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THE BOSTON CONSULTING GROUP

DIGITAL COMMERCIAL SUPPLY CHAINS AND TRADE

UNLOCKING THE FULL
POTENTIAL OF TRADE AND
COMMERCE FOR DIGITAL INDIA

DISCUSSION PAPER





The Boston Consulting Group

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SWIFT

In 1973 SWIFT SCRL was founded on the principle that collaboration and cooperation can solve big, common problems. Four decades on, the banking co-operative operates a financial messaging platform that brings together 11,000 financial institutions and corporations across 215 countries. Built on this are a variety of financial applications, business intelligence, reference data and most recently compliance services. The network and its members exchange more than 25 million payments, securities, trade finance and treasury messages daily in a highly reliable, secure and resilient manner.

SWIFT India

SWIFT India Domestic Services Pvt Ltd ("SWIFT India") is a privately held company, with shareholders comprising of SWIFT SCRL and a cross section of Indian public and private sector banks. The shareholders of SWIFT India currently comprise of (in alphabetical order) AXIS Bank Ltd, Bank of Baroda, Bank of India, Canara Bank, HDFC Bank Ltd, ICICI Bank Ltd, Punjab National Bank, State Bank of India, SWIFT SCRL and Union Bank of India.

SWIFT India Domestic Services Pvt Ltd ("SWIFT India" or "the Company"), founded on similar principles, is a financial messaging services provider formed by SWIFT SCRL and Indian banks, for the domestic Indian financial community and by the community.

Through shared resources and capital, SWIFT India functions with the objective of enabling harmonized exchange of structured financial information between domestic participants in the domestic Indian community, thereby

- a) Reducing costs and risks.
- b) Expanding the reach of automated, standardized and secure exchange of information across the industry.
- c) Enabling new instruments, opportunities and markets for the industry.

EXECUTIVE SUMMARY

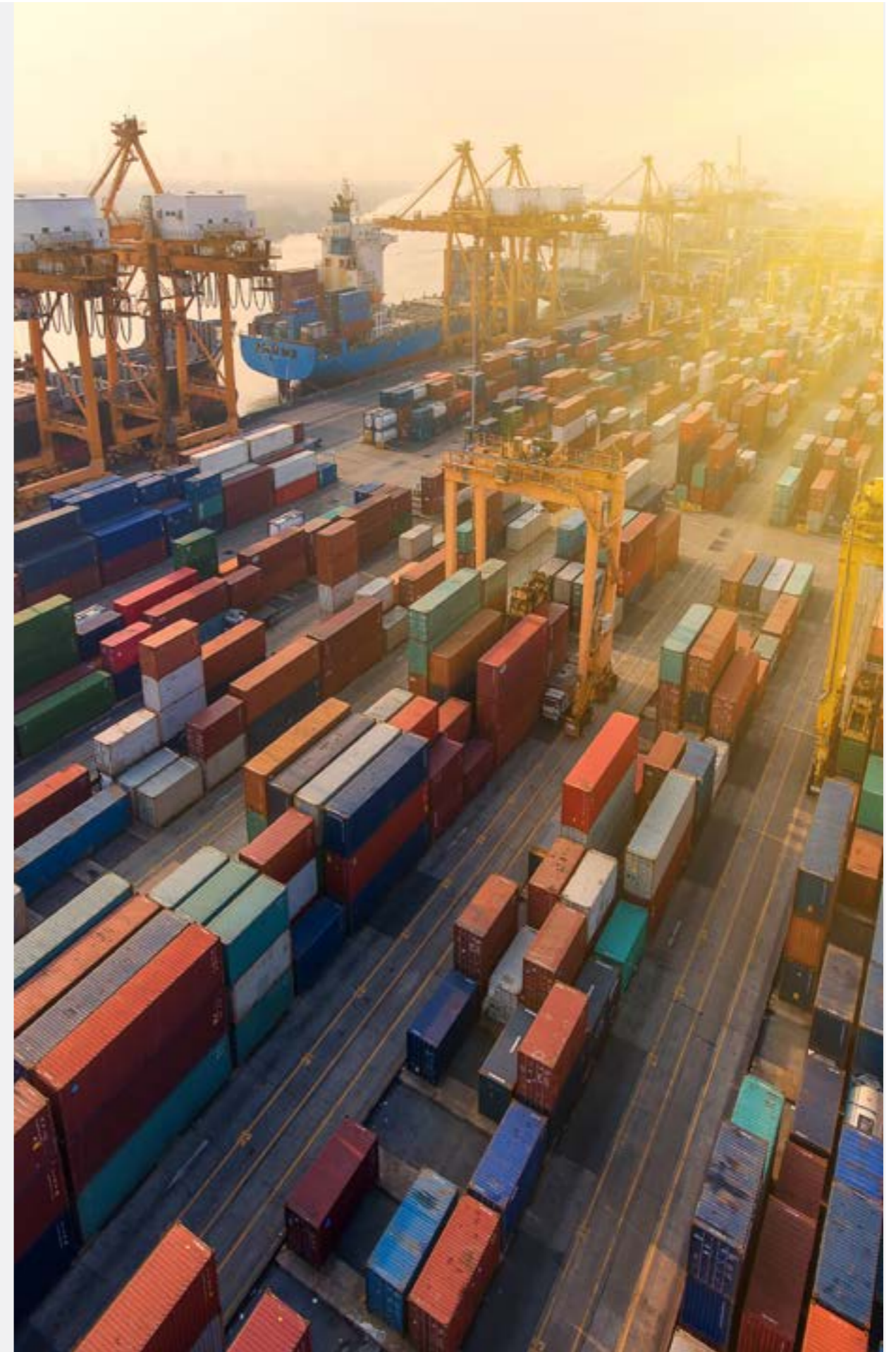
Even as globalization is being contested and international trade is slowing, trade continues to be strategically important for India. India's aggregate trade, across both inland and foreign, stands at ~\$2T. Domestic trade, including that between and within firms, is ~\$1.1T whereas cross border trade is ~\$0.9T. Apart from economic importance, trade provides huge employment. With initiatives like GST that aim to dismantle barriers to trade, the size and importance of trade is set to increase.

Currently, around 40% of trade is backed by trade finance. Trade and its finance are currently very inefficient. India significantly lags on key metrics such as turn around time (TAT) and operating costs. Reliance on physical documentation, requirement of liaison with multiple stakeholders on disparate systems, and lack of transparency increase the cost of compliance. This report highlights some of the key issues with trade finance processing and advocates its digitization.

GST will force commercial entities across the board to embrace digitization. This is a great

opportunity for banks to offer end to end digital solutions for industrial supply chains with payment, ordering, financing and reconciliation facilities. While Banks have started to offer digital platforms for trade finance processing, there is significant room for improvement. Banks' digital platforms must support the end to end trade value chain of the customers and focus on driving adoption of the platforms.

Digitization of trade finance is incomplete without a comprehensive digital trade processing platform that enables digitization of underlying trade documents and establishes a standard interface across all stakeholders. Such a platform will not only reduce trade costs but also boost overall trade volumes (5-8% in exports alone). Experience from many countries has been very encouraging. It is argued here that the government should establish a non profit entity ("National Trade Processing Corporation" along the line of National Payment Corporation of India) with a mandate to provide such an interoperable trade platform with seamless linkage to all stakeholders and facilitate single window services for trade.



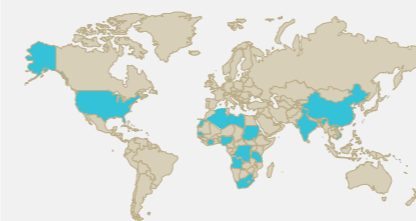
NATURE OF GLOBALIZATION IS CHALLENGING CONVENTIONAL TRADE AND PUSHING GLOBAL DIGITAL INTEGRATION



Nature of trade will change significantly over the next few years. Global trends such as fragmented economic growth, reduced tax arbitrage and increased economic nationalism will drive localized manufacturing and decentralization. This will result in lower goods export income for the same amount of investment and deceleration of goods trade.

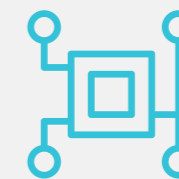
However, non-goods trade will continue to increase on the back of intellectual property, advisory and services. And physical decentralization will be accompanied with heavy digital integration of global value chains.

Global economic model



- Multi polar, fragmented growth
- Low trade multiplier
- Increasing divergence

Global business model



- Digital integration
- Physical decentralisation

Global political model



- Economic nationalism
- Reduced cross-border arbitrage (cyber security, tax)

VALUE OF TOTAL TRADE IN INDIA EXCEEDS \$2TN; POTENTIAL FOR SIGNIFICANT GROWTH

Growth of Indian economy has resulted in significant trade, estimated at ~\$2tn.

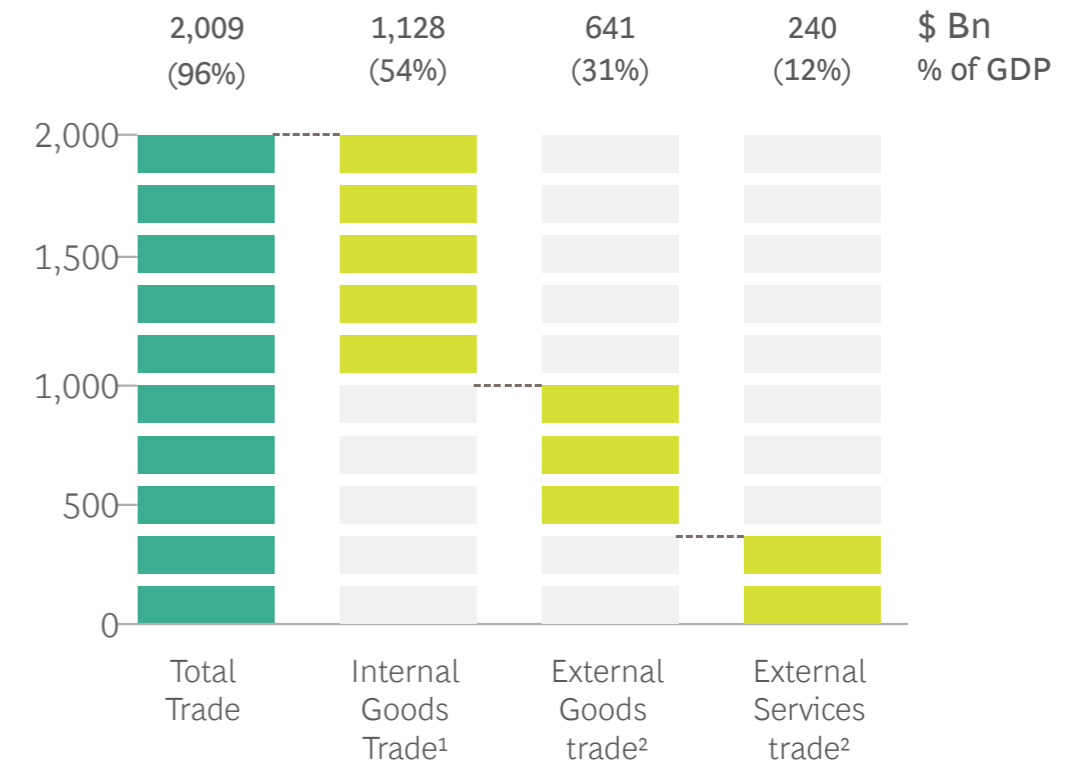
Interstate goods trade between and within firms is ~\$1.1tn. Foreign trade is ~\$0.9tn.

Comparison of India's Trade to GDP value against other economies indicates significant potential. Trade is poised to increase significantly.

Currently, ~40% of trade is backed by trade finance and is poised to grow further with rising convenience in supply chain and financing.

1. 2015 Figures includes only merchandise trade (inter and intra firm trade) 2. Apr 15-Mar 16 figures
 Note: 1 USD = Rs 65 assumed to convert GDP value
 Source: India Budget, Press Information Bureau, Economic Survey, Bank for International Settlements

India's aggregate trade value is sizeable



Indian trade has significant potential to grow further

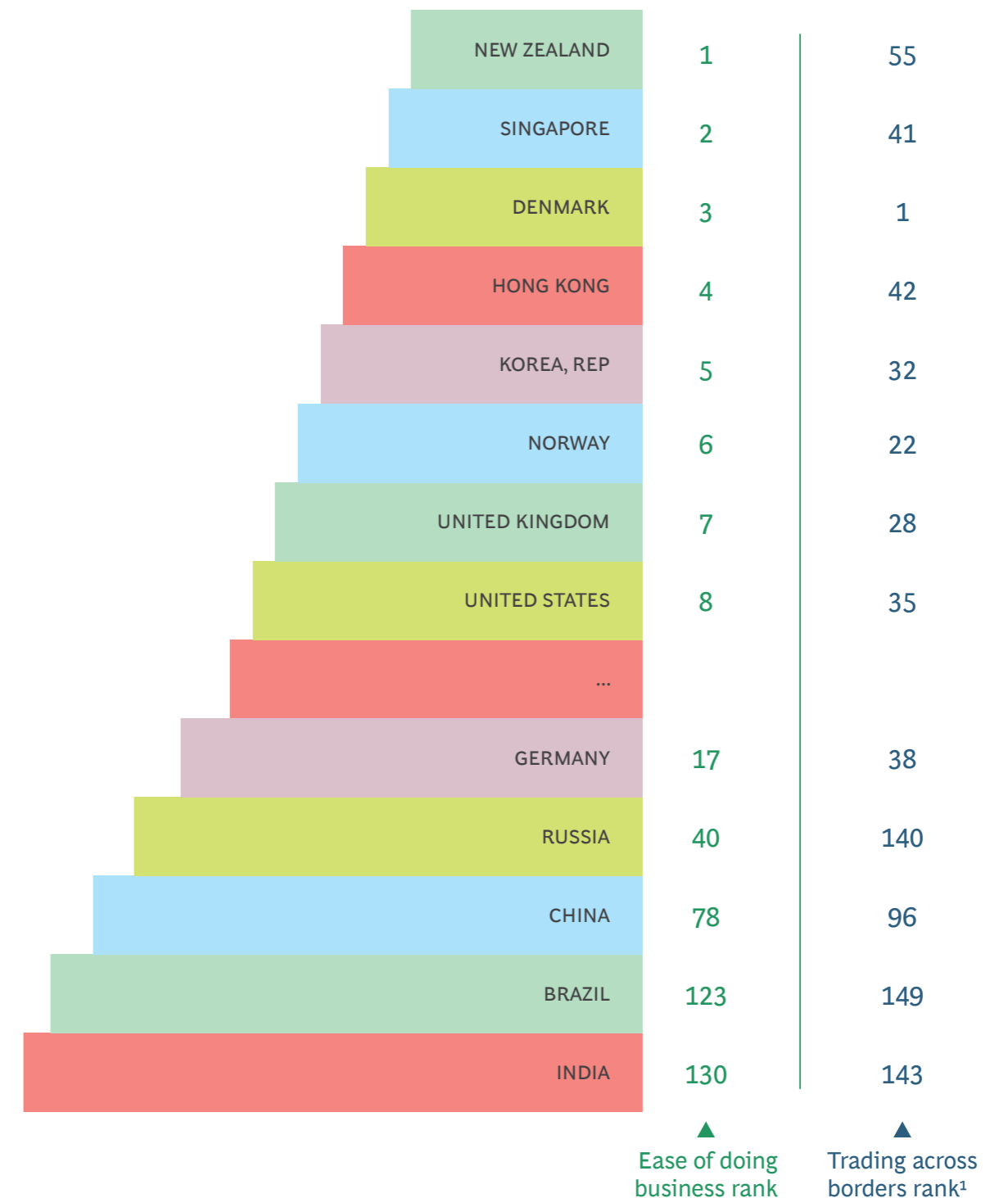


EASE OF TRADE A KEY DRIVER OF EASE OF DOING BUSINESS – INDIA LAGGING BEHIND WITH LARGE MARGIN

India ranks 143 in trading across borders and 130 in the ease of doing business ranking, lagging significantly behind other similar economies

Given the focus of the government in improving India's ease of doing business rank, improving trade efficiency is imperative.

Country rankings across Ease of doing business and Trading across borders



1. Trading across borders rank is representative of time and cost associated with trade.
Note: Trading across borders is one of the ten components of Ease of doing business rankings
Source: World Bank Ease of Doing Business

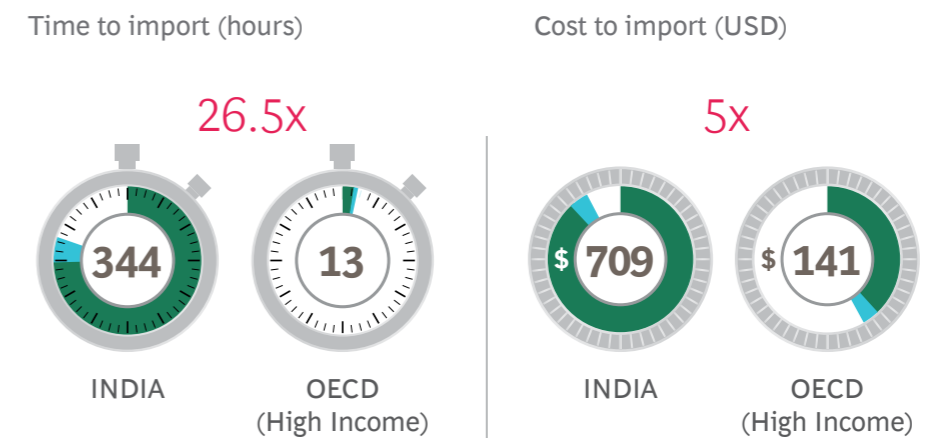
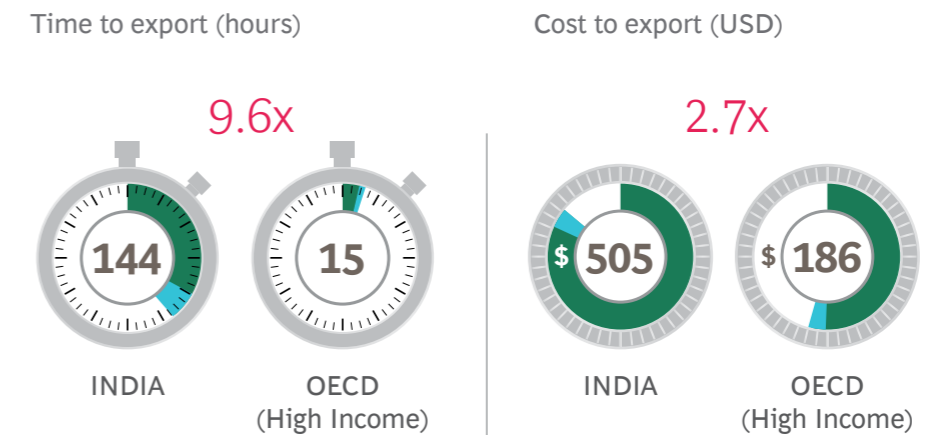
GAPS IN TURNAROUND TIME AND OPERATING COSTS ASSOCIATED WITH TRADE

Today the trade processing in India involves physical documentation, poor adoption of digital across the trade cycle, and manual processing, which makes seamless trade a challenge. India's cross border trade takes 10x-25x times longer and is 3x-5x times more expensive vs high income OECD nations. These inefficiencies also limit the speed and efficiency of trade finance processing.

Digitization of trade processing can help overcome the inefficiencies in trade and trade finance processing and will benefit all stakeholders including corporates, banks and government agencies. It is estimated that Indian exports alone can be boosted by 5-8% percent through digitization. In addition, a 10% improvement in efficiencies could yield ~\$5 billion in logistics cost savings each year.

Source: World Bank Ease of Doing Business, CII MAERSK report

Long gap to bridge in time and costs associated with foreign trade



Documentary compliance
Border compliance

INTRODUCTION OF GST OFFERS MAJOR OPPORTUNITY TO PICK UP OVERALL TRADE DIGITIZATION

Trade to get a push

GST is likely to increase the competitiveness of Indian goods and services overseas and give boost to exports by 3-6%¹. Also, lower artificial barriers and a uniform tax regime will enhance domestic trade.

Digital adoption in commercial entities encouraged

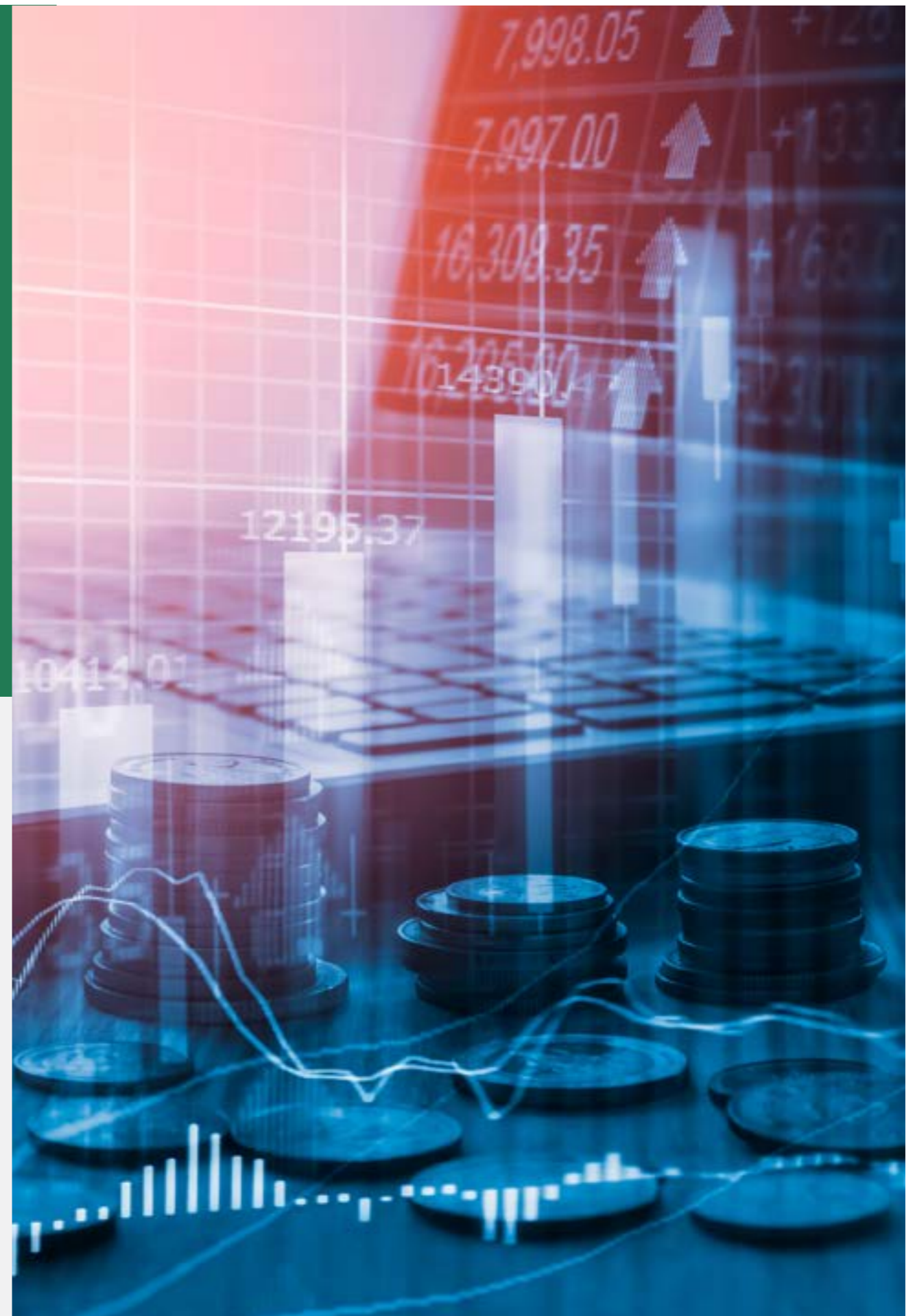
To benefit from GST and to reduce compliance costs, corporates, including SMEs will need to adopt digital.

Industrial value chain digitization to get a push

Inter-connected nature of GST will lead to a substantial part of the commercial value chain getting digitized in order to facilitate easy tax credits.

GST expected to increase exports by 3% to 6%¹

1.NCAER report
Source: NCAER, Finance Commission, Financial Express,

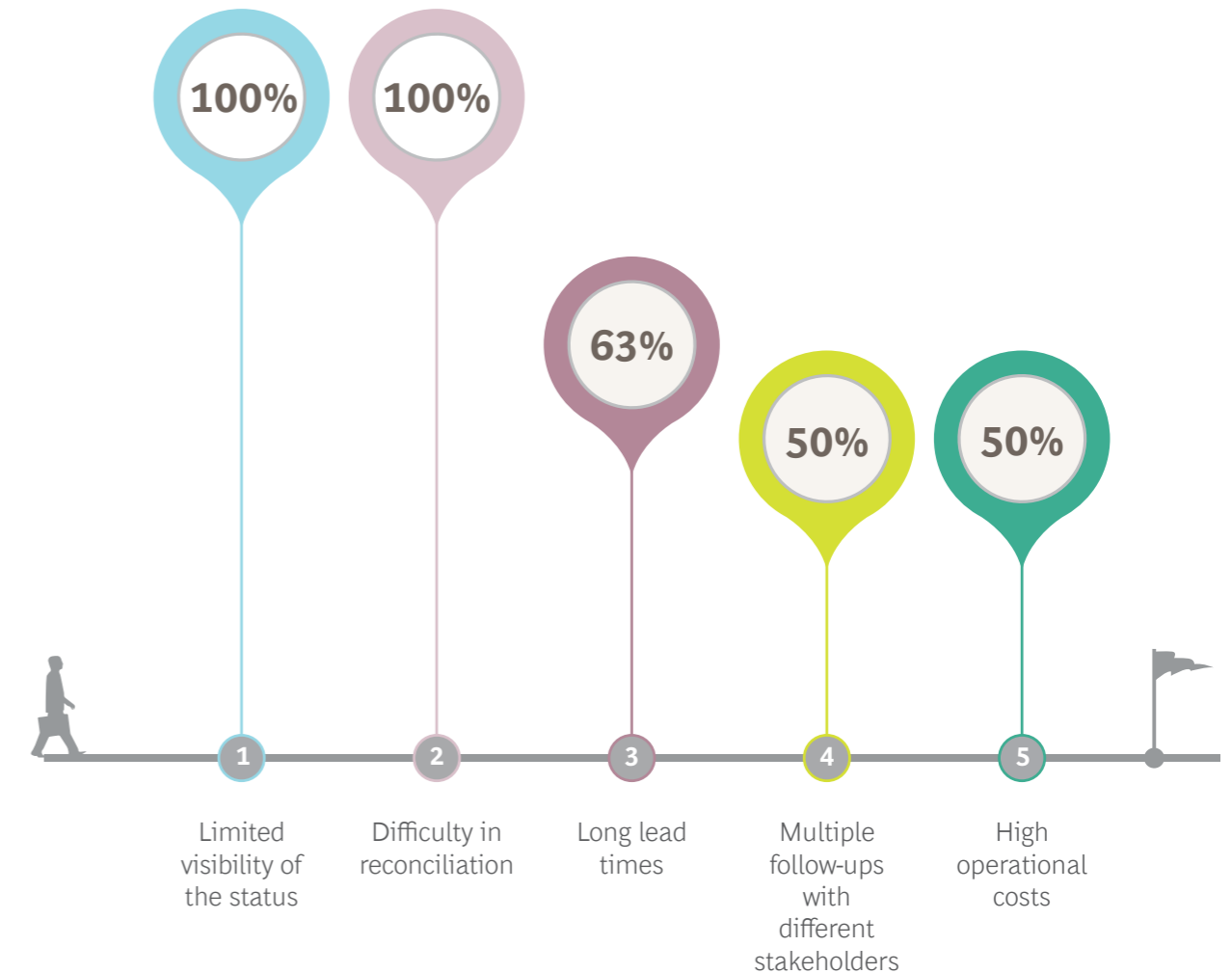


ADOPTION OF DIGITAL TRADE PROCESSING BY CORPORATES CRITICAL

Paper based processing and having to deal with multiple agencies lead to a number of challenges for corporates, including:

- **Limited transparency:**
Of transaction status, reactive system
- **Reconciliation challenges:**
Paper based processes make reconciliation difficult
- **Long lead times:**
Primarily driven by inefficient processes
- **Need to follow-up separately:**
With different entities and no single window mechanism
- **High operational costs:**
Primarily driven by the sub-optimal processes

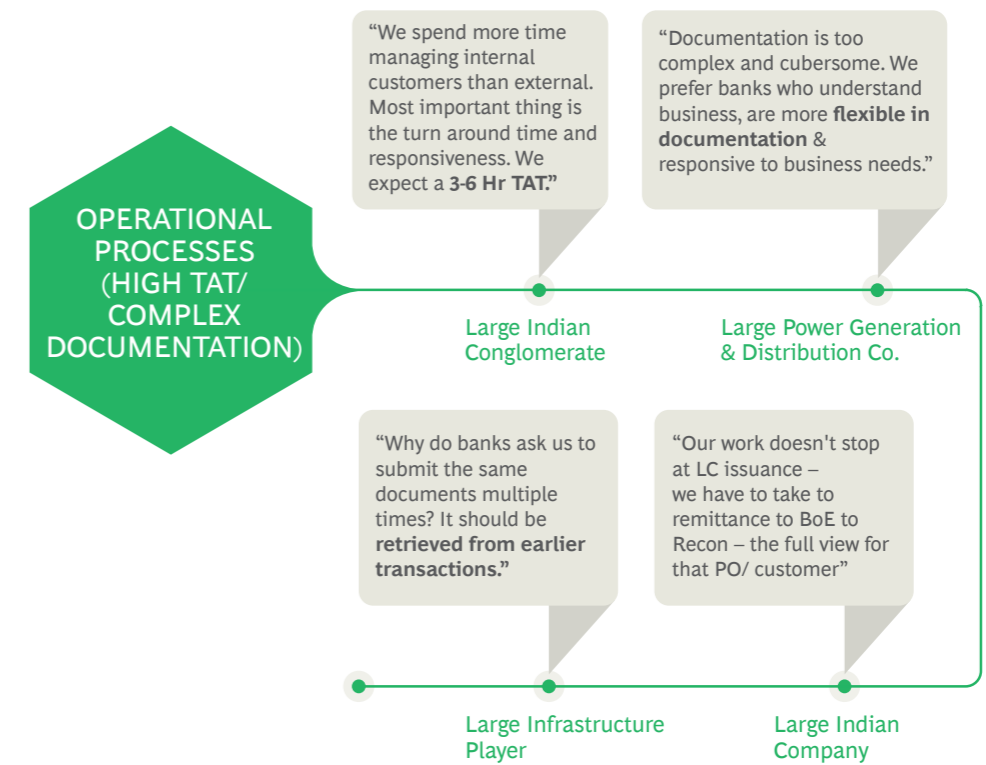
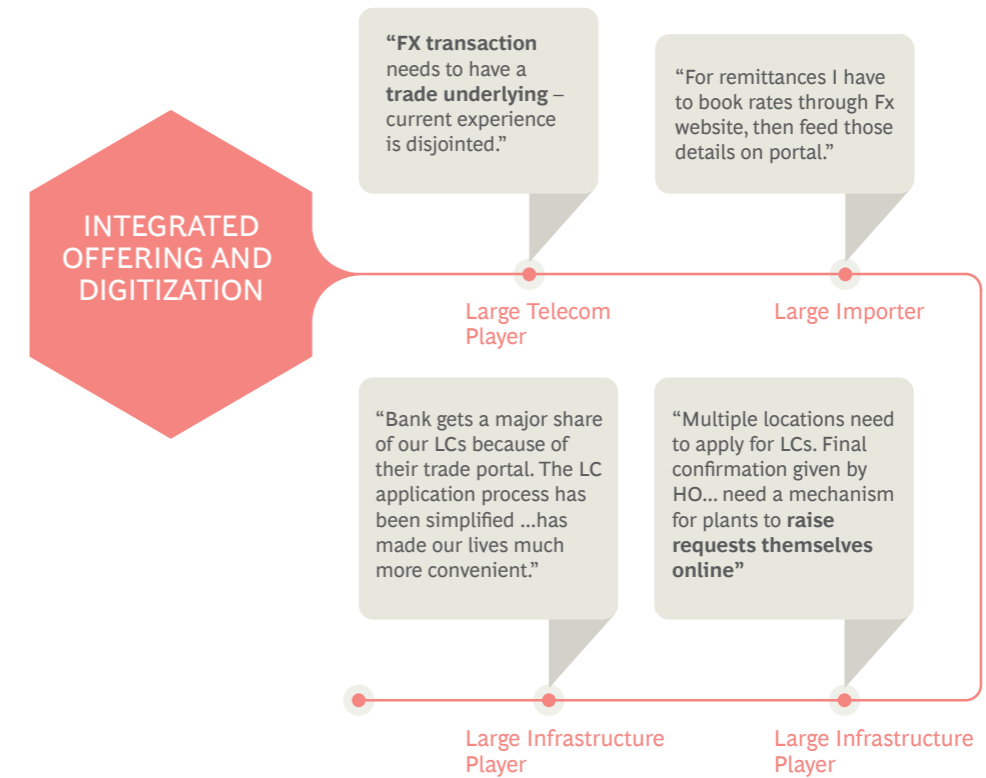
Top 5 challenges faced by corporate customers in current trade finance processes (Percentage of respondents)



Corporates which use digital trade finance processing have 20-30% lower trade transaction costs¹

1. BCG Case experience
Source: Survey conducted across 80+ companies

CORPORATES HIGHLIGHT SEVERAL PAIN POINTS IN CURRENT TRANSACTION PLATFORMS OFFERED BY BANKS



Source: Survey conducted across 80+ companies

DIGITAL TRADE FINANCE PLATFORMS OFFERED BY BANKS ARE LIMITED TO APPLICATION REQUESTS GIVEN ECOSYSTEM CHALLENGES

More than half the banks offer digital trade finance platform to initiate requests. However, currently less than 20% of trade transactions are initiated on these platforms.

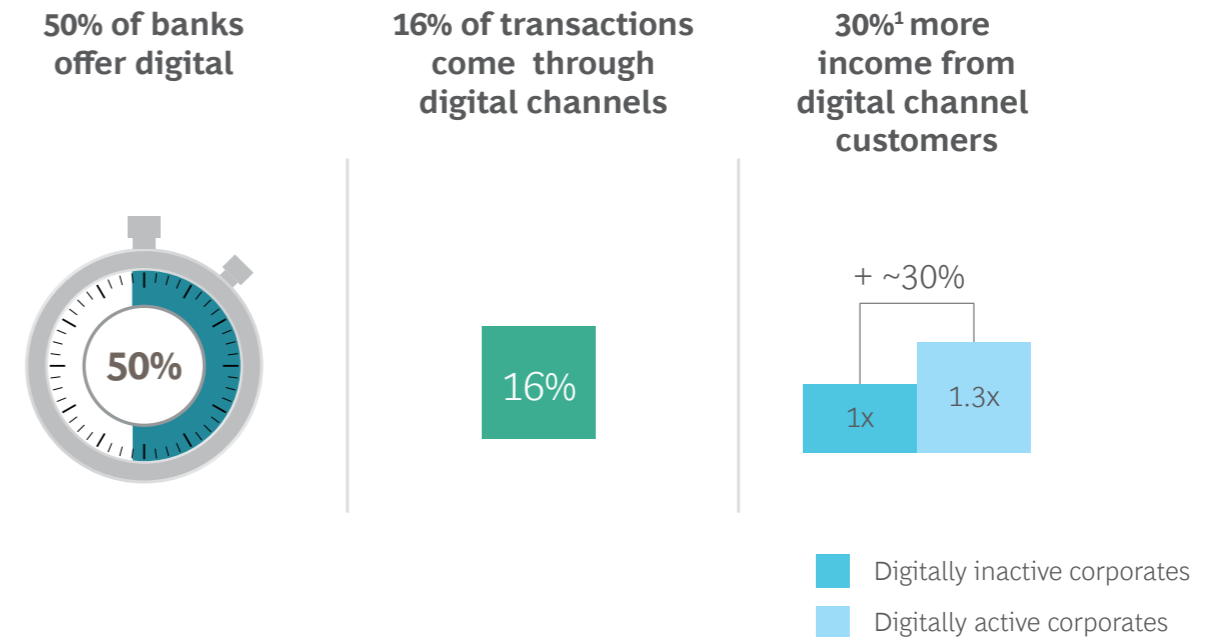
It is imperative that while these digital portals are a good start, the ultimate need for physical documentation, having to liaison with different agencies separately and lack of connected systems all lead to inefficiencies.

Addressing all the challenges of the trade ecosystem will need state intervention. Banks have significant opportunity to create advanced transaction platforms for commercial clients in light of introduction of GST.

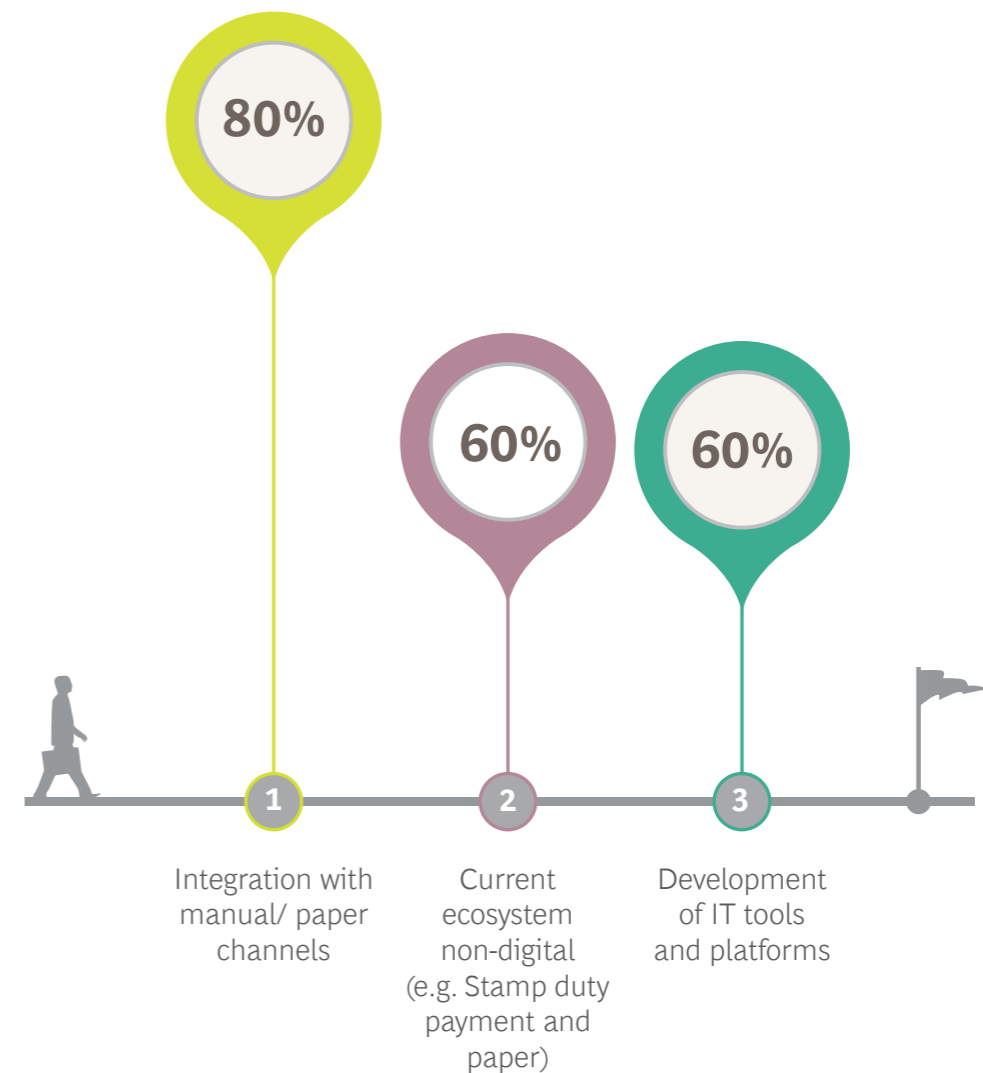
For banks, corporates using digital platform generate ~30% more income vs others¹

¹.BCG experience
Source: Survey conducted across Indian banks

Digital trade offerings by banks



Top 3 challenges faced by banks



BANKS' TRADE PROCESSING PLATFORMS NEED TO BE ENHANCED THROUGH DIGITAL INNOVATION



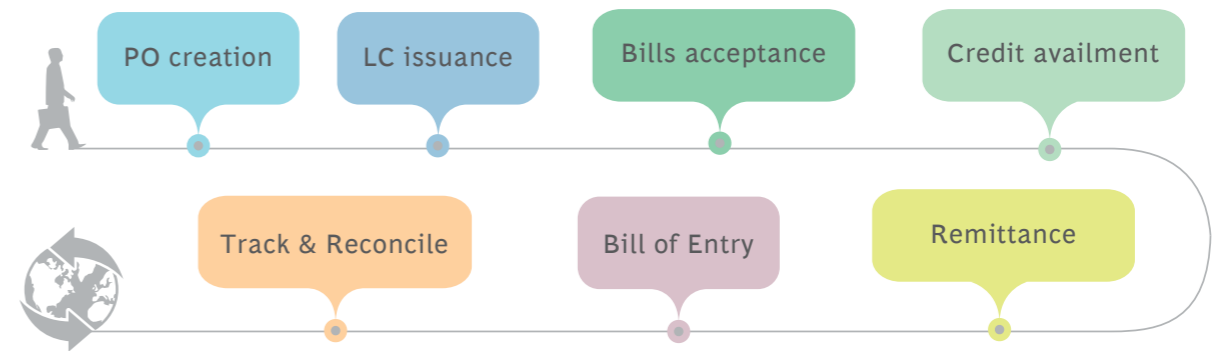
Banks should adopt a customer journey approach in redesigning their trade and transaction platforms. The platforms should permit end to end solutions starting from PO creation up to tracking and reconciliation facilities.

BCG's research with corporates highlights certain key elements of banks' transaction platforms that corporates will find extremely valuable but are currently missing.

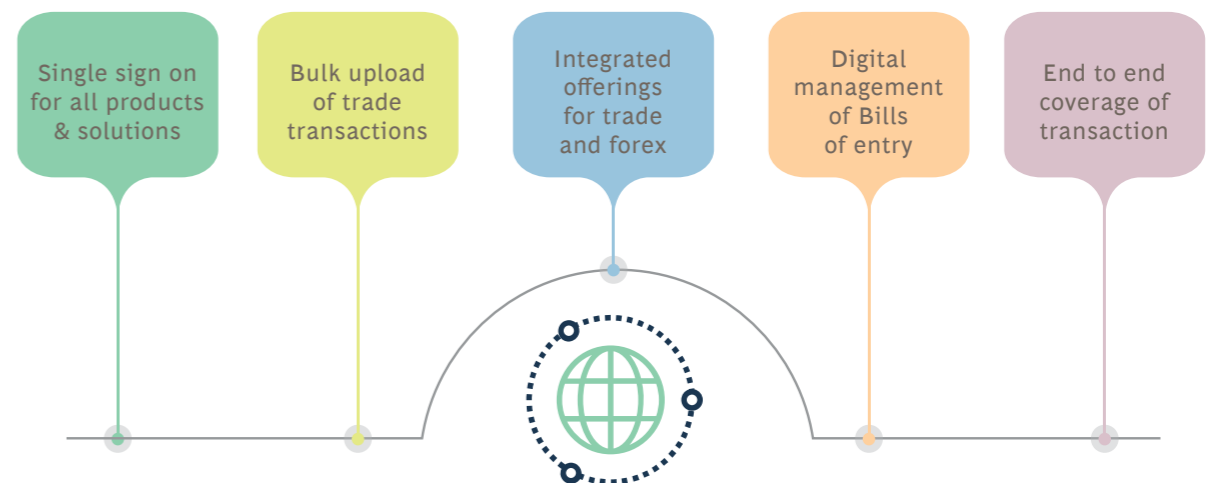
- Single sign on for all products & solutions: Many banks have multiple log in requirements
- Bulk upload of trade transactions: Bulk upload is not permitted
- Integrated offerings for trade and forex: Trade and forex are not linked and data needs to be fed all over again
- Digital management of bills of entry: Currently not present
- End to end coverage of transactions: Overall coverage needs to be introduced

In BCG's experience, an end to end proposition can increase products per customer by 3x and generate >50% more business for banks¹

End to end customer journey for trade



Digitally enhanced solutions possible at every stage



1. BCG Case Experience
Source: BCG analysis

INDUSTRY SPECIFIC VALUE ADDED SUPPLY CHAIN SOLUTIONS

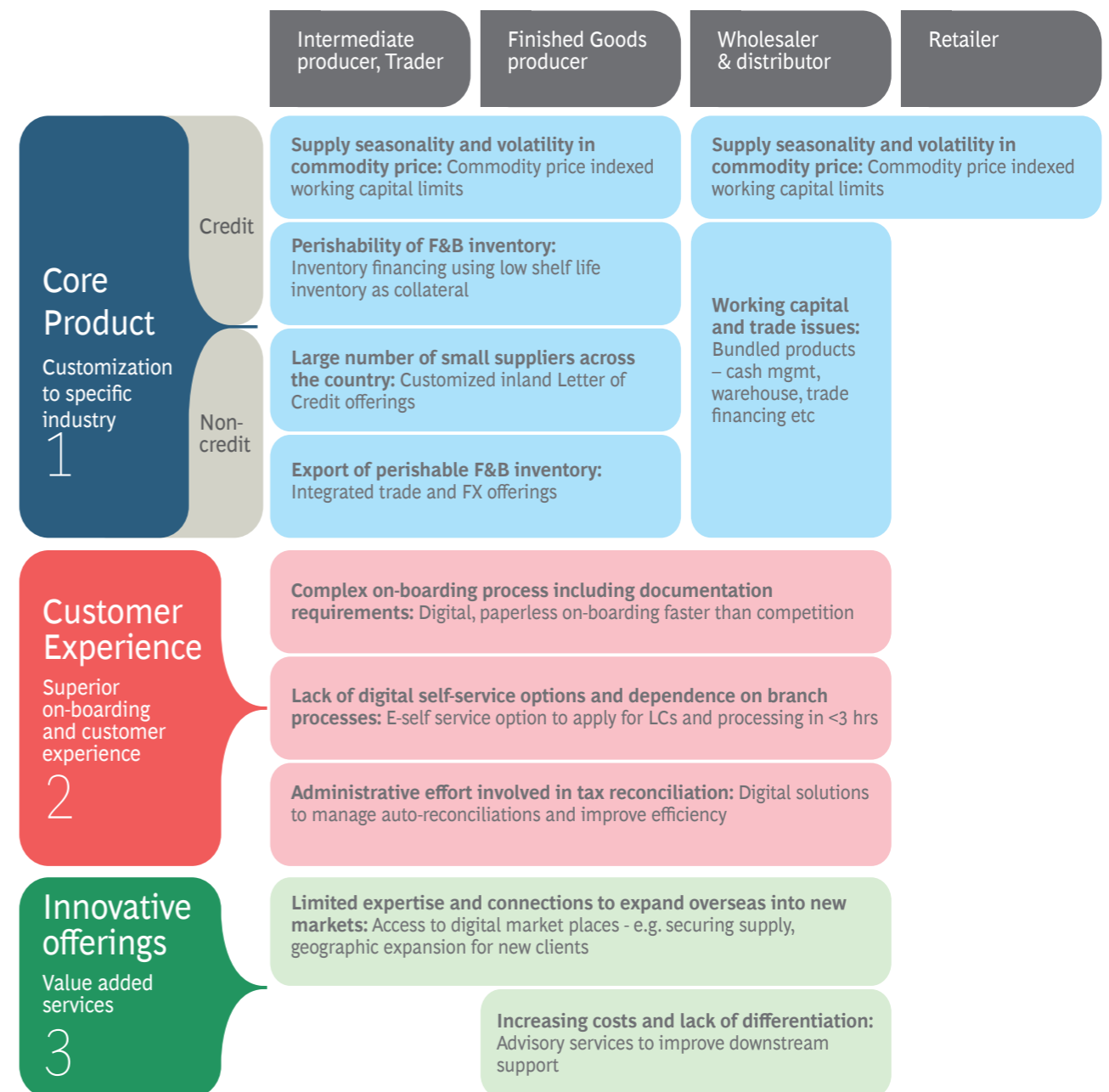
Banks should create industry specific solutions that can facilitate easy flow of information and funds across the supply chain of various industries.

Introduction of GST will drive digitization across enterprises. Industry specific supply chain platforms can ensure that various actors in the supply chain can not only make payments seamlessly to each other but also place orders, raise invoices, and get information to help reconcile their transactions.

Banks can create value added solutions for industries that go beyond merely financial transactions by providing business specific information over this platform.

For example – in Food and Beverages industry we have seen various banks taking forward innovations to solve specific pain points in the value chain to create compelling propositions for clients.

Food & Beverages industry illustration



MANY COUNTRIES HAVE LAUNCHED SINGLE WINDOW SYSTEMS FOR TRADE

Country Examples



SINGAPORE
Single window data entry for multiple transactions



MALAYSIA
Single window, re-use of data, seamless processing



SWEDEN
Electronic Customs declarations / application



CZECH REPUBLIC
Secure interoperable and integrated platform

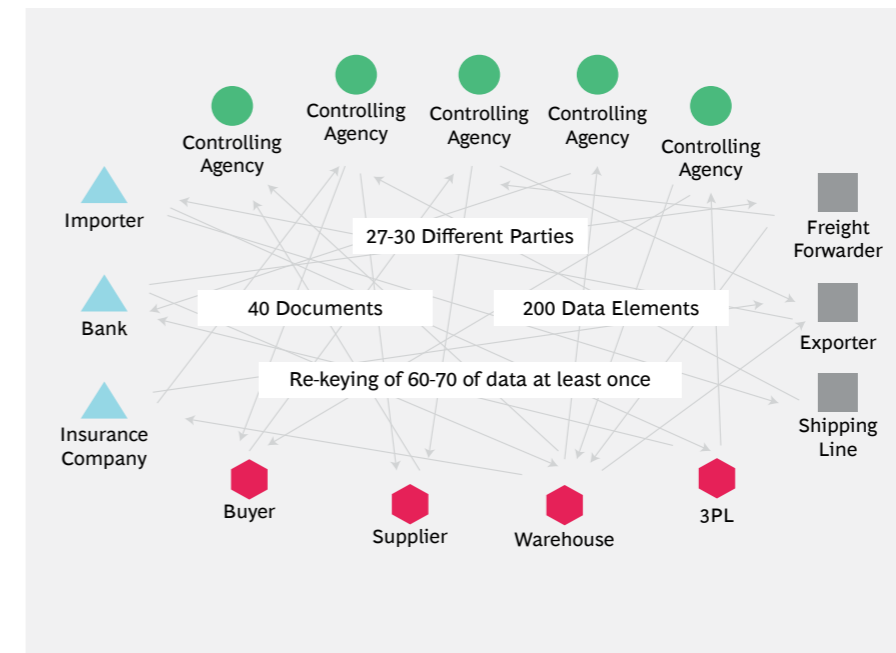


THE NETHERLANDS
Industrywide logistics integration, e-messaging

Singapore Example

Pre single window:
Singapore's trade finance system was very complex

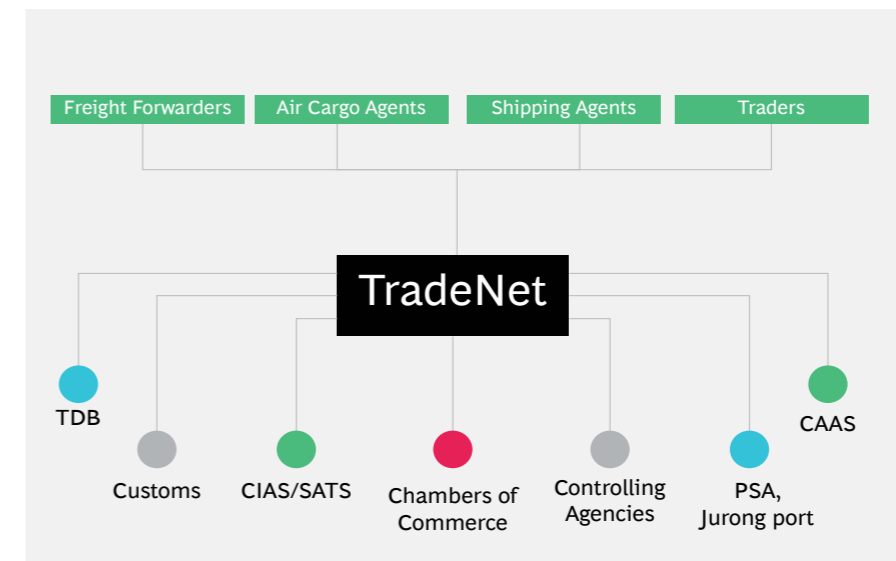
Significant manual processing; physical document; error prone; high cost of transactions



Overall Ease of Doing Business ranking

Post single window:
Efficiency improved

Integrated across 35 agencies; digital forms; faster turnaround time and improved costs



SINGAPORE EXPERIENCED TREMENDOUS IMPROVEMENT AFTER LAUNCHING ITS SINGLE WINDOW SYSTEM



Before Single Window System

After Single Window System

Required multiple agencies' endorsement – Trade Development Board, Customs and over 35 Controlling Units

Integrates controlling units' requirements **across 35 agencies**

All handled manually via dispatch clerks/ couriers

Submit and retrieve electronically (~9 mn digital transactions annually)

4-35 documents had to be completed for each transaction

1 eForm/ eDoc

Available only within office hours

24*7 availability

Took 2-7 days to process a permit

Over 90% processed in under 10 minutes

Customs duty collection by cheque

Automatic bank account deduction

PROMISING NEW TECHNOLOGICAL ADVANCES IN TRADE



Globally, organizations and banks have started experimenting and adopting disruptive technology solutions for trade finance processing.

Swift for Corporates

Swift for Corporates enables communication with multiple banking partners through a single interface.

- Corporates benefit from not having to maintain multiple proprietary bank channels
- For Banks, this could reduce costs and increase their access to new customers.

Electronic Bills of Lading (e-BoL)

eDocument platforms aim can enable paperless, efficient and transparent trade process

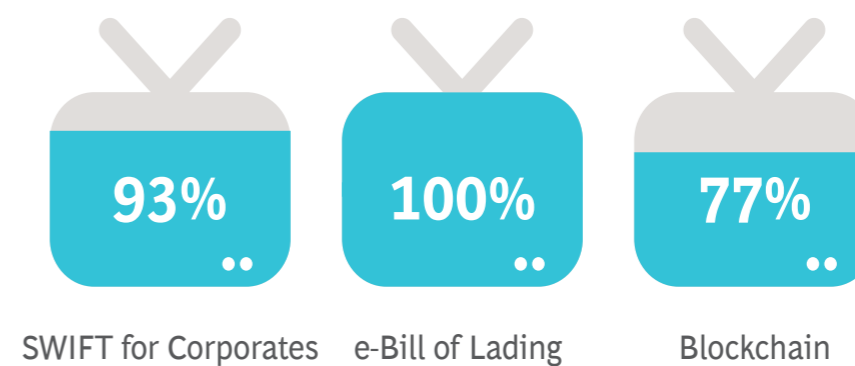
- For corporates, e-BoLs will accelerate transfer and presentation of documents, shorten payment cycle and improve the working capital position.

Blockchain

Block chain technology can enable e-documentation, eliminate fraud and improve transparency.

- 40 banks globally are backing a start-up R3CEV to develop universal standards for blockchain; trade finance is one of the pilots
- DBS and Standard Chartered launched a joint pilot using blockchain to authenticate invoices and prevent fraud.
- HK Central Bank recently unveiled a blockchain platform PoC for trade finance with participation from five large banks.

Trade Finance Emerging Technology (Percentage of respondents agreeing on potential to disrupt)



A POTENTIAL WAY FORWARD FOR INDIA

Digitally transforming end to end infrastructure supporting trade and trade finance processes

Across stakeholders, digital trade transformation initiative will require government to lead from the front. A National Trade Processing Corporation of India must be established that can act as the umbrella organization with the mandate on delivering following digital capabilities

Establish a single end to end digital infrastructure for foreign trade:

Create an integrated end to end infrastructure which facilitates seamless integration across all entities involved with the trade facilitation. Such a platform will provide a single point of data entry (single window) for customers, with digital documents once uploaded, travelling through the workflow towards digital approvals and signatures across all required entities.

Such a platform will seamlessly integrate with current systems such as Export Data Processing and Monitoring System (EDPMS), Import Data Processing and Monitoring System (IDPMS) and e-Bank Realisation Certificate (eBRC). This will unlock significant operations & cost efficiency, facilitate real time visibility and enforce controls.

End to end digital platform for domestic trade:

Currently domestic trade finance, such as inland LC documentation is physical, with settlement turnaround time of ~5-7 days due to physical exchange of documents between Banks and trade counter parties. eDocument platform supporting digital presentation and exchange could reduce settlement to a single day, improve efficiency of domestic trade finance processes for banks and corporates

Similarly BGs are physically exchanged between counter parties. The digital platform must enable a simplified process including eStamp duty, eStamp papers, digitally signed BGs and access control for all trade counterparties. This will lead to improved turn-around time and reduced risk of fraudulent transactions.

Create a National Trade Processing Corporation of India to act as a single coordinating body across all multiple stakeholders with a mandate to build digital trade platform and single window



NOTE TO THE READER



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