



# Build it on blockchain

Collaborate with trust  
in an open world



## About blockchain at Wipro

Wipro partners with its clients in their blockchain journey right from ideation till execution phase. We bring recognized and acclaimed advisory services to clients on blockchain technologies, construct blockchain networks and tailored solutions by leveraging our CoE (Centre of Excellence), combined with our powerful blockchain partner ecosystem. We help customers in experimenting and deploying proof-of-concepts on blockchain technologies and incrementally expand to scale to production releases. Our thought leaders regularly educate customers, partners and CxOs on the power of blockchain for today and tomorrow.

## Our offerings Advisory and consulting

### Executive workshops

Educating the clients on blockchain; its potential applications, relevance to business and impact

### Business advisory services

Formulation of business strategy for blockchain, defining the strategy/roadmap, elaborated use cases and creating initial business value proposition, including cost-benefit, feasibility and complexity

### Technology consulting

Define blockchain platform strategy to address use case, security, scalability, privacy and operational demands.

## Co-innovation and experimentation

Co-innovate with clients to develop solutions in an iterative manner.

Ideation-to-execution partner in blockchain client experimental programs

### Blockchain innovation lab

Capability to auto-provision configurable blockchain networks in Cloud environments.

### Ideation engagements

Ideate, evaluate and shortlist use cases for blockchain experimentations.

### POCs/Pilots

Launch of pilot projects that can prove the business value and technology impact.

## Blockchain application & network services

### Develop blockchain applications

- Architecture and Design services
- Blockchain app development, performance, scalability testing and roll-out production releases

### Build a blockchain network

Building new business models and revenue streams by onboarding counter-parties to the client's blockchain network; including infrastructure, Cloud, and security

## Key enablers

The solution enables rapid go-to-market of blockchain applications for our clients through an integrated suite of expertise, assets, technology, processes and partner ecosystem.



**Strong advisory based approach** to accelerate the client journey on blockchain with a well-defined business case



**Industry specific solution assets** to jump-start blockchain adoption and experimentation



**Comprehensive partner ecosystem** to jointly construct and operate blockchain networks to create an ecosystem for clients



**Blockchain Academy for enterprise level talent development** to build competency through a multi-level program



**Blockchain COE (center of excellence) to provide technology guidance and build technology solutions/ assets**, creating blockchain point of views, frameworks, IPs, reference architecture and other artifacts

## Creating value for Oil & Gas companies

### Key deterrents to successfully leveraging blockchain

- Time consuming process due to large number of handouts between shipping participants
- Huge volume of paper based documentation  
More time consumed on reconciliation and settlement process
- Lack of real-time integration of information across entire ecosystem

### Leveraging our proprietary 5 step process:

#### Disruptive insights

- Envisage the paradigm shifts caused by blockchain
- Envision the blockchain-enabled oil & gas industry

#### Future vision

- Deconstructing oil & gas value chain to capitalize on the blockchain paradigm
- Market making opportunities
- Disrupting existing processes and systems

#### Ecosystem roadmap

- Prioritize use cases
- Ecosystem architectural and technology decisions
- Disruption roadmap

#### Experience design

- Building MVPs and controlled pilots
- Learnings and plan to scale
- Revisit and enhance business case

#### Continuous delivery

- Expand and onboard additional use cases
- Onboard additional participants
- Agile delivery

## Targeted use cases for Oil & Gas industry

### Material tracking

- Ensuring product quality throughout shipment
- Mitigating risk of multiple parties involvement

### Permit to work

- Worker certification validation for specialized operations jobs
- Creating a unified ecosystem between oil & gas firms, certification authorities workers and contracting firms

### Smart contract enabled settlement

- Use of smart contracts to enable payments upon delivery of goods and services
- Enables autonomous processes and improve quality control

### Vessel tracking and billing

- Global view of vessels with movement tracking and ownership transfers
- Conversion of charter contracts into smart contract for better reconciliation

### Trading platforms

- Marketing of reserve capacities of virtual power plant
- More granular markets, modified hedging of risks and new market participants
- Non-storable commodities trade such as electricity

### P2P Trading

- Peer to peer trading of energy. Coordination between energy providers, utility distributors and prosumers to validate trades

### Group Data Privacy Regulation – GDPR

- A DLT based solution orchestrated an audit trail of the handled PII data to ensure an immutable and transparent audit trail, fit for the purposes of reducing ambiguities and ensuring legal compliance besides giving employees a transparent view of how their PII data was dealt with

## Benefits

- Visibility of single source of truth data
- Immutability of transaction
- Managing multiple ownership
- Onboarding of various companies with different IT maturity
- Reduced in time consumed in transaction settlement
- Multiple hand-offs in a single process
- Process integrity
- Faster transaction velocity
- Empowered users

## Blockchain industry solutions

### Trade finance

The trade finance process includes steps for verification, settlement, approvals and clearance.

#### Key challenges in current process include:

- Long verification process due to multiple paper-based contracts
- Delay in settlement (typically takes weeks) as multiple parties are involved (custom agents, forwarders, ports, sellers, inspection agencies, insurers, banks, etc.)
- Lack of real-time visibility into the entire process
- Billions of dollars spent annually due to the complex and time-consuming intermediary processes

### Solution

- Shared ledger for maintaining important documents like letter of credit, bill of lading etc.
- Smart contracts to model workflows for document sharing in a multi-party scenario
- Logistical chain of events maintained in the blockchain for exhaustive audit trail
- Distributed ownership and transparency for all participants

### Benefits

- Faster verification by reducing manual processing time involved in trade finance
- Minimized costs
- Improved transparency and visibility

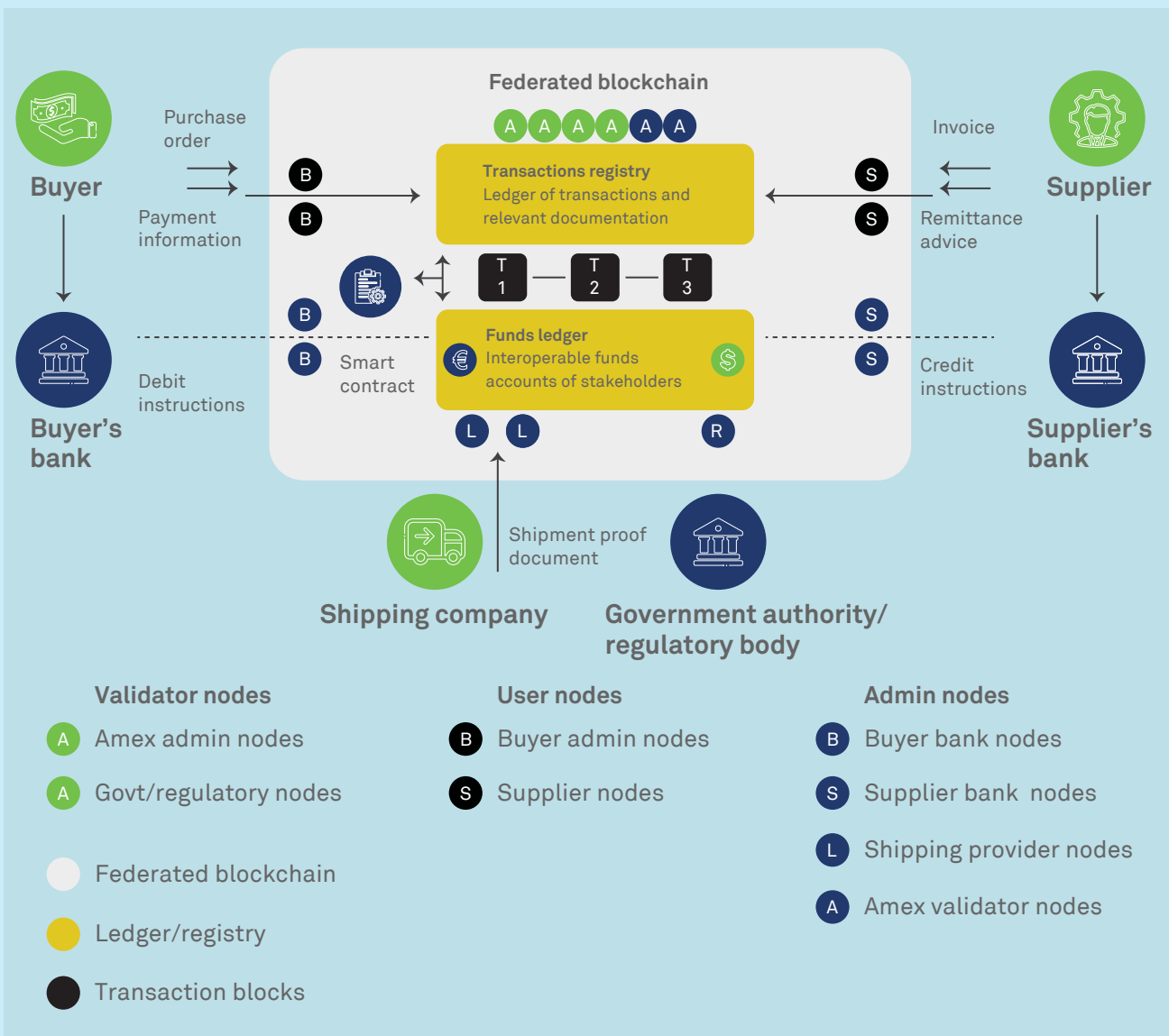


Figure 1: Blockchain in Trade Finance

## Invoice reconciliation

### Challenges

- Billing projections is a substantial effort for the finance team as it involves collation/reconciliation of data from multiple suppliers
- In most cases current billing projection numbers are based on human interpretation of data
- Post facto reports from SAP for billing projection are available only at a certain time (in most cases it is available only once a month)
- Data changes cannot be tracked from the previous cycle to ascertain the reason for data change

### Solution

- A distributed ledger which combines the contracts and efforts to provide an integrated view and visibility into the processes
- The solution provides a single source of truth about location and timing information for all stakeholders
- Smart contracts are used for contract details combined with instrumented effort or timing/location feed provides bill details

### Benefits

- Automates integration of data to bring transparency in the system
- Reduces billing and invoicing disputes
- Reduces manual processing

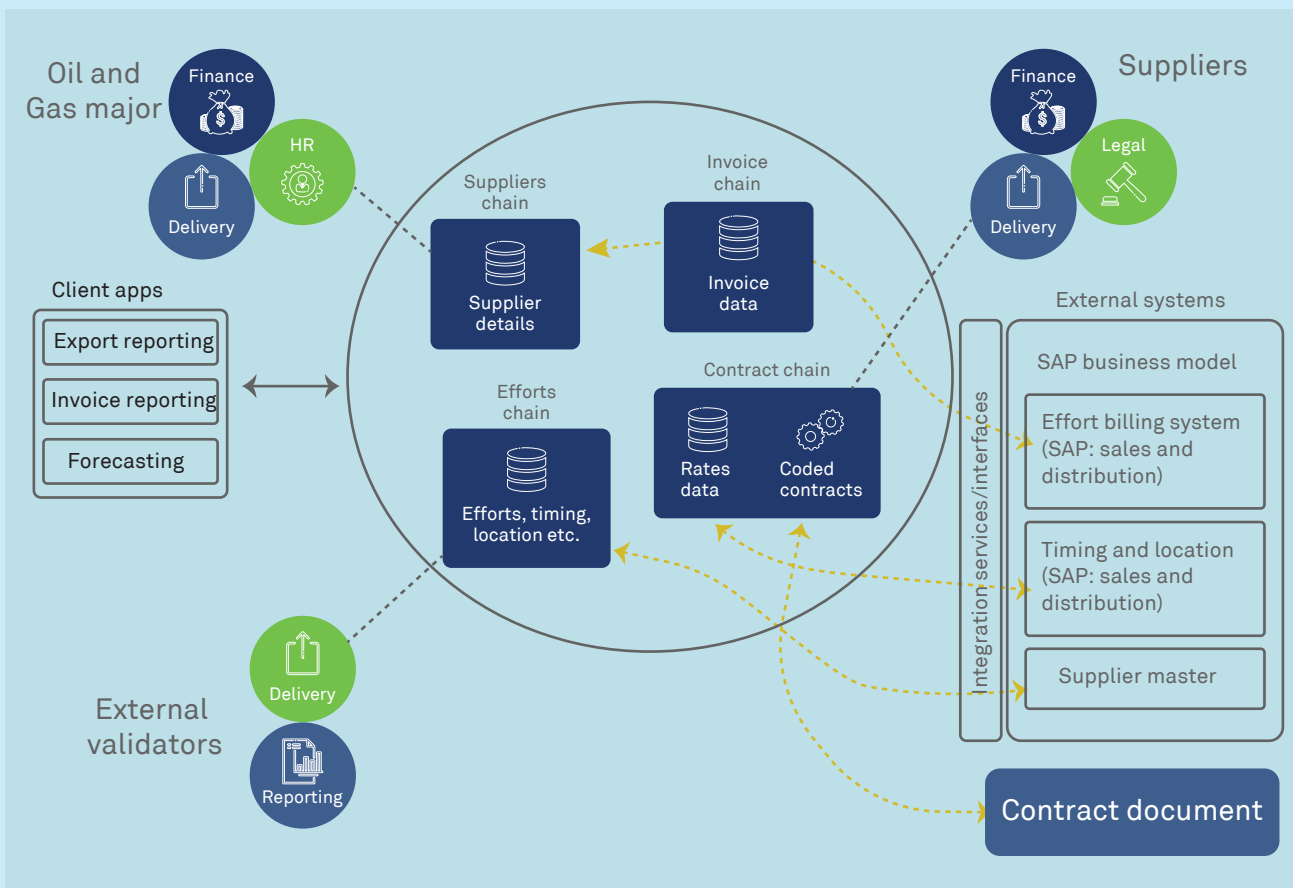


Figure 2: Various chains form the blockchain network for Invoice Reconciliation between multiple parties

## Group reporting

### Challenges

#### Book keeping

- Prone to human errors and frauds
- Outdated supporting documents due to time lag between transaction and agreements
- Accounting entries may be inaccurate due to lack of common agreement between counterparties and lack of visibility into transaction status

#### Close / Reconciliations

- Reconciliations may require significant effort to resolve lack of clarity with the suppliers/ partners
- Inaccurate close due to delays in settlements and lack of visibility into costs and transaction status

#### Audit

- Data for audit resides in silos and unavailable for other parties
- Audit may take up significant time to validate authenticity of transactions involving multiple parties

#### Management reporting

- Management reporting is not based on real-time information
- Undetected frauds and errors cases due to lack of single source of truth for transactions

#### Regulatory reporting and tax

- Regulatory requirements changes frequently
- Difficult to provide detailed breakdown of the reported values in current format

### Solution

- Distributed ledger for storing accounting entries and transaction details/ documents
- Permissioned ledger with access control for creating and reviewing entries at required granularity
- Managed by a regulator/auditor for authorization of entries
- All supporting documents to be stored within blockchain
- Automated third-party reconciliations based on the shared entry in blockchain

### Benefits

- Real-time visibility into transactions reduces reporting errors (accruals, adjustments)
- Common view of transactions and accounting data reduces chances of disputes and the time and effort spent to resolve them
- Tracking of transaction status via blockchain enables automatic trigger of tasks such as payments and acknowledgements via smart contracts
- Automatic reconciliations with third party data as all information is available at a single source
- Direct authorized access to regulators/ auditors/ taxman for granular data and insights
- Manual errors for data extraction/ consolidation eliminated

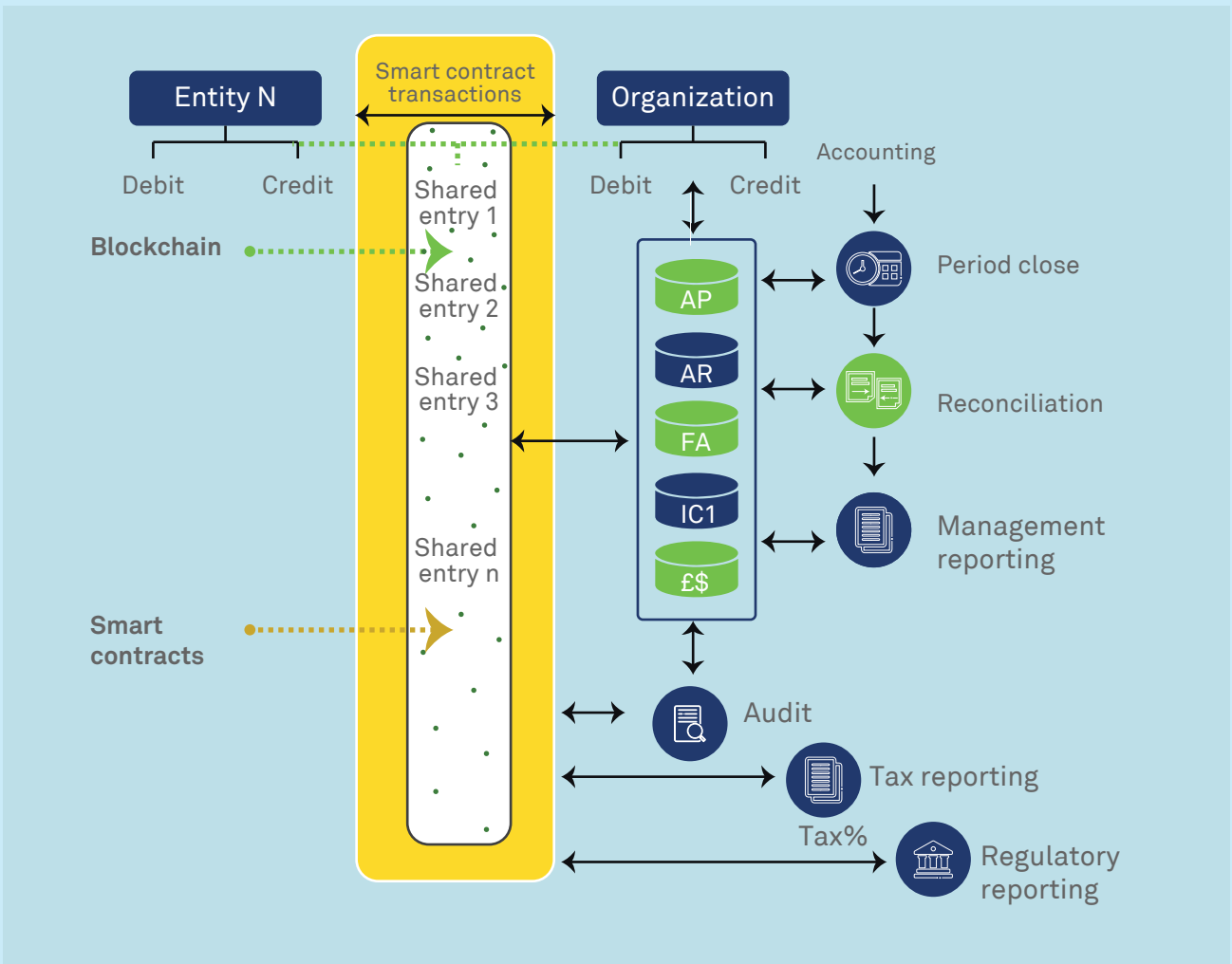


Figure 3: Blockchain in record to report process



## **Wipro Limited**

Doddakannelli, Sarjapur Road,  
Bangalore-560 035,  
India

Tel: +91 (80) 2844 0011

Fax: +91 (80) 2844 0256

**wipro.com**

Wipro Limited (NYSE: WIT, BSE: 507685, NSE: WIPRO) is a leading global information technology, consulting and business process services company. We harness the power of cognitive computing, hyper-automation, robotics, cloud, analytics and emerging technologies to help our clients adapt to the digital world and make them successful. A company recognized globally for its comprehensive portfolio of services, strong commitment to sustainability and good corporate citizenship, we have over 160,000 dedicated employees serving clients across six continents. Together, we discover ideas and connect the dots to build a better and a bold new future.

For more information,  
please write to us at  
**info@wipro.com**

