



#dltledgers

# Multi-enterprise Collaboration Network (MCN) Platform



Sharing with Supply Chain Leaders  
July 2023  
By Atul Patel & Ambika Ravi

[www.dltledgers.com](http://www.dltledgers.com)



# Agenda



- **Future of Supply Chain**
- **#dltledgers showcase**
- **Case studies**

# Agenda

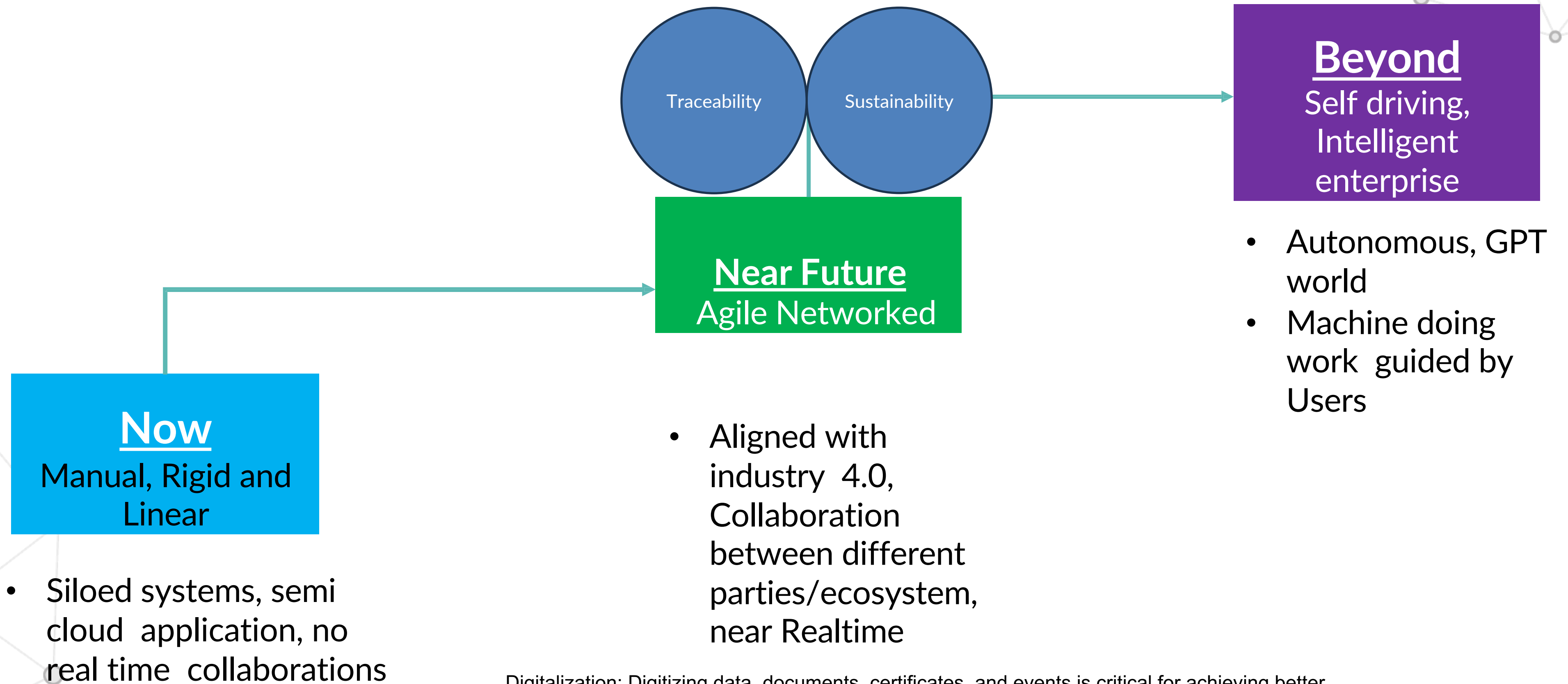


- **Future of Supply Chain**
- **#dltledgers showcase**
- **Case studies**



# Future of Supply Chain:

Future of supply chain is shifting from rigid and linear to agile, networked ecosystems on the path to an autonomous future.



Digitalization: Digitizing data, documents, certificates, and events is critical for achieving better and more trusted collaboration within the networked ecosystem.

# Agenda



- **Future of Supply Chain**
- **#ditledgers showcase**
- **Case studies**

# #dltledgers showcase

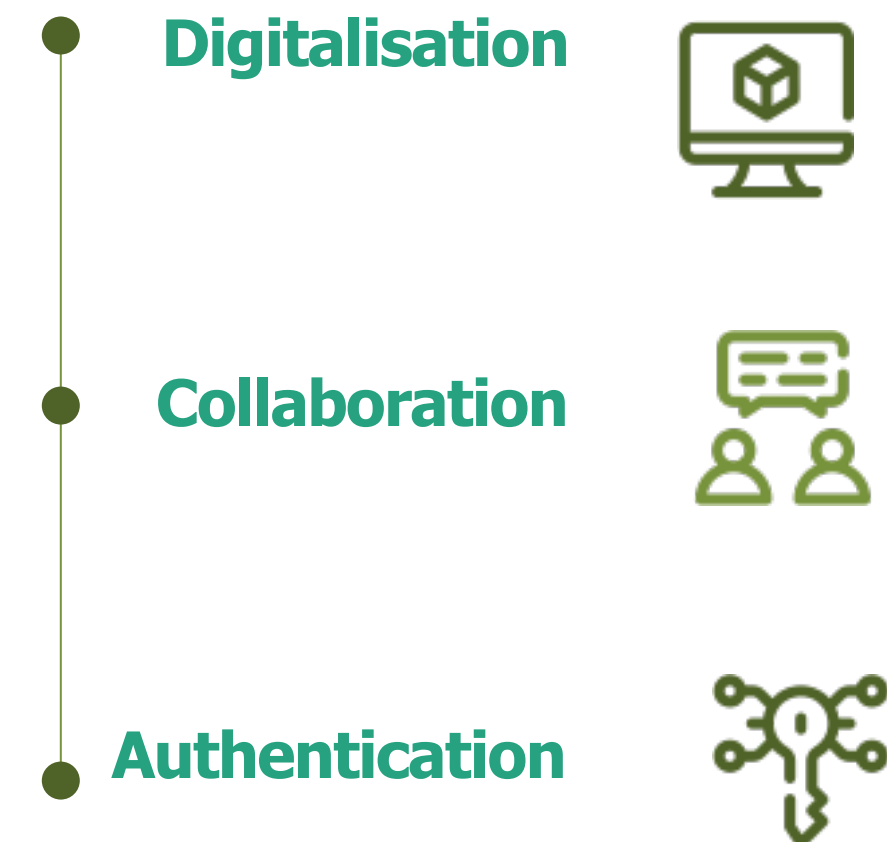
What is [#dltledgers](#)?



# About US

We are a global **inter-enterprise blockchain platform** focused on resolving supply chain issues for Large Enterprises and Banks. We create **multi-party private networks** that enable digitalization, ecosystem collaboration, and authentication, supporting multi-party enterprise needs based on trust, privacy, and security.

We have built  
our platform  
keeping in  
mind **three key  
factors**



The key capabilities of MCN solutions include three layers: Network representation and management, Application functions, Embedded analytics and intelligence.

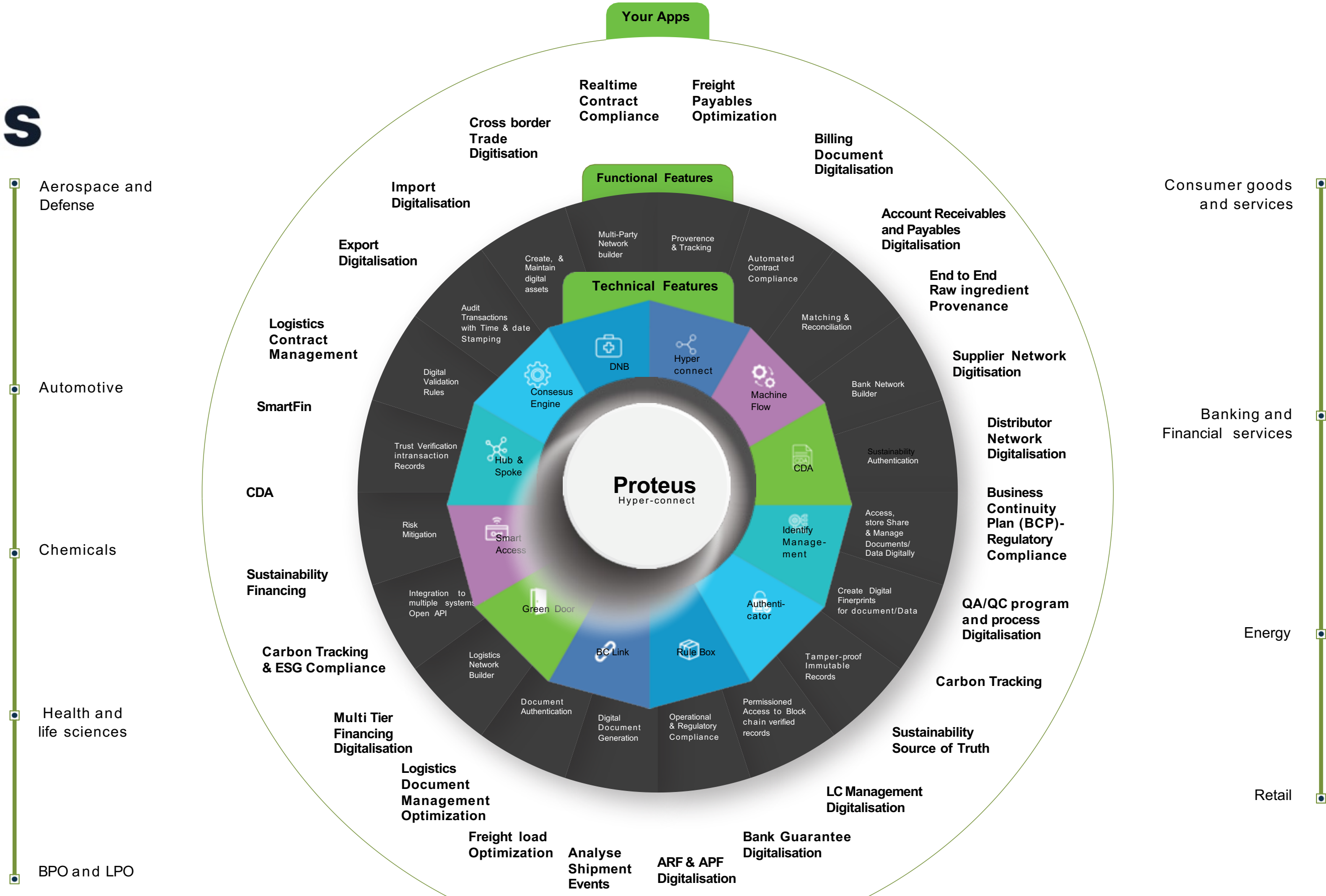
# #dltledgers' platform for connected Supply Chain

Multi Enterprise Supply Chain Business Network Platform and apps

Powered by



Low Code No Code (LCNC) Platform underpinned by Enterprise Blockchain, & AI/ML capabilities





# Building your own apps in weeks

# USP: Go live in 8 weeks

## Multi-party apps for supply chain visibility in real time



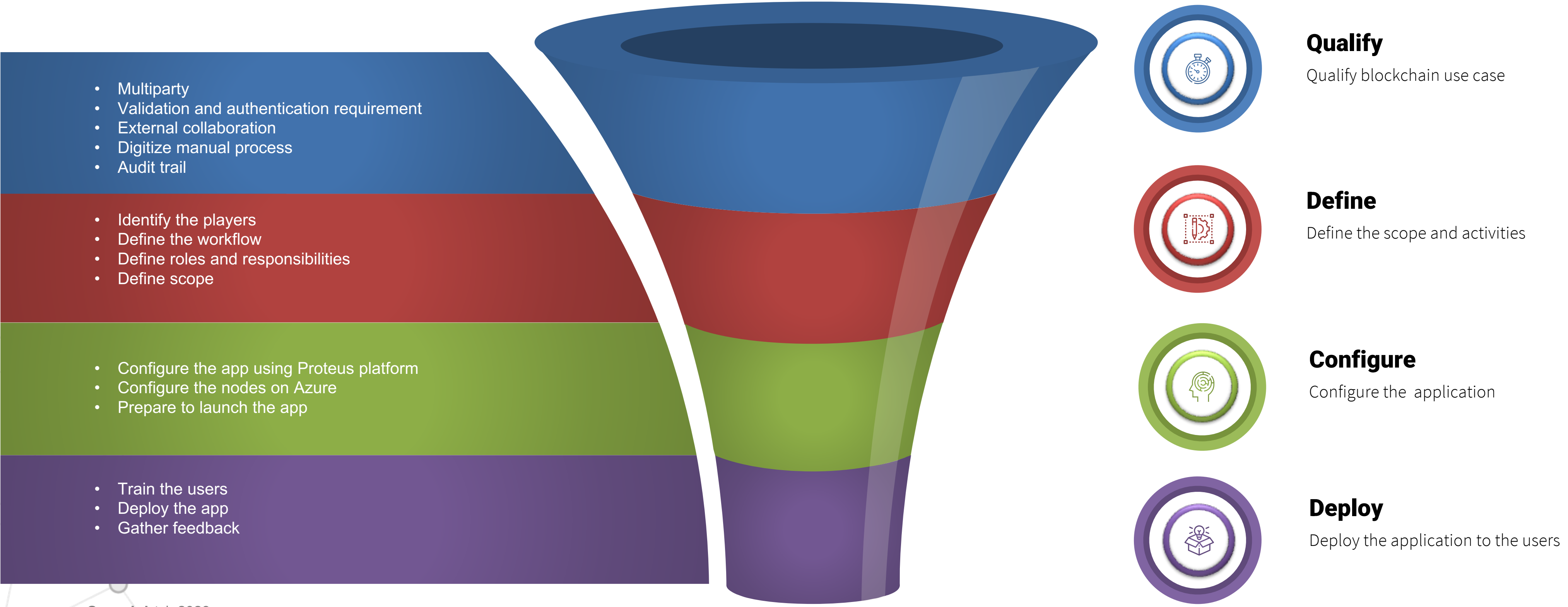
Outward Traceability	Procurement Traceability	Distributor Network Digitalisation
Supplier Network Digitalisation	Real-time Contract Compliance Management	Project Payables Management
Logistics Network digitalisation	Provenance and tracking App	Shipment track n trace (Inbound & Outbound)
Compliance App for Manuf. Plants	Cognitive Document Automation (CDA)	Infringement Payables Digitalisation App
LC Management Digitalisation	Forfaiting Digitalisation	ARF & APF Digitalisation
Risk Sell Down Digitalisation	Supplier Finance Digitalisation	Project payables App
Battery Passport App	Carbon Footprint App	Sustainability Data Management App

# #dltledgers' platform – App deployment

How we qualify and deploy new apps using Proteus platform

## USP: Go live in 8 weeks

### How we do it





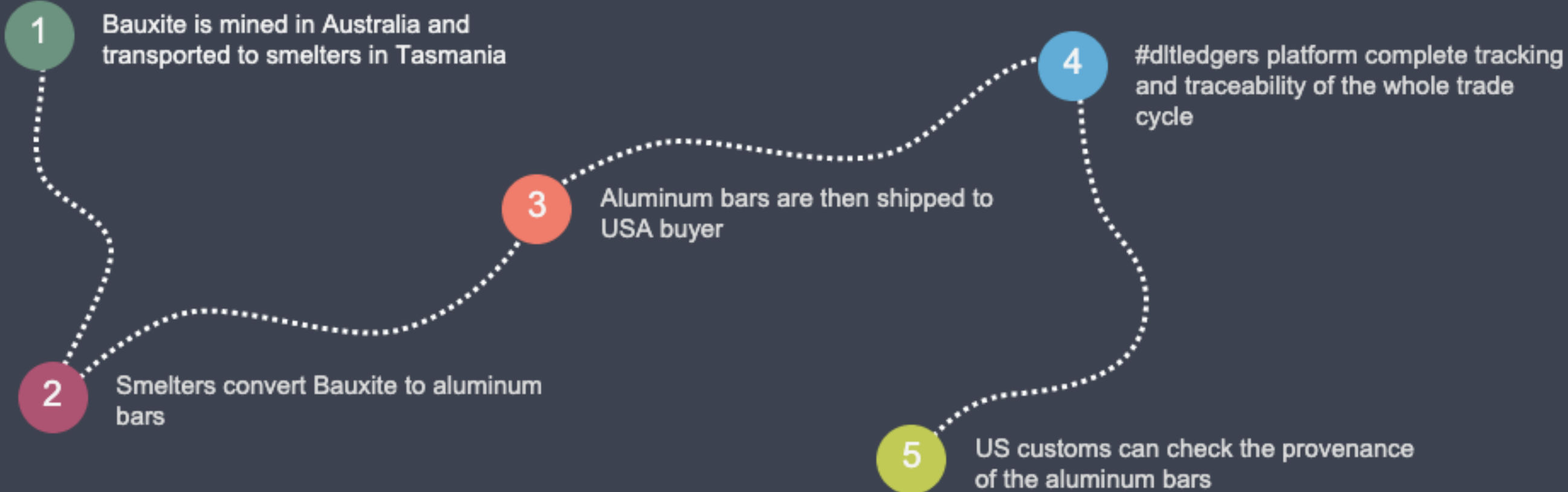
# Agenda







- **Future of Supply Chain**
- **#dltledgers showcase**
- **Case studies**

# Client Story : Provenance and Tracking


RESOURCES



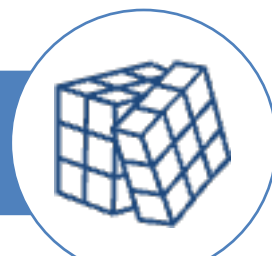
## Core Capabilities

-  **Real time collaboration**  
Easy Network Creation and onboarding multiple parties.
-  **Digital documents**  
Documents stored digitally providing a single source of truth for all the stake holders
-  **Provenance and Tracking**  
End to end tracking of the complete trade cycle
-  **Integration**  
Integrate with different systems such as ERP and other customized inhouse software

## Reference Customer:

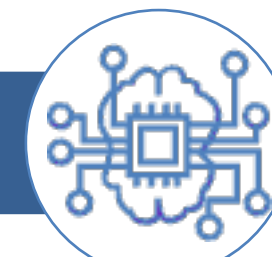
-  **Deployed at mining company**  
A minerals mining company based out of Australia

## BUSINESS CHALLENGE



- Disparate data systems: Multiple, siloed systems lead to inaccurate chain of custody.
- Inconsistent documentation: Weak links allow misrepresentation of metal provenance and sustainability.
- Limited visibility: Reliance on seller representations hinders verification of metal's origin and sustainability.

## BLOCKCHAIN SOLUTION



- Unified data: Integrating systems on a blockchain for accurate chain of custody representation.
- Standardized documentation: Enforcing smart contracts to strengthen links between trade documents and shipments.
- Enhanced visibility: Secure, real-time information sharing for independent verification of metal provenance and sustainability.

## VALUE POTENTIAL

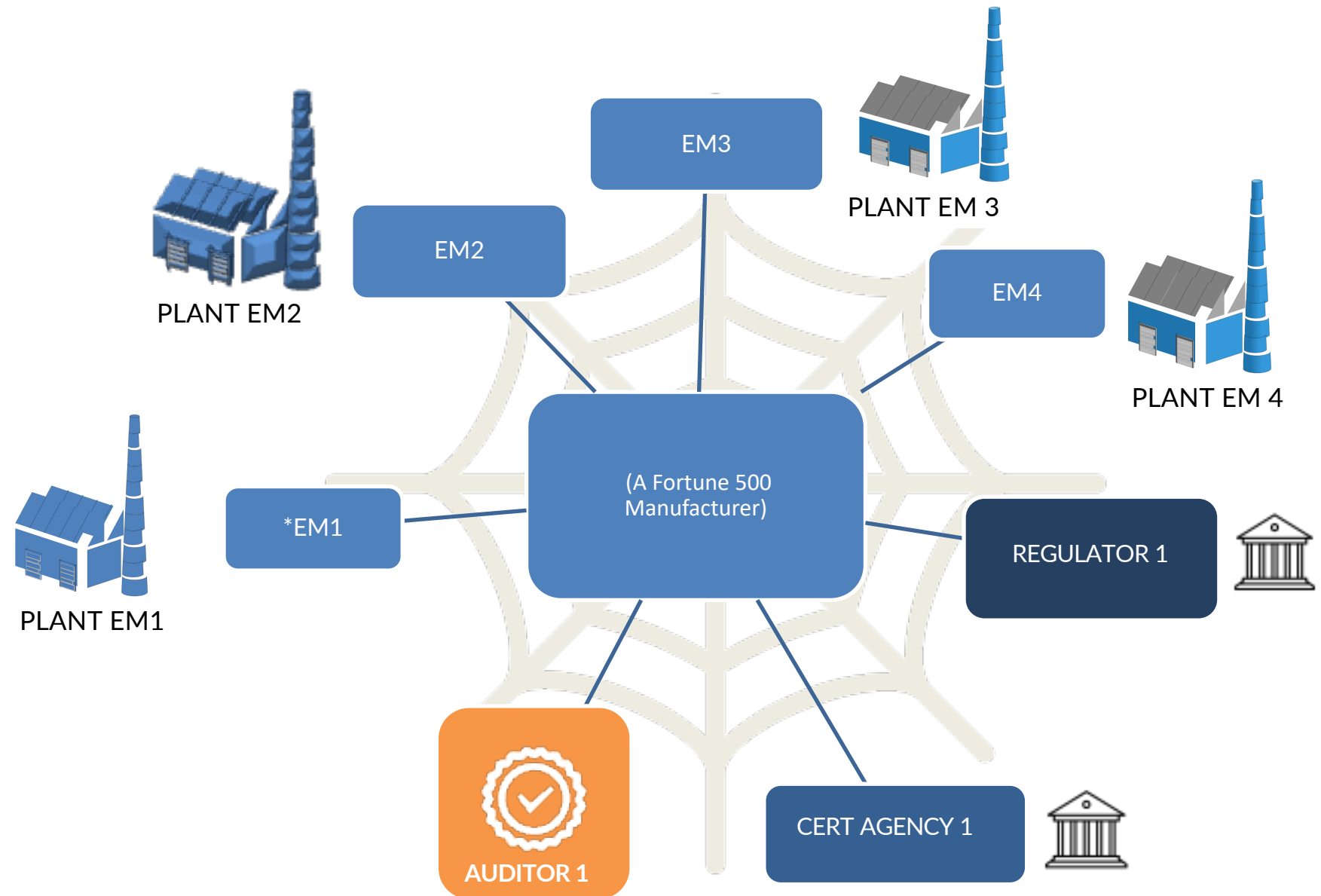


- Unified data: Improved accuracy, reduced inconsistencies, and better decision-making.
- Standardized documentation: Streamlined processes, reduced fraud, and increased trust.
- Enhanced visibility: Independent verification, informed decisions, and efficient compliance.





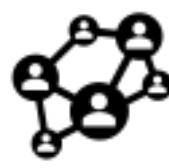

# Client Story : Compliance Assurance App

MANUFACTURING




\*EM – External Manufacturer

## Core Capabilities:

-  **Workflow and Collaboration enabled**  
App has defined workflows and collaboration capabilities to execute the process for the various user personas
-  **Data-Digital, Document- Digital Framework**  
Authenticated validation framework provides consented information at source with data & documents with built-in collaboration
-  **Private blockchain network creation and setup**  
All actor nodes have full autonomy on the network initiated by manufacturer
-  **Real time Tracking and visibility for different actors**  
All Compliance Tracking status is monitored, and exceptions reported in near to real time for all actors

## Reference Customer:

-  **Deployed at Fortune 500 company**  
UP and running live in 40 days, Only Manufacturing company pays subscription, other actors free

## BUSINESS CHALLENGE

- Manual or semi-automated contract manufacturing compliance process lacking version control, visibility & authenticity
- Possible brand impact or damages due to oversight error in regulatory or operational compliance
- Laborious auditing process and certification

## BLOCKCHAIN SOLUTION

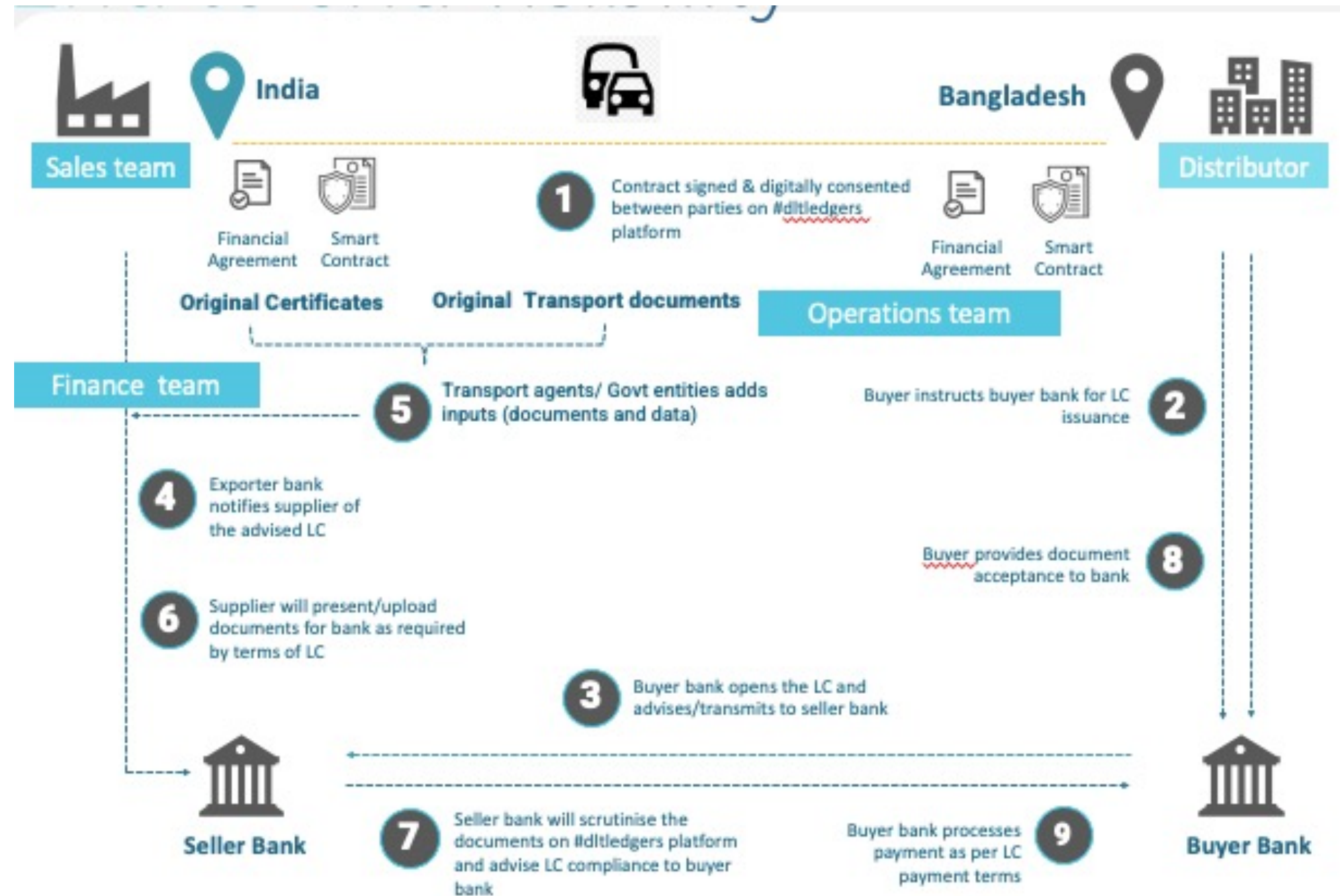
- Leverage a ready to use app to provide a decentralized immutable, real-time visibility mechanism for all licenses, permits & Certificates
- Solution provides for validation & digitalisation of permits, licenses etc. with associated regulatory and auditor flow based on the pre-assigned roles and activities/task. Can extended to additional actors at ease.

## VALUE POTENTIAL

- Improved compliance assurance visibility, reduced errors by 30% and optimized auditor's cycle time,
- Potential saving by preventing a Brand Impact event
- Installed enabler for business continuity planning for your plus 1 strategy for contract manufacturing

# Client Story : Outward Logistics App

AUTOMOTIVE



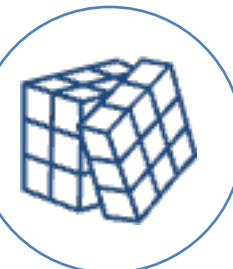
## Core Capabilities

- Automated Process**  
 Process efficiency to be achieved and maximize automation
- Real time collaboration**  
 Collaborate with business partner on a real time basis with necessary audit trails
- Network Creation**  
 Supplier & business partner network created & digitized
- Tracking and visibility**  
 Increased trust & transparency among participants

## Reference Customer:

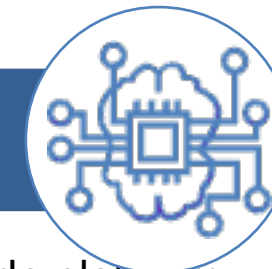
- Deployed at Fortune 500 company**  
 One of the leading global automobile manufacturer

## BUSINESS CHALLENGE



- Company faces challenges with rapidly growing international business and increased complexity in export trade, resulting in hampered operations and outdated manual workflows.
- Streamlining the export process and digitizing documentation management are essential to maintaining operational performance and providing visibility into the trade flow

## BLOCKCHAIN SOLUTION



- Company implements the #dltledgers Cross Border Trade platform, enhancing efficiency in vehicle movement tracking and real-time monitoring, while gaining business insights through data tracking and tracing.
- The Cognitive Document Automation (CDA) module employs AI/ML for digital document classification, verification, and authentication, while integrating SAP systems for seamless trade documentation flow and digital document exchange between company and its distributors.

## VALUE POTENTIAL

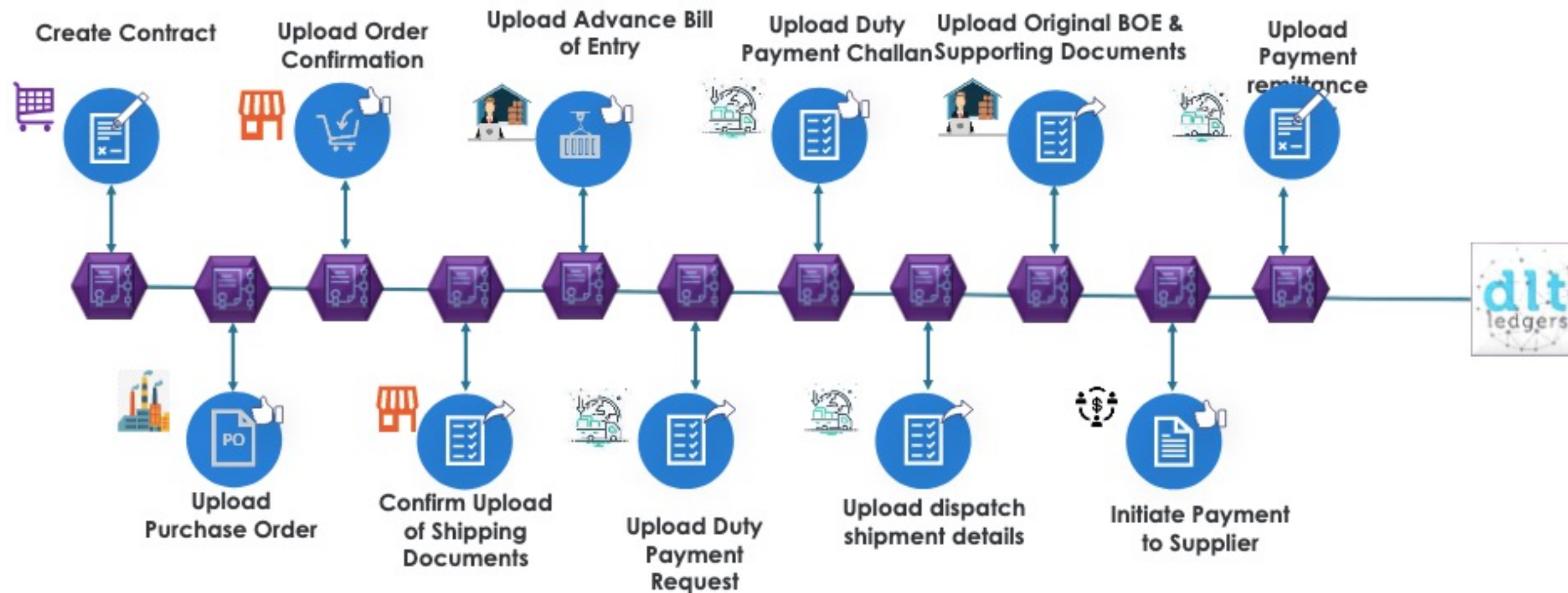


- Trade execution time significantly reduced from days to hours, resulting in a 15-20% cost reduction.
- Improved transparency and trust, accompanied by a shorter working capital cycle, enhance overall business efficiency.



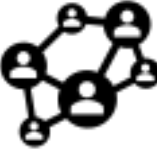



# Client Story : Inward Logistics App


MANUFACTURING



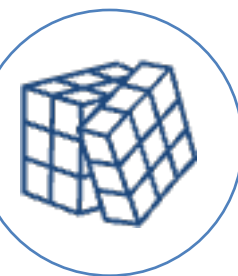
## Core Capabilities

-  **Automated Process**  
Process efficiency to be achieved and maximize automation
-  **Digital Document Collaboration**  
Document exchange via blockchain network authenticated, trusted & secured
-  **Network Creation**  
Supplier & business partner network created & digitized
-  **Tracking and visibility**  
Transparency and analytics through the platform for detailed tracking.

## Reference Customer:

-  **Deployed at Fortune 500 company**  
One of the largest snack companies in the world

## BUSINESS CHALLENGE

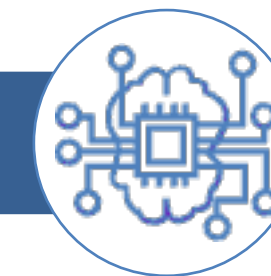


- Corporate's cross-border trade activities, involving complex import/export transactions and raw material sourcing, present a significant opportunity for optimization and digital interventions.
- Current manual processes lead to limited document tracking visibility, off-system communication with partners, delayed responses, and difficulties in accurately forecasting lead times for trade transactions.

Copyright | 2023

[www.dltledgers.com](http://www.dltledgers.com)

## BLOCKCHAIN SOLUTION



- The intuitive digital platform, based on blockchain technology, streamlines manual, paper-based processes for complete physical trades, enabling secure transactions through consensus validation and immutability of exchanged documents.
- Users can efficiently manage trade activities with smart contracts, exchange trade and title documents, track shipment documentation, and initiate and monitor payments.

## VALUE POTENTIAL

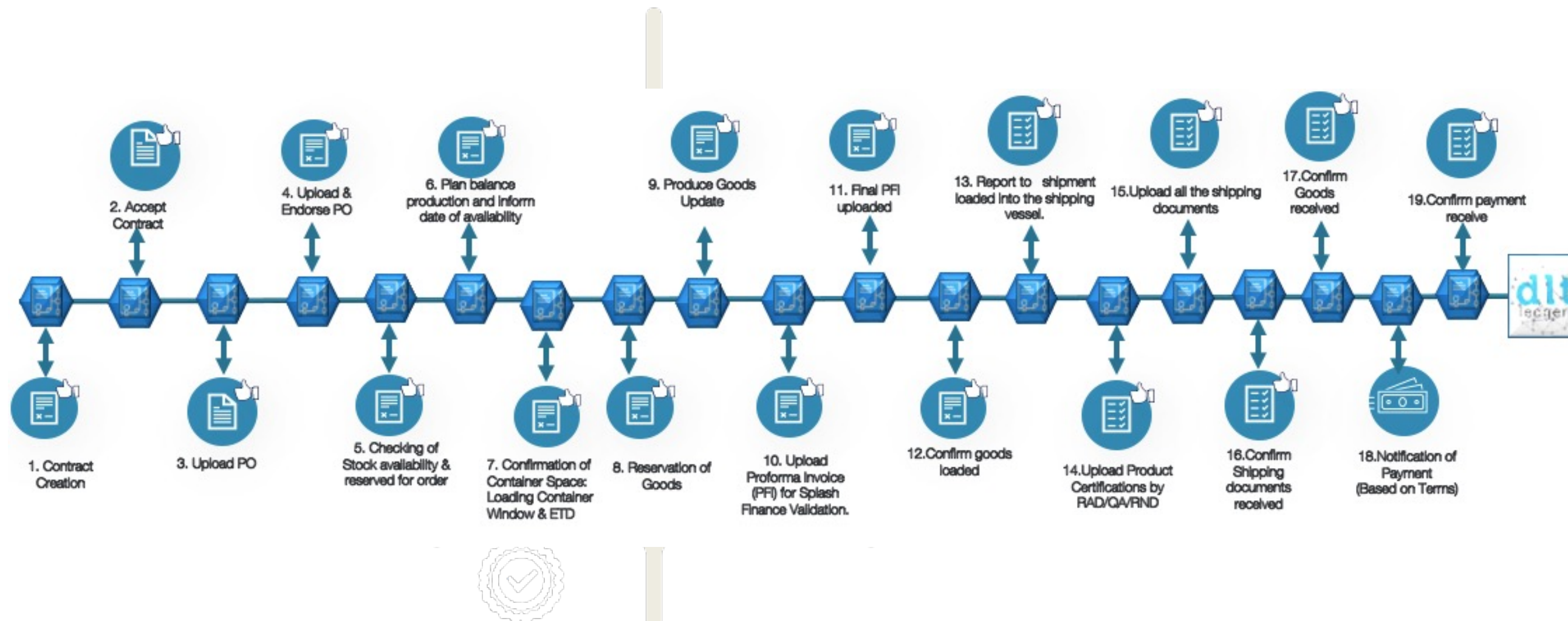


- Enhanced supplier and distributor networks enable sustainable sourcing with transparency and traceability, while leveraging supply chain optimization through digitizing imports and exports using the network.
- Integration with SAP systems and third-party system integrations improve process efficiency, transparency, and visibility, as well as facilitate document checks for added value.



# Client Story : Distributor Network Digitalization App

CONSUMER PRODUCTS



## Core Capabilities



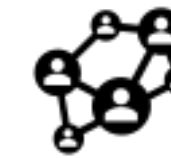
### Real time collaboration

Collaborate with business partner on a real time basis with necessary audit trails



### Digital Assets

Digital Assets configured to be maintained as part of the distributed ledger with blockchain.



### Network Creation

Easy Network Creation and onboarding multiple parties.



### Notification

Real Time notification to expedite and avoid any delays in shipments across multiple parties.

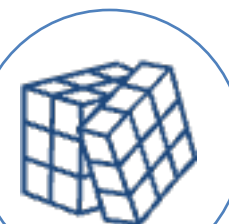
## Reference Customer:



### Deployed at consumer goods company

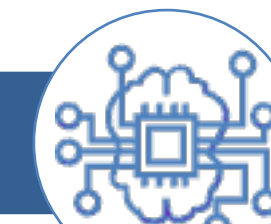
Produces and markets a wide range of personal care and household products such as skin care, hair care, and laundry detergents

## BUSINESS CHALLENGE



- Managing a supplier network can be difficult due to trust issues, manual collaboration, delivery obstacles, rising logistics costs, and challenges with transfers, invoices, and payments.
- Ignoring stock level visibility at distributors can cause the bullwhip effect, resulting in demand variability, losses, and increased complexity, especially when dealing with global distribution networks.

## BLOCKCHAIN SOLUTION



- The dtledgers solution leverages distributed ledger technology to streamline order fulfilment, enhancing collaboration across geographies, and providing real-time information for improved customer relations and issue resolution.
- This solution simplifies the export process, offering accurate data, digital document storage, real-time reports, and secure tracking of order fulfilment with tamper-proof digital records for compliance purposes.

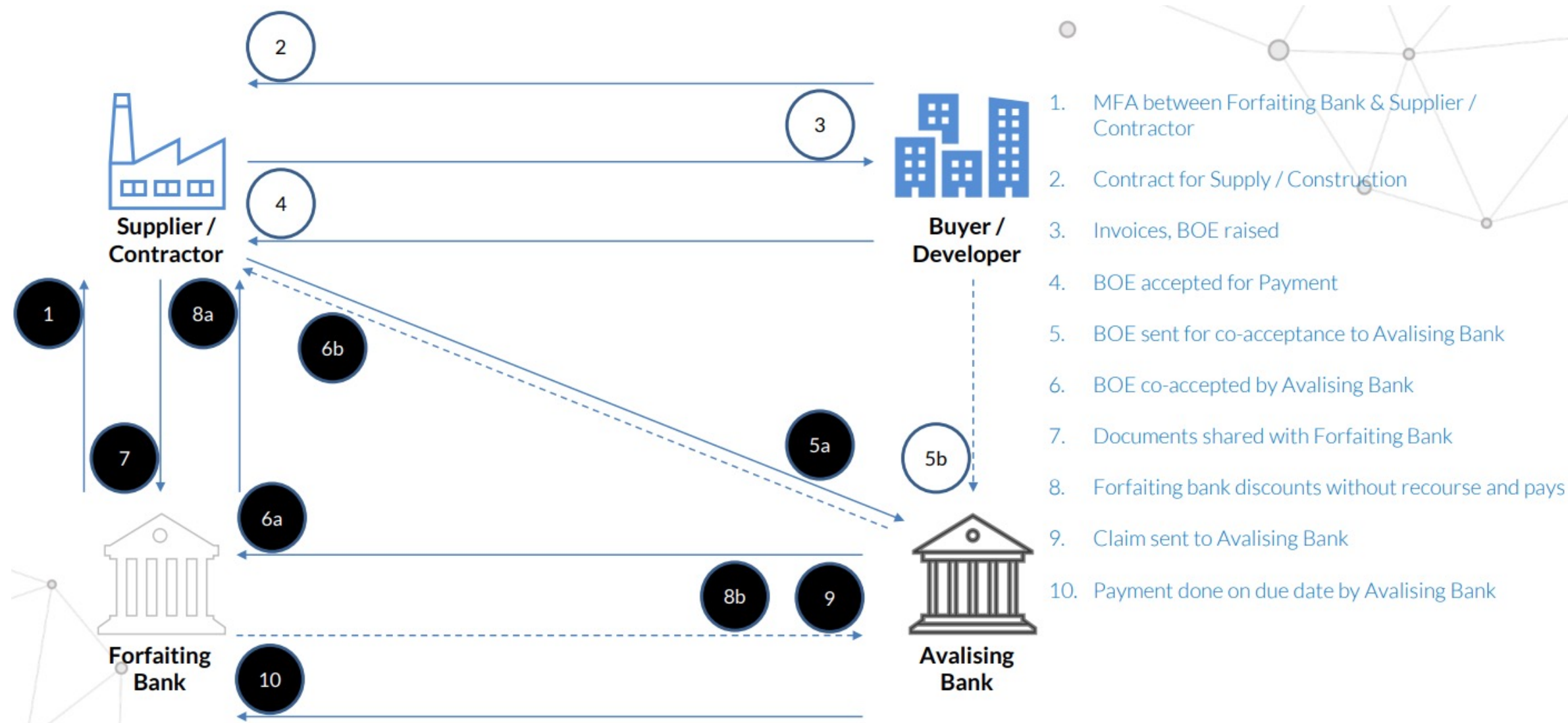
## VALUE POTENTIAL



- The solution delivers significant business value, including a 10-15% improvement in OTIF, a 20-30% increase in revenue through real-time information flow, and a 60-70% reduction in order fulfilment processing time.
- Enhanced real-time tracking and tamper-proof digital records ensure transparency, proper documentation, and compliance, while enabling timely payments for logistics and distribution partners.



# Client Story : Forfaiting Digitalization App



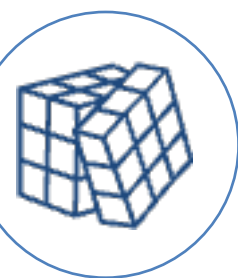
## Core Capabilities

- Real time collaboration**  
Easy Network Creation and onboarding multiple parties.
- Digital Assets**  
Digital Assets configured to be maintained as part of the distributed ledger with blockchain.
- Network Creation**  
Easy Network Creation and onboarding multiple parties.
- Notification**  
Real Time notification to expedite and avoid any delays in shipments across multiple parties.

## Reference Customer:

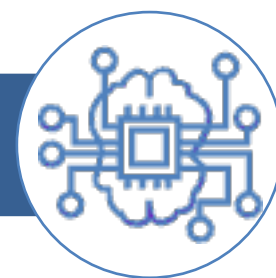
**Deployed at large commercial bank**  
African development finance institution, with investment grade ratings and assets of USD 8bn

## BUSINESS CHALLENGE



- Limited digitalization in bank's cross-border financing operations led to inefficiencies and hindered the forfaiting business.
- The bank must invest in digitalization and modernization to remain competitive and meet clients' evolving needs in the global trade landscape.

## BLOCKCHAIN SOLUTION



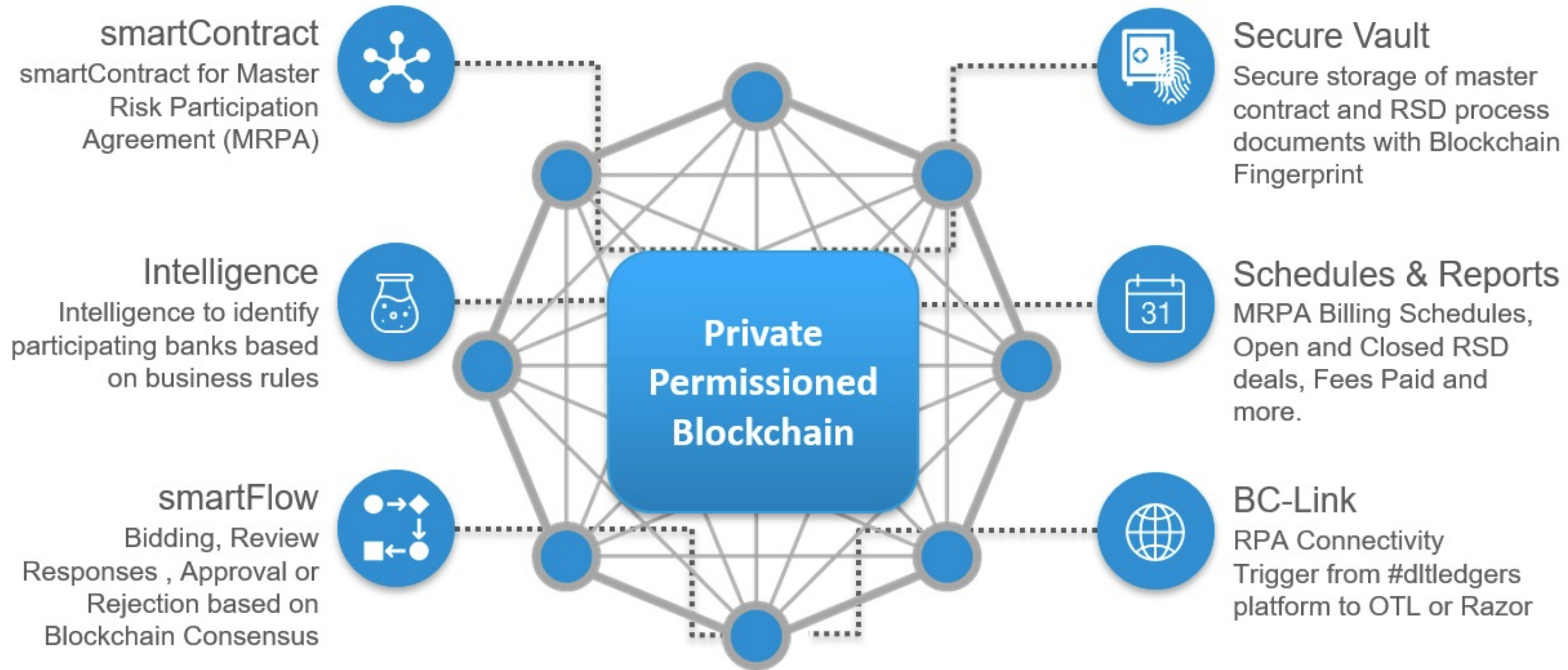
- The platform digitally connects corporates, avalising banks, and forfaiting banks, enhancing collaboration and visibility using advanced technology, which enables traceability, reduces costly delays, and transforms the process into a paperless, blockchain-based system.
- The streamlined transaction flow benefits all parties involved by allowing quicker processing, earlier fund transfers for corporates, and increased income opportunities for banks.

## VALUE POTENTIAL



- The streamlined process reduces the average working capital cycle for corporates by 15-20 days, leading to better cash flow management and business efficiency.
- Banks benefit from increased revenue opportunities and an expanded global customer reach.

# Client Story : Risk Distribution App



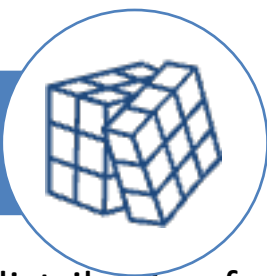
## Core Capabilities

- Internal and external collaboration**  
Easy collaboration with internal and external teams.
- Digital documents**  
Documents stored digitally providing a single source of truth for all the stake holders
- Workflow automation**  
Most of the manual tasks automated thereby reducing manual errors and improving process efficiency
- Reports and dashboards**  
Real Time reports and dashboard to show deal status and progress

## Reference Customer:

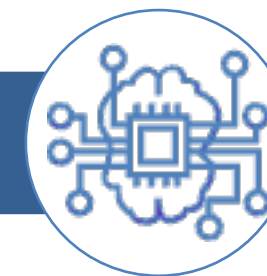
- Deployed at large multinational bank**  
A large bank that provides banking and financial products and services to over 8.5 million retail and business customers and operate across 32 markets.

## BUSINESS CHALLENGE



- The current process for managing secondary risk distribution for LCs and guarantees is cumbersome, inefficient, and error-prone, involving multiple intermediaries with disparate systems and processes, leading to potential delays and discrepancies.
- The lack of transparency in the existing process contributes to trust issues between parties involved in secondary risk distribution, increasing the risk of fraud and disputes, and ultimately hindering the smooth functioning of banking operations.

## BLOCKCHAIN SOLUTION



- The collaboration with #dltledgers enables automation of the secondary risk distribution process through smart contracts, reducing the need for intermediaries and minimizing errors and delays.
- The implementation of a decentralized ledger ensures all parties have access to the same information, promoting transparency, reducing the risk of fraud, and providing an immutable record for tracking transaction history and making informed decisions.

## VALUE POTENTIAL

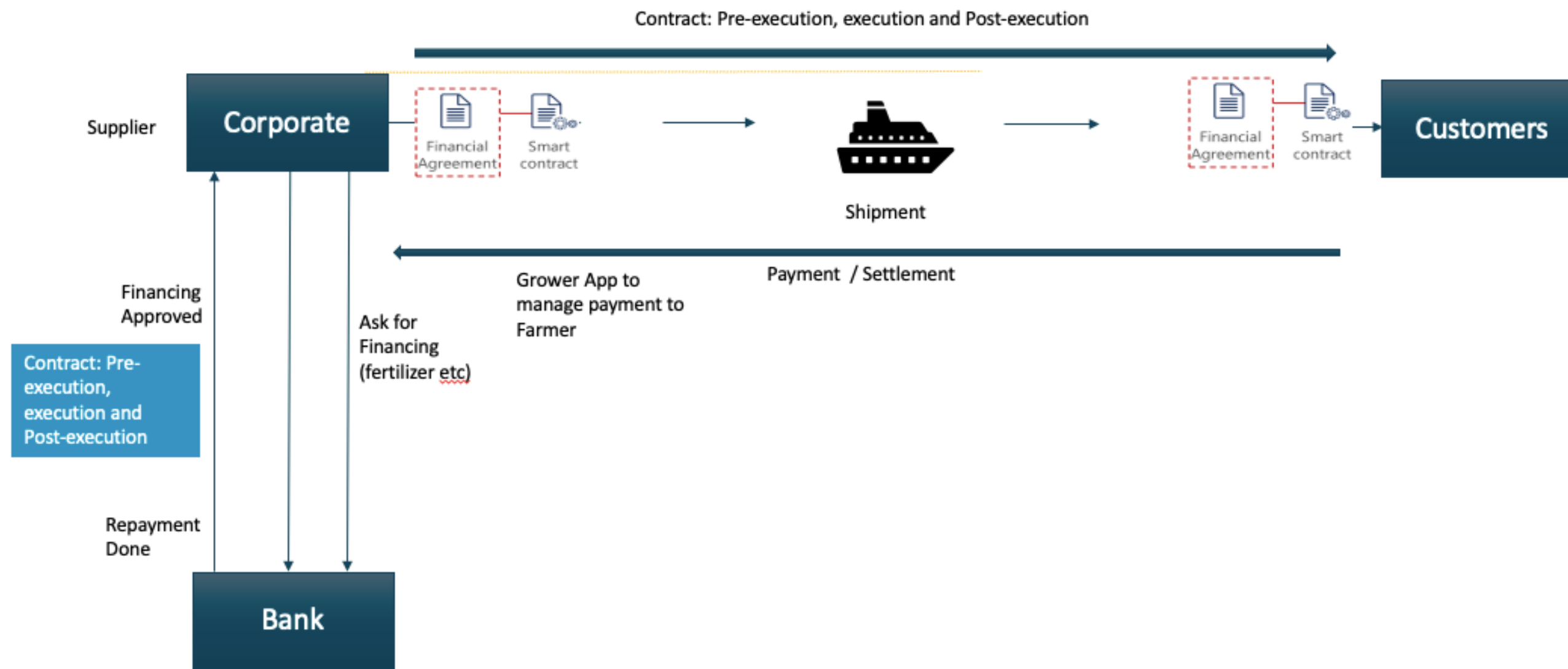


- The solution facilitates both internal and external collaboration and provides real-time reports and dashboards, empowering stakeholders to make informed decisions based on accurate, up-to-date information.
- The system enables digital document storage and workflow automation, streamlining operations and reducing manual efforts, leading to increased productivity and cost savings.



# Client Story : LC Discounting App

## RESOURCES



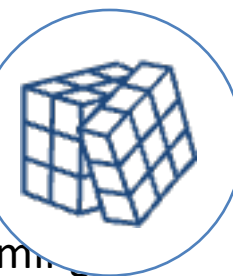
### Core Capabilities

- Real time collaboration**  
 Easy Network Creation and onboarding multiple parties.
- Digitization with banks**  
 Complete digitization of LC discounting process with banks
- Network Creation**  
 Easy Network Creation and onboarding multiple parties.
- Better finance**  
 Better working capital cycle due to faster access to funds

### Reference Customer:

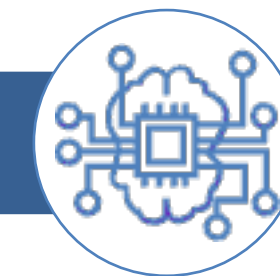
- Deployed at large fertilizer company**  
 A state owned fertilizer company based out of east Africa

## BUSINESS CHALLENGE



- The company struggles with a complex, time-consuming discounting process that involves multiple intermediaries, leading to increased risk of errors and delays in managing their supply chain financing.
- The inefficiencies in the traditional LC discounting process negatively affect the company's working capital, cash flow, and profitability, posing significant challenges to their financial health and growth.

## BLOCKCHAIN SOLUTION



- By collaborating with #dltledgers and creating a private blockchain network, the Company ensures the validity and security of trade transactions, including real-time tracking of shipments and payments, fostering trust among all involved parties.
- The blockchain network allows the bank to have full visibility into the entire process, ensuring that working capital finance is disbursed efficiently and securely, while enabling the secure sharing of information with nodal network certification or independent inspection agencies as needed.

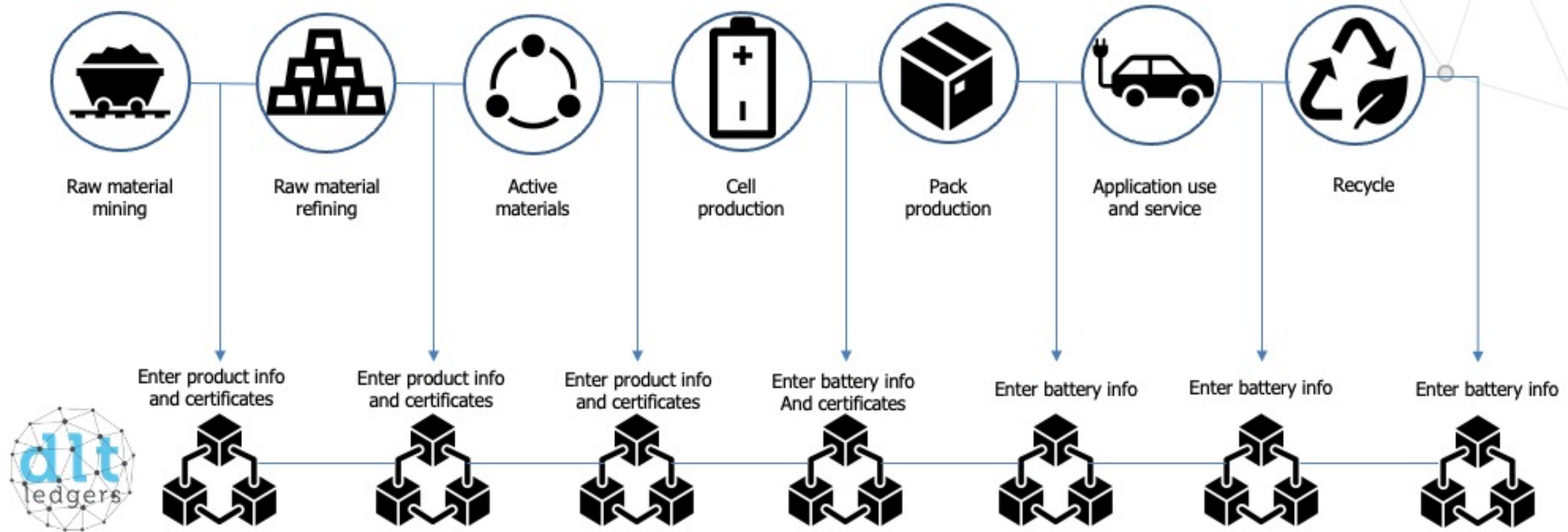
## VALUE POTENTIAL



- The solution offers improved visibility across transactions and processes, simplifying the onboarding of business partners and promoting seamless digital integration with banks and customers.
- The implementation of the solution leads to a more efficient working capital cycle, enabling businesses to better manage their cash flow and financial resources, ultimately promoting growth and sustainability.

# Use Case: Battery Passport

Product



### Core Capabilities

- Secure data storage:** The platform ensures secure storage of comprehensive data related to battery provenance, materials, licenses, ESG metrics, carbon emissions, compliance, and performance levels.
- Tamper-proof record keeping:** The immutable nature of blockchain technology ensures that once data is recorded, it cannot be altered or tampered with, providing a reliable source of information for stakeholders.
- Controlled access and data sharing:** A private, permissioned blockchain allows only authorized participants to access, view, and share specific data, ensuring the privacy and security of sensitive information.
- Enhanced traceability and transparency:** The platform enables tracking and tracing of battery components throughout the supply chain, promoting transparency and responsible sourcing practices.

## BUSINESS CHALLENGE

- Supply chain transparency and responsible sourcing: Complex global networks and reliance on intermediaries make it challenging to trace mineral components and ensure responsible sourcing practices.
- Data sharing limitations: Lack of data sharing hampers end-of-life battery management, recycling, and circularity within the supply chain.
- Regulatory compliance: Battery manufacturers must navigate and comply with evolving regulations related to component traceability, carbon emissions, and end-of-life management.

## BLOCKCHAIN SOLUTION

- Digital battery life tracking: A Battery Passport is created to monitor the entire life cycle of a battery and its components.
- Comprehensive data collection: The Passport gathers data on provenance, materials, licenses, ESG metrics, carbon emissions, compliance, and performance, securely stored on a blockchain platform.
- Supply chain transparency and traceability: The collected data can be shared across the supply chain, promoting transparency and component traceability.

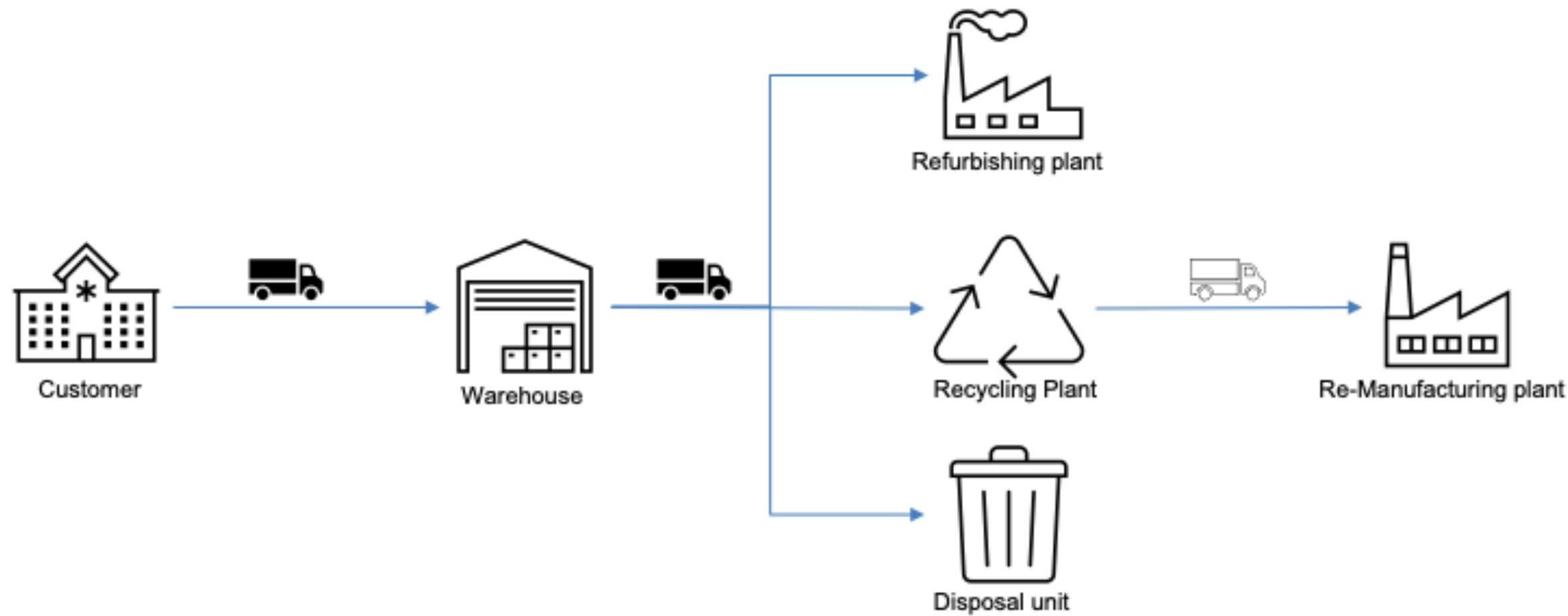
## VALUE POTENTIAL

- Improved sourcing and traceability: By capturing provenance and material information, businesses can track component origins and ensure responsible sourcing practices.
- ESG metrics and compliance: The Passport allows for tracking of carbon emissions and other ESG metrics throughout the battery life cycle, facilitating data sharing and compliance with regulations.
- Enhanced battery management and circularity: By communicating critical battery information and enabling tracking across the life cycle, Battery Passports support informed decisions on reuse, recycling, and advancements in circular economy practices.




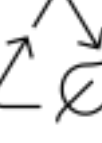


# Use Case: Reverse Logistics

Product



### Core Capabilities

- 
**Process automation and standardization:** Leveraging smart contracts to automate processes, reduce manual intervention, and create a standardized platform for managing returns, which streamlines operations and reduces complexities.
- 
**Supply chain visibility and data sharing:** Providing real-time tracking and tracing of returned goods throughout the supply chain, enabling secure and transparent data sharing among all parties, enhancing collaboration and reducing information silos.
- 
**Provenance and authentication:** Utilizing blockchain technology to verify the authenticity and origin of returned goods, reducing counterfeiting and ensuring that all products are genuine.
- 
**Compliance and sustainability:** Ensuring immutable record keeping for regulatory compliance, tracking environmental impact, and incentivizing sustainable practices through token-based reward systems.

## BUSINESS CHALLENGE

- Cost and complexity management: Balancing return-related expenses with customer satisfaction in a cost-effective and efficient manner.
- Supply chain visibility: Ensuring real-time tracking and communication among all stakeholders to reduce delays, errors, and inefficiencies.
- Compliance and sustainability: Navigating waste management regulations while minimizing environmental impact and working towards sustainability goals.

## BLOCKCHAIN SOLUTION

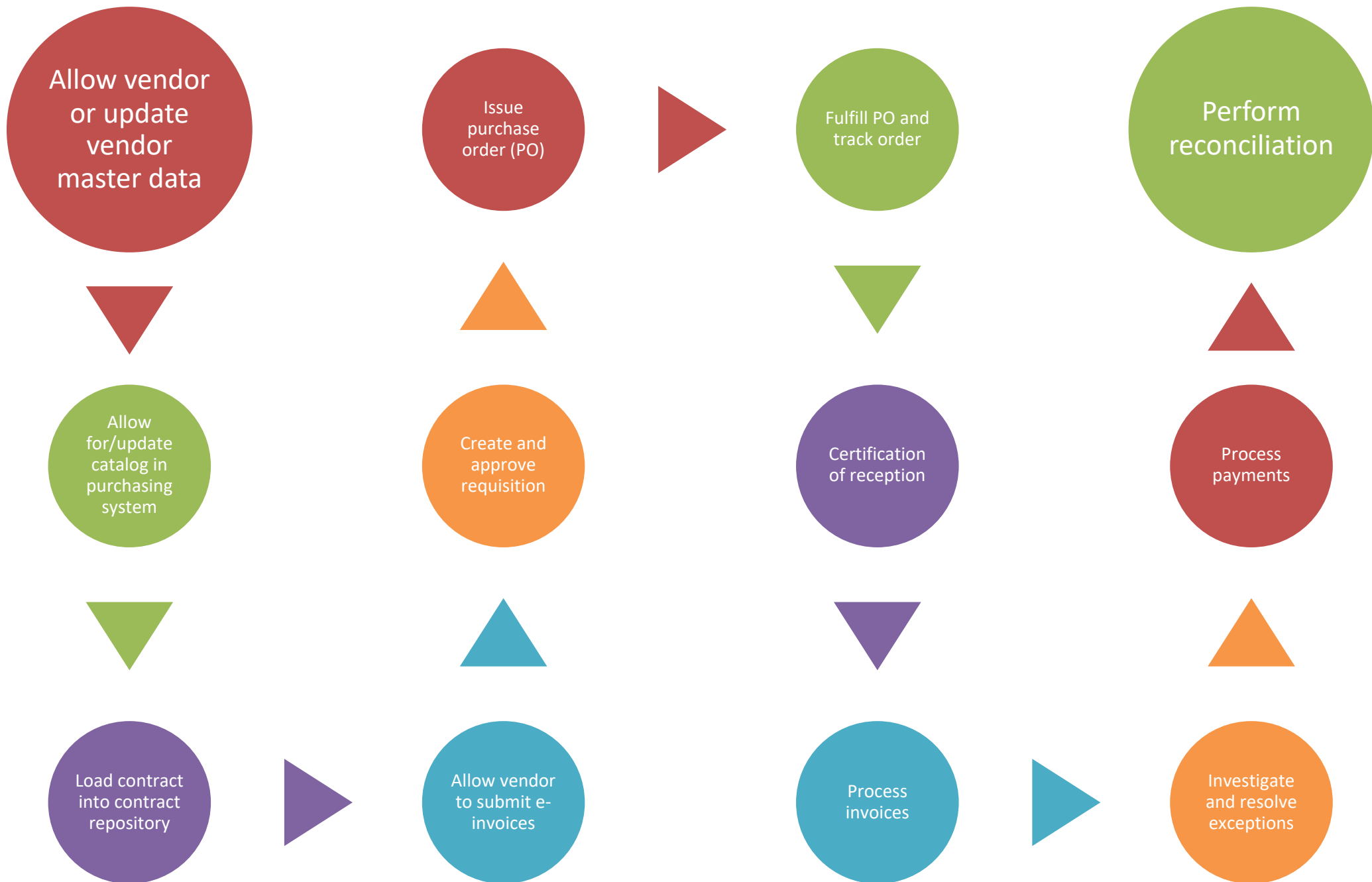
- Cost and complexity management: Blockchain enables process automation through smart contracts, standardization of return management, and secure transaction recording to reduce fraud risks.
- Supply chain visibility: Real-time tracking, secure data sharing, and provenance authentication are possible with blockchain, improving transparency and collaboration in reverse logistics.
- Compliance and sustainability: Blockchain's immutable ledger simplifies regulatory compliance, tracks environmental impact, and incentivizes sustainable practices through token-based rewards.

## VALUE POTENTIAL




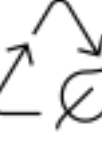
- Efficiency and collaboration: Blockchain implementation in reverse logistics improves operational efficiency, enhances collaboration among stakeholders, and streamlines decision-making.
- Customer satisfaction and compliance: Real-time tracking, fraud reduction, and secure record-keeping boost customer satisfaction and simplify regulatory compliance.
- Sustainability and competitive advantage: Incentivizing sustainable practices and adopting innovative blockchain solutions contribute to a greener supply chain and provide a competitive edge.

# Use Case: Procurement

Product



**Core Capabilities**

-  **Process automation and standardization:** Leveraging smart contracts to automate processes, reduce manual intervention, and create a standardized platform for managing returns, which streamlines operations and reduces complexities.
-  **Visibility and data sharing:** Providing real-time tracking and tracing of goods throughout the P2P process, enabling secure and transparent data sharing among all parties, enhancing collaboration and reducing information silos.
-  **Provenance and authentication:** Utilizing blockchain technology to verify the authenticity and origin of goods, reducing counterfeiting and ensuring that all products are genuine.
-  **Compliance and sustainability:** Ensuring immutable record keeping for regulatory compliance, tracking environmental impact, and incentivizing sustainable practices through token-based reward systems.

## BUSINESS CHALLENGE

- The need for sustainable cost reductions and efficiency improvements.
- The necessity for robust fraud control measures.
- The requirement for enhanced transparency in processes.

## BLOCKCHAIN SOLUTION

- Disrupts traditional PTP processes and provides operational benefits.
- Facilitates information exchange, improves validation, and accelerates order management.
- Streamlines management processes, reduces risk, and increases trust among stakeholders.

## VALUE POTENTIAL

- Enhances validation, accelerates order management, and reshapes invoice processing.
- Accelerates settlements, reduces money laundering risk, and increases trust.
- Provides a strong audit trail and enhances transaction security.

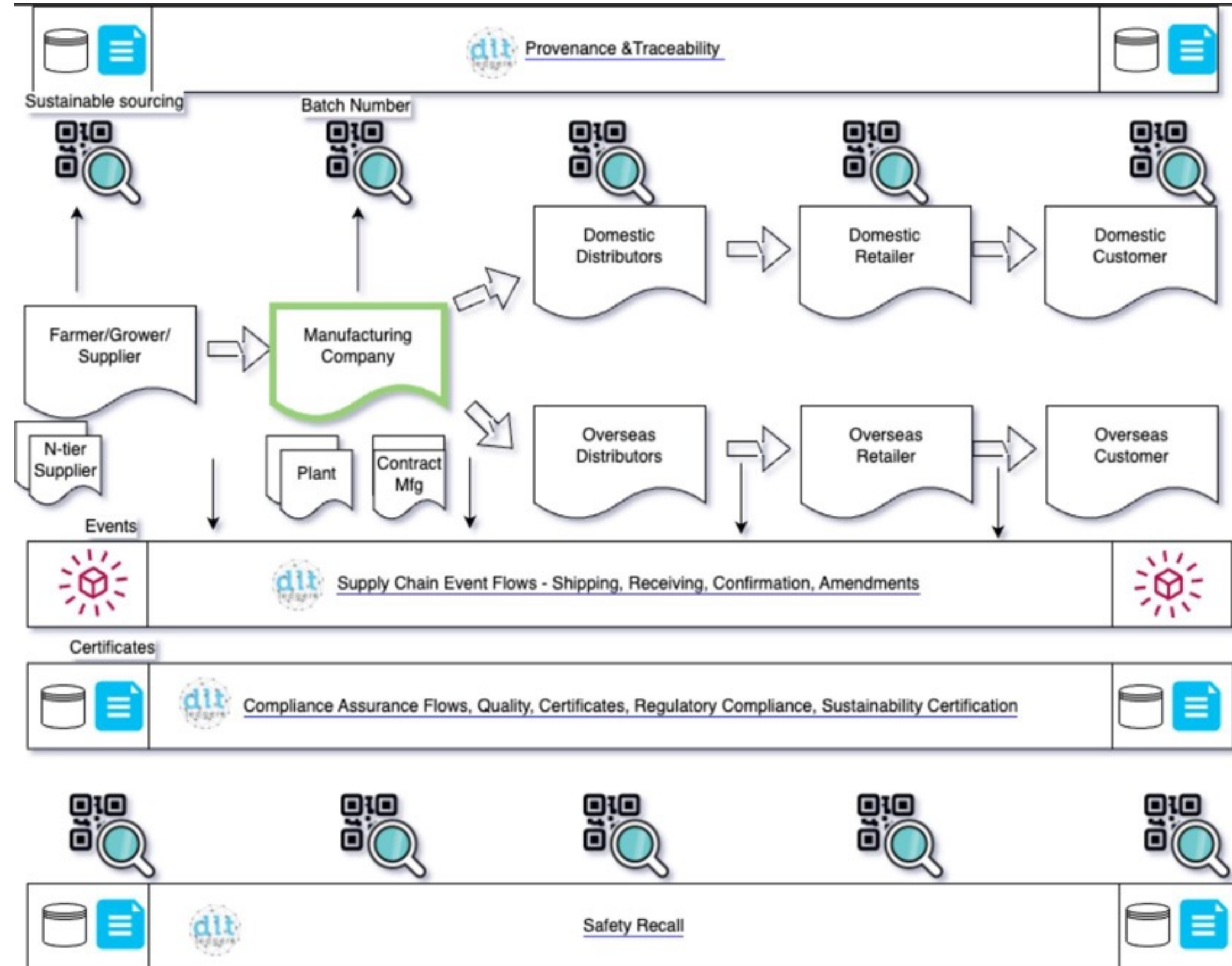


# Use Case: Sustainability

When it comes to traceability, there are key elements to consider when designing an effective trace and tracking solution: **Data, Documents, Events, Certificates**, and their respective tracking across the entire value chain.

#dltledgers is **private block chain set up**, with an option to extend dedicated nodes to each parties within the network.

**Increased transparency, Quality control and Competitive differences** among peers are the most key benefits for Enterprise of implementing block chain based Track and Trace system.



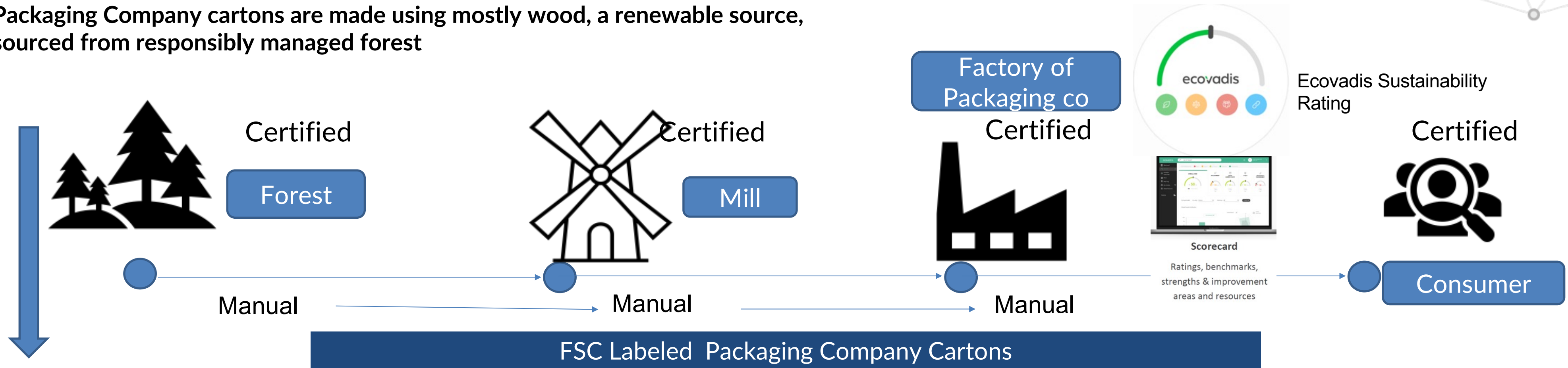
# FSC (Forest Stewardship Council) Chain of Custody

Ensuring “responsible sourcing” through out the supply chain

Current “As is” versus “To Be” proposed

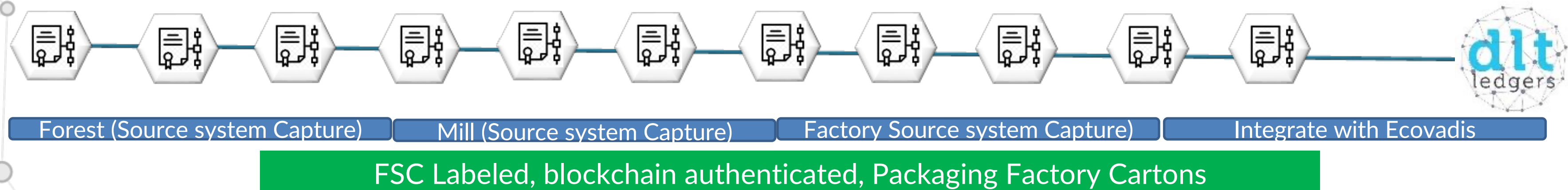
## Current “as is” process

Packaging Company cartons are made using mostly wood, a renewable source, sourced from responsibly managed forest



## Future “To be” process

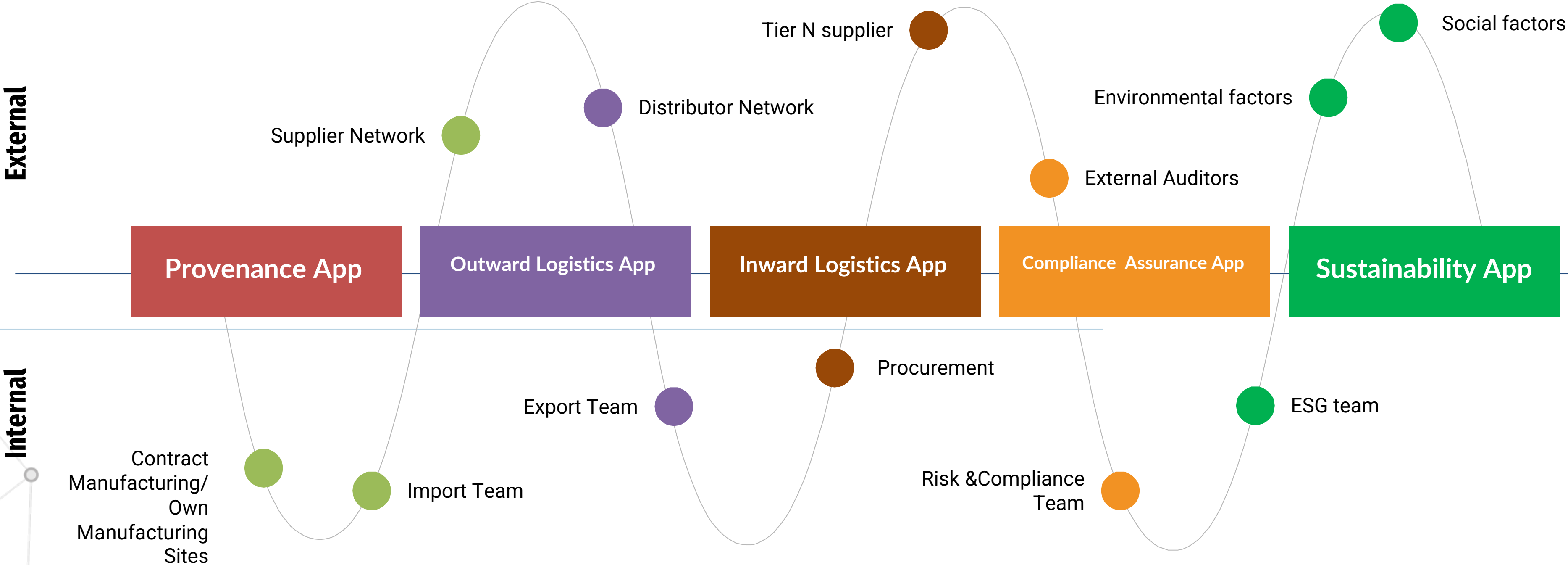
At source, verification of documents/data





# Building your own apps in weeks based on your priorities

Future Roadmap with #dltledgers for a Large Enterprise



# Limited view of our customers

## MFG/AUTO/CPG/LOGISTICS



## Banks/FSI



## RESOURCES



## PUBLIC SECTOR



## TELCO/HIGH TECH / TECH







**Proposed call to action**

**Next steps**

- Free brainstorming workshop for your Traceability and Sustainability Initiatives

[www.dltledgers.com](http://www.dltledgers.com)

# Contact:

## HQ: Singapore

Distributed Ledger Technologies (DLT) Pte Ltd  
81 Ayer Rajah Crescent, Singapore 139955

E: [sglabs@dlt.sg](mailto:sglabs@dlt.sg)

M: +65 6816 8180

W: [www.dltledgers.com](http://www.dltledgers.com)

Singapore & SEA | India | MEA | Japan | New Zealand | Australia | USA