisdictions involved, as is usually the case with global trade, the more rules to comply with and by implication the higher the compliance cost becomes. The IFC surveyed over 300 private-sector bank clients across 92 countries and 64% of respondents are seeking ways to improve harmonisation such as sharing data.

Source: Asian Development Bank
Notes: Highlighted areas in the graph refer to the specific issues being discussed

Research and Survey Findings
(Refer to the Bibliography section for a detailed list of reference materials)

and mutualising their efforts, with a view of making AML/CFT compliance more efficient for emerging markets businesses (See Figure 6)\(^6\). The survey also highlighted a desire to see more regulatory guidance on technology-based solutions.

Figure 6: Banks identify compliance-related solutions that could help (Percentage of responses)

![Banks Identify Compliance-Related Solutions That Could Help](chart.png)

Source: International Finance Corporation (IFC)
Notes: Highlighted areas in the graph refer to the specific issues being discussed

Since the IFC survey, a lot of clarifications have been issued in respect to the use of technology for individual identity verification, especially under the auspices of FATF\(^7\). The increase of FinTech and RegTech offerings and more recently the advent of COVID has further accelerated digitisation especially in individual onboarding processes and KYC.

However, the use of technology in corporate onboarding, which is highly relevant to trade finance, remains more complex and less automated. Also, connecting trade finance platforms, each of which have their individual KYC processes, may improve KYC pain points, while also increasing network effects.

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3. Low SME Trade Finance Inclusion

Respondents to the HKMA survey stated that the successful onboarding rate is the lowest for SMEs among firms of different sizes, and the reason behind it may be the high estimated cost of onboarding. The survey results (See Figure 7) suggest that SMEs are difficult to onboard, with only 20% of surveyed banks claiming a high success rate. This is significantly lower than 45% for large corporations and mid-caps, and 50% for multinationals.

This is echoed in the results of the 2019 ADB survey, which concluded that 45% of trade finance applications rejected by banks are from SMEs, compared to 39% from large corporations and mid-cap, 17% from multinationals (See Figure 8). The top reasons for the rejections are AML and/or KYC requirements.

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Figure 7: Success Rate of Onboarding by Firm Size

Source: Hong Kong Monetary Authority Survey
Research and Survey Findings
(Refer to the Bibliography section for a detailed list of reference materials)

The reason why SMEs are perceived as high-risk borrowers is because they have less collateral, guarantees and credit history than large companies. Without proper risk profiling, banks generally require additional collateral from SME borrowers as a risk mitigation measure, which is difficult for most SMEs to fulfil. As shown in Figure 9 below, approximately 20% of applications are rejected due to lack of additional collateral.

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SMEs heavily rely on trade opportunities brought by digital connectivity as it does not require as much investment to run a business as traditional business models\textsuperscript{9}.

As a result, their credit history data and characteristics are often located outside of the trade finance ecosystem, scattered among e-commerce and logistics platforms and, often not accessible to banks. According to the World Economic Forum (WEF), access to and use of these data could reduce the risk of providing finance to the participants in the ecosystem and thereby lead to greater trade finance inclusion\textsuperscript{10}.

Similarly, a study conducted by the Bank for International Settlements (BIS) validated the effectiveness of using non-traditional data for credit scoring. It concluded that, for debtors with a short credit history, credit scoring based on a machine learning model using non-traditional data is better able to predict losses and defaults than traditional credit scoring models\textsuperscript{11}.

4. Lagging Digitalisation in Emerging Markets

Almost all of the surveyed banks (95\%) highlighted that trade finance digitalisation is important to the provision of trade financing (See Figure 10).

\textsuperscript{9} WTO (2018), "E-commerce and developing country-SME participation in global value chain" (https://www.wto.org/english/res_e/reser_c/ersd201813_e.pdf)
\textsuperscript{11} BIS (2019), "How do machine learning and non-traditional data affect credit scoring? New evidence from a Chinese fintech firm" (https://www.bis.org/publ/work834.pdf)
D

Research and Survey Findings
(Refer to the Bibliography section for a detailed list of reference materials)

Figure 10: Trade Finance Digitalisation (Percentage of responses)

How much does your institution agree that trade finance digitalisation will be conducive to the provision of trade financing of your institution?

Source: Hong Kong Monetary Authority Survey

According to the WTO, developing countries have the greatest challenge in accessing trade finance\(^\text{12}\). This is in part due to the lack of trade finance digitalisation and bank risk appetite in emerging markets. This conclusion was confirmed by the WEF which showed that half of the trade finance gap is in developing countries in Asia and Africa, with SMEs suffering the most\(^\text{13}\). The WTO estimates that the value of unmet demand for trade finance in Africa is US$ 120 billion (one-third of the continent’s trade finance market) and US$ 700 billion in developing Asia\(^\text{9}\). This is further illustrated in Table 1 below from the ICC which shows that Asia and Africa/Middle East have the highest rejection rates on trade finance transactions.

\(^{12}\) WTO (2016), "Trade Finance and SMEs" (https://www.wto.org/english/res_e/booksp_e/tradefinsme_e.pdf)
\(^{13}\) WEF (2020), "Why exporters need to mind the trade finance gap" (https://www.weforum.org/agenda/2020/02/exporters-mind-trade-finance-gap/)
Table 1: Actual Risk of Trade Finance vs. Perception of Risk

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<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>0.39%</td>
<td>19%</td>
<td>46%</td>
</tr>
<tr>
<td>Middle East</td>
<td>2.43%</td>
<td>19%</td>
<td>48%</td>
</tr>
<tr>
<td>APAC</td>
<td>0.29%</td>
<td>29%</td>
<td>130%</td>
</tr>
<tr>
<td>Central and South America</td>
<td>0.50%</td>
<td>8%</td>
<td>51%</td>
</tr>
<tr>
<td>United States</td>
<td>0.0%</td>
<td>8%</td>
<td>195%</td>
</tr>
<tr>
<td>CIS</td>
<td>1.98%</td>
<td>17%</td>
<td>55%</td>
</tr>
<tr>
<td>Europe</td>
<td>0.38%</td>
<td>12%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Transaction default rate from ICC, 2015; rejection rate from ADB, 2014; Financial depth from World Bank Global Financial Development Database (GFDD)

According to an OECD/WTO questionnaire\textsuperscript{14}, approximately 60% of the respondents identified that inadequate domestic infrastructure is a main barrier in connecting firms to value chains.

In light of the above, trade finance digitalisation that is compatible with the standing infrastructure may improve the access to trade finance in emerging markets.

\textsuperscript{14} WTO (2013), "Aid for Trade at a Glance" [https://www.wto.org/english/res_e/booksp_e/aid4trade13_e.pdf]
Problem Statements

Based on the issues identified in the previous section, we have created the below problem statements. For illustrative purposes, possible technology solutions are also provided. However, technology providers may propose other technology solutions to digitise trade finance. Additional points will be given for transformational proposals, open-sourced technology, and technology that can become part of core infrastructure or otherwise become a public good of one or more jurisdictions or of the central banking community.

Problem Statement 1
Connecting Digital Islands and Increasing Network Size and Effects

Trade finance platforms operate as networks where participant banks have access to customer data that are stored on the platform. However, the existing trade finance platforms run on different applications and technology solutions and have different participants – thereby becoming akin to “digital islands”. This in turn is hindering the formation and maximisation of network effects. The aim of this part of the TechChallenge is to connect trade platforms, enable the interchange of information or make them more interoperable to increase network effects, but also to explore other means to increase network size. Possible technology solutions include amongst others -

- connecting trade finance platforms through secure, authenticated exchange, accessibility, or portability of standardised data;
- increasing bank participation on trade finance platforms through technology approaches that can reduce the liability risk of banks for data corruption and cyber risks;
- facilitating access of corporates to trade finance platforms through portable blockchain/ DLT enabled digital identity, enabling KYC;
- facilitating access for corporates to trade finance platforms through digitisation of company registries featuring APIs and connection to LEIs that platforms can leverage for KYC.
Problem Statement 2
Trade Finance Inclusion for SMEs

SMEs still have only limited access to trade finance, mostly because of data gaps or data silos. Increasingly, technology-driven approaches are being developed to bridge these gaps and break the silo structure, and thereby improve SME access to trade finance. The aim of this part of the TechChallenge is to improve trade finance inclusion for SMEs through technology, including through tech-driven SME risk-profiling, trade authenticity verification and fraud risk assessment. Possible technology solutions could include or combine amongst others -

- novel technologies such as those based on internet of things (IOT), artificial intelligence (AI), machine learning (ML), federated learning, blockchain/ DLT or quantum computing;
- leveraging non-traditional data such as logistics data (e.g. IOT data for trade authenticity), e-commerce data (e.g. trust scores), mobile payment and other transactional data;
- a platform-based approach connecting different data sources (e.g. credit, accounting, banking, transaction, and non-traditional data) enabling public and private sector participants to improve SME risk-profiling, trade authenticity verification and fraud risk assessment;
- a platform-based approach connecting SMEs to the financial institutions in the LEI database or connecting SMEs to large counter-parties to increase access to trade finance.
Problem Statement 3
TradeTech for Emerging Markets

The trade finance gap is particularly acute in emerging markets. Many such markets do not yet benefit from tech-driven trade networks and platforms. Accordingly, these markets could greatly benefit from low-cost or open-sourced technology that leverages common standards (e.g. ISO20022, UCP600, etc.) to deploy trade finance applications. These applications could connect to jurisdictional infrastructures, such as automated single windows or implementations of the ASYCUDA software developed by the United Nations Conference on Trade and Development (UNCTAD). The aim of this part of the TechChallenge is to develop technology solutions that support trade finance functionalities for emerging markets. Possible technology solutions could include amongst others -

- **low-end mobile devices** with intuitive user interfaces that feature connectivity to public and private trade infrastructure;
- technology solutions that facilitate the development of open data and API standards;
- a **platform-based approach** that leverages the automated single window of one or more jurisdictions to connect to B2B services, such as trade finance;
- **open-sourced technology solutions** that support the establishment of national trade finance platforms.

Though such is not a requirement, solution providers may leverage international initiatives such as the Digital Standards for Trade Initiative which works to develop digital standards of the trade ecosystem; the Global Legal Entity Identifier (LEI) system which issues unique identifiers for large and small firms at low cost and helps to improve transparency on anti-money-laundering and know-your-customer concerns; and the United Nations efforts to enable electronic commerce and signatures.
# Judging Criteria

The following judging criteria will be used to evaluate the proposals submitted by participants:

<table>
<thead>
<tr>
<th>Weighting</th>
<th>Judging Criteria</th>
<th>General Description/Consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td>15%</td>
<td>1. Relevance, Clarity, and Depth</td>
<td>Measures clarity and relevance of the submission, including all research and analyses, which are related specifically to the intended Problem Statement/s.</td>
</tr>
<tr>
<td>25%</td>
<td>2. Functionality and Feasibility</td>
<td>Measures the degree of functionality and feasibility of the proposed solution/s relevant to the specific Problem Statement/s, in particular regarding whether these can be realistically executed (up to live) within a reasonable time period.</td>
</tr>
<tr>
<td>15%</td>
<td>3. Market Potential and Viability</td>
<td>Measures the potential of the proposed solution/s to be adopted in the market, in particular its/their long-term survival and ability to sustain profits over a period of time.</td>
</tr>
<tr>
<td>15%</td>
<td>4. Public Good</td>
<td>Measures the benefit of the proposed solution/s to market players and users, e.g. from opening up the source code, and technology that can become part of core infrastructure or otherwise become a public good of a jurisdiction or the central banking community.</td>
</tr>
<tr>
<td>15%</td>
<td>5. Impact</td>
<td>Measures the impact on advancing trade finance, in particular whether it would bring transformational improvements once deployed and break existing barriers/problems/challenges.</td>
</tr>
<tr>
<td>15%</td>
<td>6. Innovation and creativity</td>
<td>Measures how innovative and creative the proposed solution/s related to the Problem Statement/s is/are.</td>
</tr>
</tbody>
</table>
TechChallenge - Application Form

This TechChallenge is open to all types of companies – early or late stage start-ups, SMEs and established companies – as well as to technology research institutes and academia. Proposals will be judged by a panel of judges in accordance with the judging criteria set out in the Information Pack. Different prize categories will be available as sponsorship. Selected winners will be taken forward to prototype development with the sponsor as per the timeline set out in the Information Pack.

We look forward to receiving your completed Application Form!

1. High-level Company Profile

<table>
<thead>
<tr>
<th>1.1. About Your Company</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Company name and registration details</td>
<td>Click or tap here to enter text.</td>
</tr>
<tr>
<td>Address</td>
<td>Click or tap here to enter text.</td>
</tr>
<tr>
<td>Years in business</td>
<td>Click or tap here to enter text.</td>
</tr>
<tr>
<td>Number of employees</td>
<td>Click or tap here to enter text.</td>
</tr>
<tr>
<td>City/cities which your proposed project team operates from</td>
<td>Click or tap here to enter text.</td>
</tr>
<tr>
<td>Website</td>
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1.2. Contact Point

| Full name | Click or tap here to enter text. |

1 Technological research institutes and academia may read company as institute or university.
Application Form

(Please fill out the Microsoft Word version downloadable from the TechChallenge website)

2. High-level Summary of Proposal(s)

2.1. Please indicate which problem statement(s) you intend to solve.

Please click inside the box and then the arrow on the right to choose from the drop-down menu

2.2. Please summarise your proposal, in particular:

a) The innovative nature of your proposed technology solution(s) in key words only, incl. the use of novel technologies such as AI, machine learning, big data analytics, DLT, IoT, federated learning, homographic encryption, etc;

[Max. 200 words per problem statement you are solving]

b) How your proposed technology solution(s) works, incl. functionality, feasibility and whether it is a solution that connects or is best integrated into existing solutions/ TradeTech platforms/ single windows, or whether it is a standalone solution/ platform:

[Max. 200 words per problem statement you are solving]
c) How your proposed technology solution(s) addresses the selected problem statement(s):

[Max. 200 words per problem statement you are solving]


d) The viability of your proposed technology solution(s), incl. technical viability in the case of connecting Digital Islands or in case of building solutions onto existing platforms; competitive advantages, addressable market, growth path, adoption to date, (potential) network effect or profitability in case of standalone solutions/platforms; and/or targeted public good outcomes in the case of public goods.²

[Max. 200 words per problem statement you are solving]

3. High-level Overview of Credentials

3.1. Trade Finance Experience: please provide details for key projects/companies you wish to highlight [feel free to copy the box if you wish to highlight several projects/companies]

| Project/ company name | Click or tap here to enter text. |

² In economics, a public good refers to a commodity or service that is made available to all members of a society. Often, though not always, these services are administered by government authorities and paid for through public funds. In the context of this TechChallenge, public goods include Technology Solutions that can be administered and paid for by government(s) and/or central bank(s) to enhance the functioning of the financial system. Public goods could also include technology solutions placed in the BIS Innovation Hub cloud for use by the Central Banking community or open-sourced technology. The following podcast contains more detail of the BIS Innovation Hub mission in this regard: https://bispodcast.libsyn.com/bis-innovation-hub.
3.2. **Tech/ FinTech/ TechFin/ TradeTech Experience: please provide details for key projects/ companies you wish to highlight**  
*feel free to copy the box if you wish to highlight several projects/ companies*

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<th>Year and duration</th>
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<td>Public website (if any)</td>
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3.3 **Relevant awards, prizes, recognitions or third-party publications mentioning the project/ company, if applicable**

Click or tap here to enter text.

3.4 **For start-ups, admission to/ graduation from accelerator, incubator, sandbox or regulatory sandbox, if applicable**
4. Relevant Project Team

[Feel free to copy the box if you wish to highlight all key project team members]

<table>
<thead>
<tr>
<th>Full Name</th>
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<tr>
<td>Position</td>
<td>E.g. solution architect, data scientist, engineer, developer, product lead, project lead etc.</td>
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<td>Relevant experience</td>
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<td>Certification (if any)</td>
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5. Detailed Proposal

[Please address the below in max. 30 PowerPoint slides OR max. 15 A4 pages per Problem Statement you are solving. Attach this document to your completed Application Form]

5.1. Company Profile

a) Company background, history and focus/ mission statement

b) Bios of project team that plays/ will play a central role in executing the proposal, highlighting relevant STEM skills

c) For start-ups, unlisted companies or SMEs –
   - bios of the founders/ management team, highlighting tenure with the company, management and domain experience
5.2. Technical Proposal

a) More detail for what is set out under section 2 above

b) Detailed technology stack/ proposed technology solution(s), incl. -
   - novelty/ originality/ uniqueness of the technology solution(s)
   - competitive positioning, advantages and differentiation

c) Whether the solution, in part or in full, is/ will be Intellectual Property (IP) protected and if so where (e.g. patents, patents pending, copyrights, trade secrets, trademarks, domain names)

d) Whether the technology solution is live/ ready for deployment/ in development/ conceptual/ alpha launch/ beta launch/ MVP/ internal/ external pilot, accompanied by explanation as needed

e) For live solutions -
   - critical metrics and performance indicators, incl. e.g. revenue growth, sales funnel, customer churn, transaction volumes, speed etc.
   - major product milestones, incl. future product roadmap, development plans and planned upgrades
   - link to live demo

f) For solutions not yet live/ that require tailored development -
   - whether it will build on a standing solution and, if so, in what manner/ by adding which types of tailored features
   - proposed project approach and methodology
   - detailed timeline and plan (up to completion of a prototype)
Application Form
(Please fill out the Microsoft Word version downloadable from the TechChallenge website)

- link to a prototype, demo, sandbox or other development site, if already available

\[ g \] Key technical implementation challenges

\[ h \] Key dependencies on external parties, e.g. single windows, customs services, TradeTech platforms, banks, etc.

\[ i \] Governance framework, incl. consensus mechanisms for DLT or ISO and other standards adopted as part of the solution(s)

\[ j \] Key legal, governance, behavioral, regulatory or other implementation challenges

\[ k \] Whether your proposal is transformational, open-sourced, or technology that can become part of core infrastructure or otherwise become a public good of one or more jurisdictions or of the central banking community, incl. proposed roadmap and cost to achieve this

\[ l \] Whether your solution leverages or helps pursue international initiatives such as the Digital Standards for Trade Initiative or the Global Legal Entity Identifier (LEI) system or the United Nations efforts to enable electronic commerce and signatures

\[ m \] Case study to analyse use cases, incl. how it addresses the problem statement(s)

\[ n \] Any further details as you see fit to align with the judging criteria shown in the Information Pack or that you wish to showcase/ emphasise.

6. Prototype Stage

6.1. Selected winners will be required to submit the following deliverables to be hosted in the HKMA-ASTRI Innovation Hub by mid-2021 or earlier:

- a prototype of the proposed solution (open-sourced is welcomed)
- a demo (videos or screen flows) to present the working mechanism and how to navigate the prototype
6.2. Please confirm that you will be able to meet this expectation and timeline:

- a sandbox environment for interested party to test the Open APIs
  (if any) of the prototype
- detailed governance framework

Click or tap here to enter text.

6.3. Please advise the technical resources that you require from the HKMA-ASTRI Innovation Hub (e.g. ram, cpu, and storage) for submission of the prototype:

Click or tap here to enter text.

7. Terms and Conditions

7.1. Please confirm that you agree to the Terms and Conditions set out on the next page:

Click or tap here to enter text.

7.2. If you believe that the information you submit is competitively sensitive and must not be submitted to any one or more of the judges shown in the Information Pack or listed on the TechChallenge website, please say so and explain why:

Click or tap here to enter text.
Application Form
(Please fill out the Microsoft Word version downloadable from the TechChallenge website)

Submitted by [Click or tap here to enter text.] on behalf of [Click or tap here to enter text.]

Please pdf the completed Application Form before sending. Thank you!
Application Form
(Please fill out the Microsoft Word version downloadable from the TechChallenge website)

Terms and Conditions

By submitting this completed application form as a TechChallenge participant ("Participant"), you hereby agree that you have read and agreed to be legally bound by these terms and conditions ("Terms and Conditions"), which will govern your participation in the "TechChallenge – Digitising Trade Finance" (the "TechChallenge") co-organized by the Bank for International Settlements ("BIS") Innovation Hub and the Hong Kong Monetary Authority ("HKMA").

Your submission(s)
Upon submission, your submission will thereby be made available to the Deloitte Blockchain Lab and the judging panel. You represent and warrant that you have all the necessary authorizations, permissions, licenses and agreements to participate in the TechChallenge and to all material submitted, including the proposal and any associated prototype or technology solutions (jointly the "Proposal"), and that your participation in the TechChallenge and your submission is in compliance with all applicable laws, rules and regulations.

While cash sponsorship will be offered to the winning Proposals, TechChallenge Participants participate in the TechChallenge at their own cost. To the extent protected by law, you will retain the title, rights of ownership, or intellectual property rights to the Proposal that you submitted in response to the Problem Statements. Notwithstanding the foregoing, in the event that your Proposal is selected by the judging panel as a winning Proposal, you agree to present it during the Hong Kong FinTech week in November 2020 in a manner and format agreed with the organizers and the HKMA and you also agree to developing or making available a prototype by mid-2021 or earlier.

Amendment, suspension and termination
The BIS and the HKMA may at any time vary or amend these Terms and Conditions by posting the amended Terms and Conditions on the TechChallenge website. If you continue as a Participant in the TechChallenge after such amended Terms and Conditions have been posted, you will be deemed to have accepted the amended Terms and Conditions. If you do not agree to the amended Terms and Conditions, you have the right to withdraw from the TechChallenge.

The BIS and the HKMA may discontinue the TechChallenge at any time and for whatsoever reason. You agree that BIS and the HKMA have the right at their sole and absolute discretion and without notice or liability to restrict, suspend, or terminate your participation in the TechChallenge, without assigning any reason. You are also responsible for ensuring that all persons who act on your behalf in the TechChallenge are aware of and comply with these Terms and Conditions.

Use of the names of BIS or the HKMA
You may not use the name "Bank for International Settlements", "BIS", "Bank for International Settlements Innovation Hub", "BISH" or an equivalent name or the logo of BIS for any other than internal purposes in any advertising, publicity releases, presentations, or publicly distributed documents, without the prior written consent of BIS.

You may not use the name "Hong Kong Monetary Authority", "HKMA" or an equivalent name or the logo of the HKMA for any other than internal purposes in any advertising, publicity releases, presentations, or publicly distributed documents, without the prior written consent of the HKMA.

Notwithstanding the foregoing, the TechChallenge Participants that submitted winning Proposals may publish the fact of their participation in the TechChallenge, provided that it is never suggested that the Proposals are endorsed or recommended by the BIS or HKMA.

Limitation of liability and indemnity
Neither the BIS nor the HKMA warrant or guarantee the accuracy, completeness or fitness for purpose of any information or material on this website. Under no circumstances shall the BIS or the HKMA be liable for any loss, damage, liability or expense suffered in connection with reliance by any person on any such information or material. Neither the BIS nor the HKMA shall be liable to you for any damages, losses, expenses, liabilities under any causes of action (whether in contract or tort including, but not limited to negligence, or otherwise) caused through the use of, or the inability to use, https://www.techchallenge.finnohub.org/.

You agree to indemnify and hold the BIS and the HKMA harmless from all claims, demands, actions, proceedings, liabilities (including statutory liability and liability to third parties), penalties, and costs (including without limitation, legal costs on a full indemnity basis), awards, losses and/or expenses, due to or arising out of: (i) your use of or
Application Form
(Please fill out the Microsoft Word version downloadable from the TechChallenge website)

connection to https://www.techchallenge.finnhub.org/; (ii) your participation in the TechChallenge; (iii) your submission of the Proposal in response to the Problem Statements; (iv) your breach of any terms and conditions of these Terms and Conditions; (v) your violation of any rights of another person or entity, including intellectual property rights; or (vi) your breach of any statutory requirement, duty or law.

Governing law and dispute resolution
These Terms and Conditions shall be governed by and construed in accordance with the laws of Hong Kong, without giving effect to any principles of conflicts of law. Any dispute, controversy or claim arising out of or relating to this contract, or the breach, termination or invalidity thereof, shall be settled by arbitration in Hong Kong in accordance with the UNCITRAL Arbitration Rules for the time being in force. The number of arbitrators shall be one (1). The language to be used in the arbitral proceedings shall be English. Neither the submission of a dispute to arbitration nor any other provision of these Terms and Conditions shall constitute a waiver, express or implied, of the BIS privileges, immunities and exemptions in Hong Kong or any other relevant jurisdiction, which are specifically reserved.
Bibliography


Bibliography


WTO (2016), “Trade Finance and SMEs: Bridging the gaps in provision” (https://www.wto.org/english/res_e/publications_e/tradefinsme_e.htm);


Thank you,
we look forward to receive your submission by 7 September 2020.

website: TechChallenge.finnohub.org
email: info.TechChallenge@finnohub.org