TRADEINSORA

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Meet the team

Sathya Krishnasamy

Architect, Technology Management Executive / Architect/Developer, Domain Expert in Supply chain, International trade logistics, and Payment Integrity and innovation in Health supply chains

Badri Narayanan Ph D

Renowned Economist, Consultant to many entities including WTO, World Bank, IMF, Governments (ASIA pacific, UK), and corporates and NGOs worldwide including McKinsey .

Sharein SK – Bockchain / Full Stack Developer

APPLICANT : SATHYA KRISHNASAMY / Dr BADRI NARAYANAN

- Focuses on MicroSmallandMediumEnterprises
- Proprietorship business – 10 K to 1 M USD Loans
  - At the Low end of Goods and Service Tax(India) or NOT yet in GST
    - Exports - Nuetraceuticals, Textiles, Food. Imports – Electronics, Chemicals, Raw Material
    - Needs access to formal finance
- Specific painpoints
  - **Working capital gaps and "Export/ Import" Credits.**
  - Input Tax Credit Receivables, and Export Duty subsidies eventually arrive but puts lot of short-term cash flow deficit
  - Excessive paperwork for any loans
  - Burnout due to lack of transparency and having to repeatedly provide excessive documentation without any privacy
  - Most of these businesses are operations-oriented and current options for them are very high in interest rates (predatory)

Problem Statement

Inefficient Financial Access for Sellers (Most are local heritage preserving entrepreneur Workers – GI recognized)

A majority of global SMEs in developing economies (Exporters) do NOT have access to formal finance. Alternate options are of high interest rates. This is a high barrier for MSME Trade finance Inclusivity. Per year cross-border trade finance gaps are in Trillions. Please refer to studies by team member – Dr BadriNarayanan.

Financiers / Buyers face Validation Risk

Decentralized solutions are emerging but risks are high and validations are still very difficult

Buyers / Financiers do not know Sellers well enough

Need for Trust Minimized and access controlled, privacy-protected, yet transparent and traceable solutions
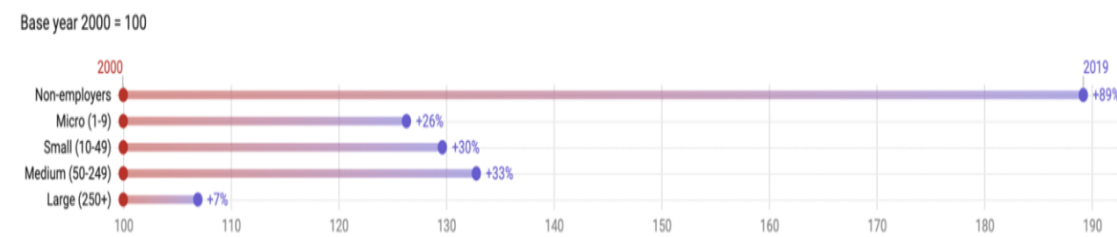
For reducing Buyer and Financier risk,

For reducing the multi-party discrepancies (starting with the financing need functions)

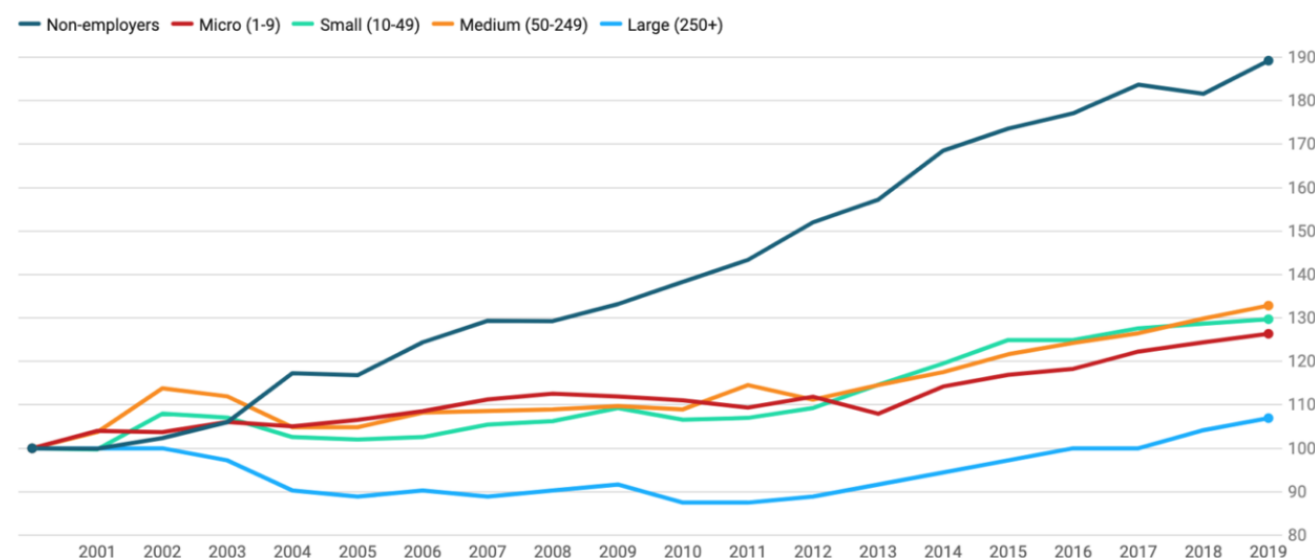 and Seller(MSMe) Financial options – Ideal end state is multi-financiers

How important are MSMEs

% Growth in number of business types from 2000 to 2019

Base year 2000 = 100

Growth in UK businesses in the private sector by number of employees (2000-2019)

MSMEs are important globally ([Davies, Narayanan and Balasubramanian 2021](#)):

- Over 95% of all companies are UK & US are MSMEs
- 90% of all businesses globally are MSMEs, they employ over 50% of all workers
- 88% of EU companies exporting to USA are MSMEs
- They are even more important in developing countries like India, particularly in the context of exports/imports ([Chakravarthy, Bharathi, Khire, and Narayanan, 2023](#)): 30% of GDP (40% of emerging economies income globally).
- Roughly the total addressable market is about 16 trillion USD – that's the income generated SMEs globally!
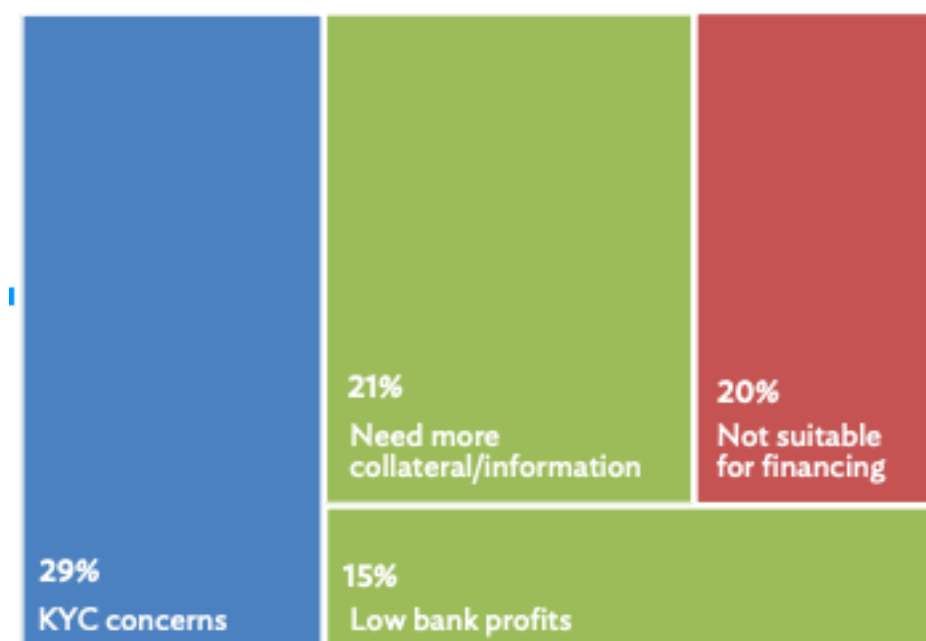
Pain-points in export cash cycle for MSMEs
Indication of Opportunity and How Big it is.
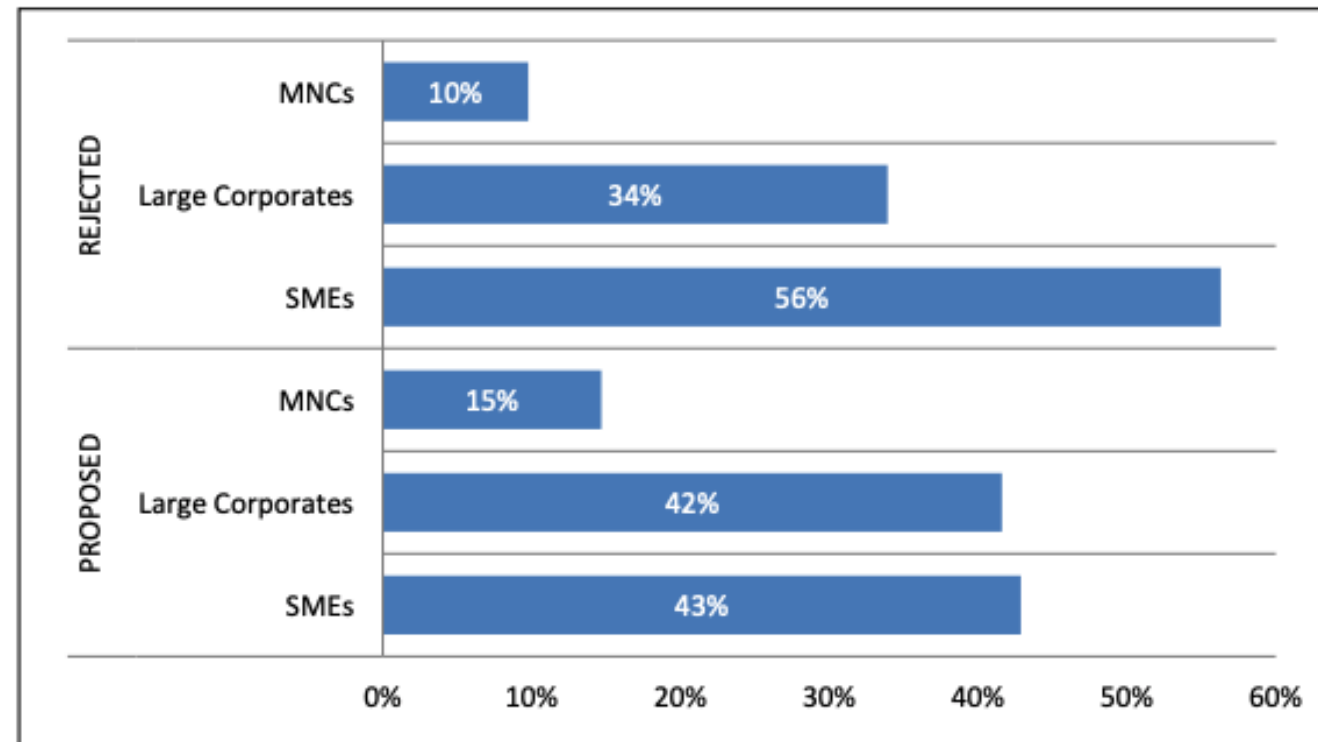
MNCs = multinational corporations, SMEs = small and medium-sized enterprises.
Source: ADB Trade Finance Gaps, Growth and Jobs Survey (2016).

Source: ADB. 2017 Trade Finance Gaps, Growth, and Jobs Survey.

- EXIM Bank in India, while working on Factoring solutions, found that the export cash cycle was 60-120 days post shipment in India. This is purely for transaction, after all the work has been done.
- MSME Finance gap ranges from 10% of GDP in South Africa to 27% of GDP in Brazil, as informal SMEs for 34-58% of formal SMEs in these countries (Narayanasamy, Narayanan and Shivakumar, 2023)
- Our research (Dicaprio, Narayanan, McDaniel and Norberg, 2020) finds that using blockchain to solve this trade finance issue could save at least 2-3 trillion USD globally, most gains coming from exports promoted in the developing countries.

Social Cause

- Most MSMEs are in industries like agriculture, handicrafts, food processing, weaving etc., which represent heritage activities, livelihoods for the poor, sustainability with implications for emissions and biodiversity
- They need systems to collect reliable data and show proof that they are ecofriendly and sustainable.
- Scientifically and analytically, this is all done long ago– Narayanan (2003) suggests 20-50% reduction in Todal Dissolved Solids (TDS) if we move to traditional natural dyes developed by MSMEs, instead of chemical synthetic dyes. ⬚ time to get into action on the ground

Terminology and current state

Bill of Lading :

The shipping **invoice**, also called a **bill of lading**, is a legal document that is required any time a company sends a freight shipment of goods.

A **bill of lading** is a document of title, a receipt for shipped goods, and a contract between a carrier and shipper. This document must accompany the shipped goods and must be signed by an authorized representative from the carrier, shipper, and receiver. Current paper are and electronic processes are error-prone, costly, and just does not work for inclusivity, as it involves time-sensitive decision making for MSMEs and no tools to support them.

Current State :
A considerable proportion of international trade is financed through banks
          Buyer initiated credits though the buyers bank.
          Sellers applying for export credit loans

In order to draw this credit
      the seller is required to ship the contracted goods and then submit (most times THROUGH SNAIL MAIL COURIER)appropriate
      documents to the bank
      and eventually importers to take the consignment out from the port of delivery. The loaning companies need insurance on the loan
and the insurers underwrite.

The current system only works for Big Buyers.

Hence MOST of the lending for MSMEs in developing nations are INFORMAL with no access to formal credit – and the options are very expensive for the borrowers **– Inclusivity for MSME Supply Chain Trade Finance is a big focus item per WEF and WTO.**

Focus Areas and Roadmap: EXIM Tokenization, Compliance Disputes Resolution

Supply Chain/ International Trade Finance：

- Web 3 Digitization of SCF / Trade documents with compliance to evolving bills and standards (Electronic Trade Bill, Model Law for Electronic Traceable Records, CBAM)
- Seller Identity though evolving Identity schemes and Decentralized IDs.
- Compliance – KYC Needs
- Enterprise connectivity to SupplyChain/Trade, ESG
  - APIs, / EVM Sidechains as needed. Oracles for Enterprise connectivity. DCSA standards.
  - ESG Favorable settlement layer , Settlement layers – ETH, stablecoins, XRPLedger
- End2End Hyper-Efficiencies
  - Cash Flow Cycle shortening
  - Proof of Best Regenerative Practices
- TradeInclusive solution
  - Active engagement with multiple trade orgs (WTO, Global services coalitions, Multiple governments – India, UK, Saudi Arabia etc., and academic / top 3 consulting.
  - Technical Proof points and prototypes built out based on
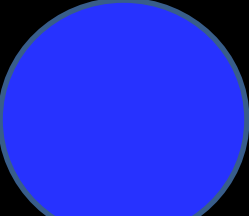 - Working with MSMes on pre-launch onboarding for effective MSMe trade finance options.
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SATHYA KRISHNASAMY

Borrowers/Sellers are MSMEs still not having adequate access to formal finance.(Natural farming, poultry and textiles – most are tagged Geographic Indicators)
Examples of our inclusivity efforts : seed investments in happy hens(humane certified), mango point(no artificial ripening), textiles(natural instead of synthetic dyes, rural basket(healthfoods)
Now they need web3 to prove provenance of best practices and accountability, documenting evidence of results to whole health and supply chain resilience, for access to finance which is what our focus is.
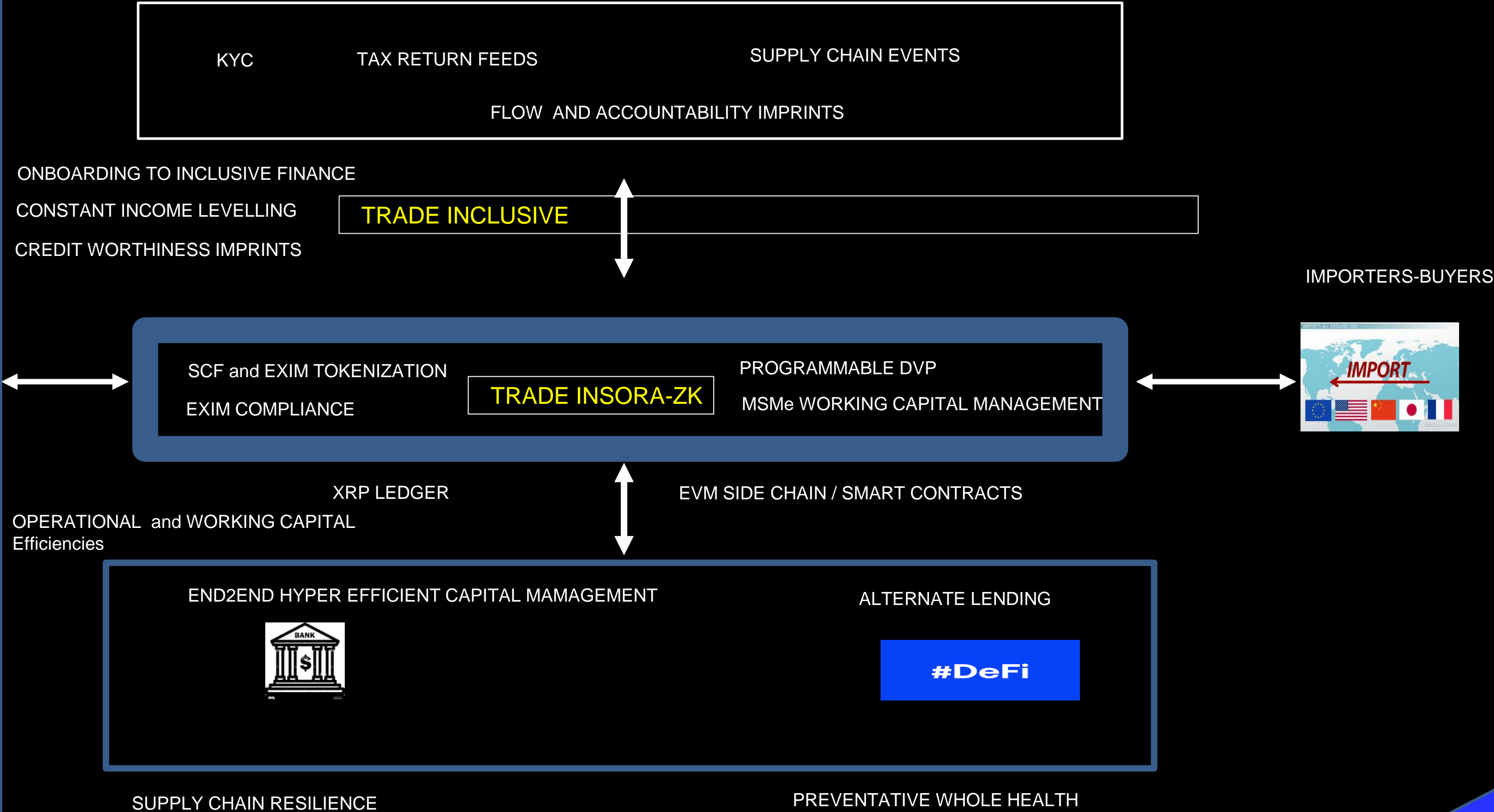
KYC   TAX RETURN FEEDS   SUPPLY CHAIN EVENTS

FLOW AND ACCOUNTABILITY IMPRINTS

ONBOARDING TO INCLUSIVE FINANCE

CONSTANT INCOME LEVELLING   **TRADE INCLUSIVE**

CREDIT WORTHINESS IMPRINTS

IMPORTERS-BUYERS

BORROWERS (SELLERS)
NATRUAL WORKERS

SCF and EXIM TOKENIZATION   PROGRAMMABLE DVP

TRADE INSORA-ZK

EXIM COMPLIANCE   MSMe WORKING CAPITAL MANAGEMENT

IMPORT

XRP LEDGER   EVM SIDE CHAIN / SMART CONTRACTS

OPERATIONAL and WORKING CAPITAL
Efficiencies

END2END HYPER EFFICIENT CAPITAL MAMAGEMENT   ALTERNATE LENDING

BANK

#DeFi

SUPPLY CHAIN RESILIENCE   PREVENTATIVE WHOLE HEALTH

We have a research arm and policy consultancy for governments, banks , NGOs, big5 consulting firms and entities like WTO, IMF, WorldBank, IADF, COP27 etc
Technical Prototypes with XRPL completed, Pre-Launch and MSME validations in progress

TradeInsOra Solution Architecture

- DLT based MSME focused SupplyChain / EXIM Financial Inclusivity

  Compliance to eBills –Ownership and Uniqueness
  - Interpretation and implementation of eBL,ML TDR
  - Compliance – Regualtory KYC, EXIM compliance
  - Privacy – protected proofs for compliance and credential badges

- SupplyChain/EXIM Financial Inclusivity Features
  MSME Access Flexibility
  -- Non-Negotiables – Dynamic Discounting, Performance based Payments.
  - Privacy protected, Yet traceable flows for counterparties for SCF/EXIM finance purposes.
  - Broader financial access including multi-financier access

  Financiers/ Insurers
  - Traceable de-risking
  - For financing decisions – more broader decisions than big-buyer credit based.

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Why MINA

- **Our research indicated**

    **Privacy and Regulations as a higher barrier for blockchain adoption
        than technical and scalability**

    The world is going to be multi-chain

     Our inclusive trade initiative needed

        a privacy-protected solution that will
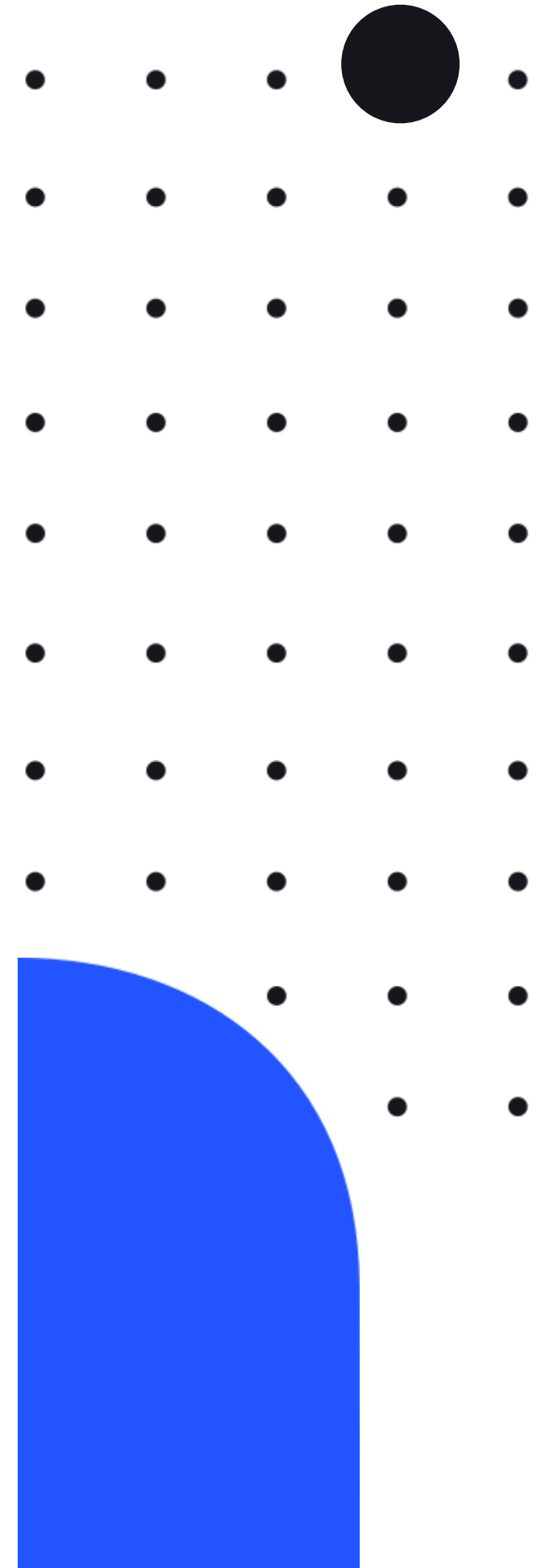
        **co-exist with the enterprise landscape
        is an abstracted layer easy to program at the application level
        has ecosystem support
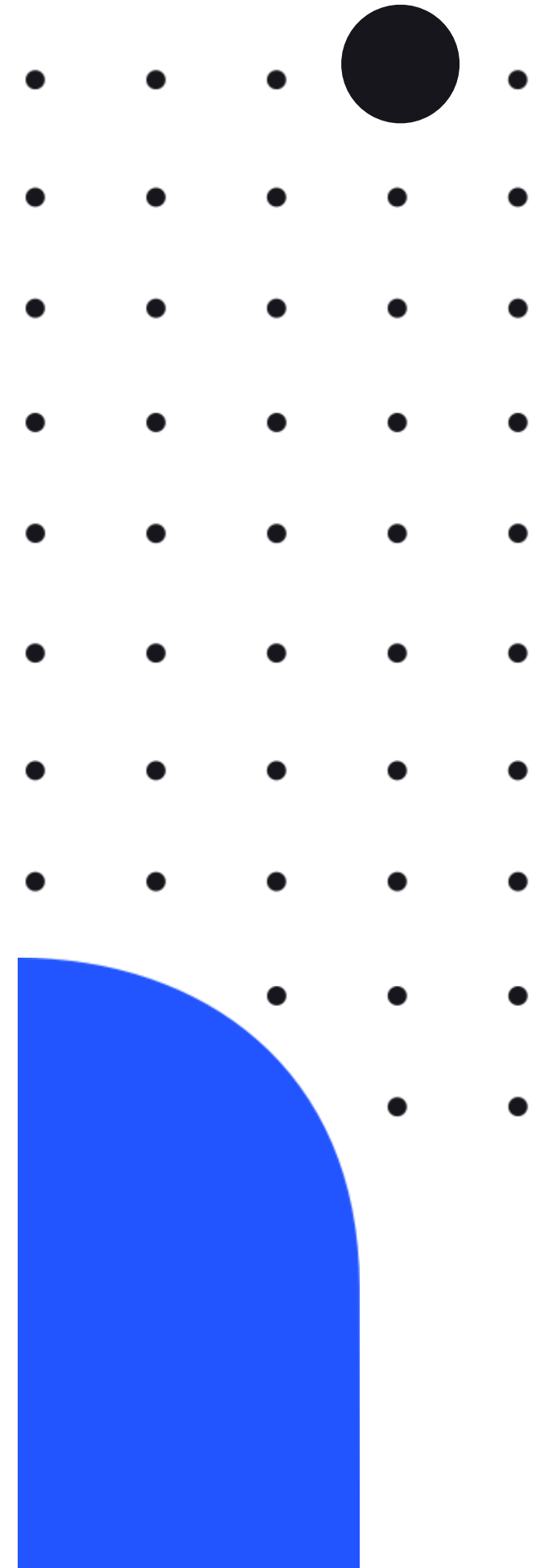   and is working on other chain-bridging**

 **Based on what we see in Cohort 1 and 2 , We think we can mutually benefit from our
needs and our deep expertise in regulation and privacy domains.**

Focus Areas and Roadmap: EXIM Tokenization, Compliance

Supply Chain/ International Trade Finance：

- Web 3 Digitization of SCF / Trade documents with compliance to evolving bills and standards (Electronic Trade Bill, Model Law for Electronic Traceable Records, CBAM)
- Compliance – KYC Needs
- Enterprise connectivity to SupplyChain/Trade, ESG

  APIs, EVM Sidechains / XRPL as needed. Oracles for Enterprise connectivity. DCSA standards.

  End2End Hyper-Efficiencies

  Cash Flow Cycle shortening

  Proof of Best Regenerative Practices

  Snarky.js based proof of credentials, and offline Deliver verus Payment constructs in MINA protocol

- TradeInsOra solution

  Active engagement with multiple trade orgs (WTO, Global services coalitions, Multiple governments – India, UK, Saudi Arabia etc., and academic / top 3 consulting.

  Working with MSMes on pre-launch onboarding for effective MSMe trade finance options.
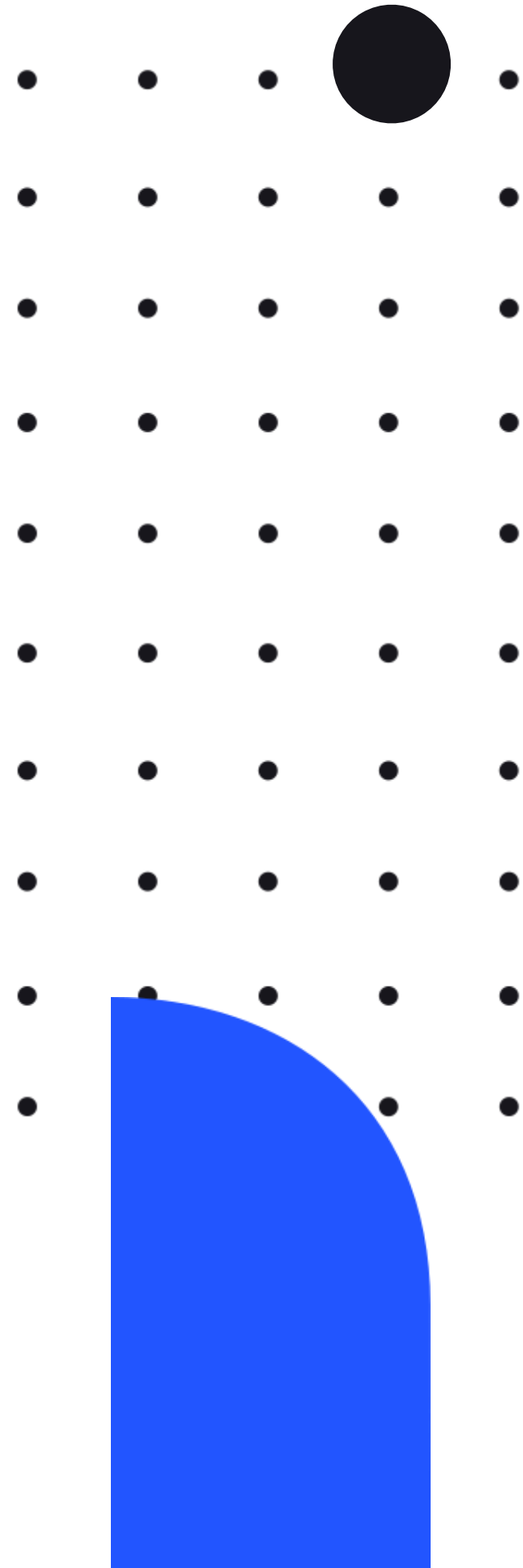
PROPOSAL AND GITHUB

Proposal

https://zkignite.minaprotocol.com/zkignite/zkapp-cohort-3/draftproposals/suggestion/754

Github:

https://github.com/chainaimlabs/TradeInsOra

What are we looking for?

- Ecosystem Partnerships in XRPL

- Incubation – Legal, Entity setups

- Working relationships

- Grants / Access to capital for further enhancements

References

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Current Market and Opportunity in just 1 CORRIDOR

- 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.

- Total of 63.4 Million MSMEs in India. Contributes 45% of overall exports. 90-120 Days Receivables Cycle

- Almost 90% of small business in india still have no links with formal financial institutions. IFC estimates debt demand gap of Rs 36.7 lakh crores.

- Government efforts to disburse credit still not effective. Banks hesitant for small business lending.

- COVID recovery needs dynamic adaptation. (Needs standardized interfaces and weights to balance between traditional metrics and to move to flow-based)

Any Questions