The Intelligent Cloud Platform for Trusted Customer Experiences
Our mission is to transform how businesses engage with their customers.

- **1999**: Tanla was founded. Sustained excellence of 21 years in telecom, managed by seasoned industry executives.
- **1st**: First company to develop and deploy A2P SMSC in India. Got listed on BSE and NSC in the year 2007.
- **800 Bn**: Interactions processed annually. Tanla touches over a billion lives carrying mission critical messages for enterprises globally.
- **~550**: World class engineers, developers, sales, and process champions with expertise in communication services.
- **₹1943 Cr**: In revenues generated in financial year 2020 and ₹654 Cr in Q3-FY’21.
We are the choice for leaders across industries

9/10 Banking
- HDFC Bank
- ICICI Bank
- Axis Bank
- Kotak
- Union Bank of India
- Punjab National Bank
- IndusInd Bank
- Canara Bank

7/10 Insurance
- Bajaj Allianz
- ICICI Prudential
- ICICI Lombard
- SBI Life Insurance
- HDFC Life
- TATA AIG
- HDFC General Insurance
- Oriental Insurance
- LIC

8/10 Financial Services
- Paytm
- HDFC Securities
- PayU
- PhonePe
- SBI Card
- FreeCharge
- PolicyBazaar
- Karvy
- MobiKwik
We are the choice for leaders across industries

9/10 E-commerce
- Amazon
- Flipkart
- Nykaa
- Snapdeal
- BookMyShow
- Myntra
- SWIGGY
- JioMart
- bigbasket

7/10 Retail
- Shoppers Stop
- Future Retail
- Reliance
- Landmark Group
- ASK
- V-Mart
- Cromangy
- DMart
- Trent

7/10 Social Media
- Facebook
- Google
- LinkedIn
- Tinder
- TikTok
- Snapchat
- WhatsApp
- Twitter
- YouTube
- Instagram

6/6 Telecom
- Airtel
- Vi
- extraat
- BSNL
- Jio
Overview
Defining CPaaS

Communications Platform as a Service (CPaaS) offers APIs that simplify the integration of communications capabilities (for example, voice, messaging and video) into any app, service or business process. (Gartner)

CPaaS helps businesses take an omnichannel approach to their communications

- Use CPaaS for messages such as appointment confirmations and reminders, order confirmations, and delivery tracking.
- Add a layer of security for your customers with CPaaS by enabling two-factor authentication, OTPs, secure mobile payment information.
- Communicate privately with customers and securely share sensitive information like credit card delivery notification, policy renewals, claim updates.
The era of CPaaS

More than 65% of marketers think SMS is an effective tool when compared to other modes of outreach.

The CPaaS market has been growing in the ~33% range when factoring in global expansion, new CPaaS entrants, emerging communications modules and accelerated user adoption.

Globally more than 1 trillion messages are being sent by businesses to their customers every month

Source: Gartner

CPaaS Trends & Predictions

- $20 B of the total market size of CPaaS in 2020 (Source: Gartner)
- 67% of people plan to increase their level of investment in CPaaS (Source: Frost and Sullivan)
- 90% of enterprises will adopt CPaaS by 2023 (Source: Gartner)
The era of flux and transformation

Challenges with the existing ecosystem

Data Security
The lack of strong data security controls and protocols allow man-in-the-middle attacks from fraudsters

Data Privacy
Data breaches are common even at the largest enterprises, resulting in loss of revenue and brand reputation

Counterfeits
Regulatory non-compliance and leakage of revenue due to counterfeiting and grey routes

Intermediaries
Multiple levels of intermediaries between the enterprises and telcos lead to poor quality of service and hamper customer experience

Reconciliations
Data silos and manual processes give rise to billing disputes and lengthen reconciliation cycles
Challenges in the current message flow

- Lack of data privacy and security
- No delivery assurance
- Absence of trustworthy ecosystem
- Grey routes and other fraudulent activities
- Limited reach and fixed pricing
Telcos, enterprises, and service providers are scattered in the current landscape
Wisely—The intelligent cloud platform for trusted customer experiences
Our Solution

The world’s first blockchain-enabled Communications Platform as a Service (or CPaaS), offering a unique marketplace for businesses and suppliers, with a global edge-to-edge network delivering private, secure, and trusted experiences.
Secured
- E2E message encryption
- No intermediaries
- Cryptographic Algorithms
- Privacy by design

Transparent
- End to end auditability
- Single Source of Truth
- Verified, Zero disputes
- No Counterfeits

Intelligent
- Rapid deployment, onboarding, and quicker time to value
- Best in class data insights
- AI-ML Analytics

Adaptable
- “As-a-Service” Model
- Cloud agnostic
- Highly scalable
- High availability & redundancy
An edge-to-edge network and a global marketplace
The Wisely Network comes integrated with global service providers for omnichannel communication – including SMS, email, voice, RCS, OTT apps, and push notifications – that can be accessed using a single API.

With Wisely Network:

- Communications are no longer transmitted in clear text: users’ personal data stays personal.
- Users’ personal data is not vulnerable, ensuring protection from fraud.
- Unsolicited communication is never delivered, meaning freedom from spam.
- All communications are received and on-time; be confident that no communication will be dropped or delayed.
A modern digital platform for commerce where businesses can discover & collaborate with global suppliers for their evolving communication requirements.

The Wisely Marketplace:

- With verified buyers and sellers creates an ecosystem of trust.
- Uses blockchain to generate zero dispute settlement reports
- Empowers suppliers by providing access to global enterprises and bringing increased business predictability and sustainability
Jointly developed and marketed by

Tanla

Microsoft
The Microsoft Azure Value

An open, flexible cloud platform that enables you to build, deploy and manage apps across a global network of Microsoft-managed datacenters.

The Azure approach to trust is based on the following foundational principles:

- Security
- Privacy
- Compliance
- Resiliency
- Intellectual Property (IP) Protection
Functional and technical aspects
## Platform functional overview

### Core Services

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### Application

- Smart Routing
- Communication Gateway
- Recon & Settlement
- Real-time analytics
- CDR

### Provisioning

- Access management
- Account Management
- Provisioning
- O&M

### Security

- Key Vault
- E2E Encryption
- Key Vault
- 2-Factor Authentication
- JWKS

### Interfaces

- Campaign Manager
- SMPP
- ODBC
- HTTP
- FTP

### Blockchain

- Ledgers
- Chain Codes
- Audit Trails
- Immutability

### O&M

- Application
- Traffic
- Management
- Revocation DB
- Long Message
- MNP
- DAI
- AI/ML

### Telco Edge Node

- Key Vault
- Security
- SMPP
- Interfaces
- Blockchain

### Wisely

- An Intelligent Cloud Platform
Technical architecture

HA/Multi-Region Deployment

South India
- Front end
  - Ingress (App Gateway)
- Back-end Services
  - Portal
  - Pod autoscaling
  - API
  - Router
  - Aggregator
  - DB-Writer

Central India
- Front end
  - Ingress (App Gateway)
- Back-end Services
  - Portal
  - Pod autoscaling
  - API
  - Router
  - Aggregator
  - DB-Writer

Enterprise Edge Node
- Traffic Manager
- Virtual network

Azure Active Directory
- Monitor
- Azure Key Vault

Cosmos DB
- Event Hubs
- Redis Cache
- Replication

Telco Edge Node

Kubernetes cluster
- Pod autoscaling
- Back-end Process

Application Gateway
- Kubernetes duster

DB-Writer
- Virtual network
How is it built

UX/UI

Mobile Application
- Registration
- Reports
- Marketplace
- Bidding
- Digital Contract
- Consent Management
- Data Analytics

Web Application
- Role-based login
- Dashboard
- Rate Card Management
- Credit Management
- Group buying
- Preference Management
- Smart Filter

User Management
- Integration Resources
- Support Management
- Marketing Automation
- App Store
- OptiCloud Storage

Modules
- User Management
- Add-On(s)

APPLICATION

TANLA SUPPORT TOOLS

APIs
- SMPP
- SMPP/HTTP

UX/UI
- Enterprise
- Mobile Application
- Web Application
- User Access Management
- User Management
- Registration
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CORE
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- Throughput Mgmt.
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- Routing
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- CDR
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TANLA SUPPORT TOOLS
- CRM
- Finance & Accounting
- Business Intelligence
- Payment Module
- Platform monitoring

Blockchain
- Ledgers
- Chaincode

Enterprise
- User Access Management
- Enterprise Routing
- Encryption Layer
- Consent Management
- Omni-Channel Management
- Campaign Manager

Telco Operator
- User Access Management
- Telco Operator Routing
- Decryption Layer
- Preference Management
- Telco Delivery Reporting

Enterprise Peer
- Scrubbing
- Enterprise Peer
- Scrubbing

Telco Operator Peer
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- Telco Operator Peer
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APIs
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- SMPP/HTTP
The Tech Stack - layers and components

Enterprise
- Microservices Layer
  - HTTP API
  - SMPP API
- Persistence Layer
  - HashiCorp Vault
  - Traffic Manager
- Cross-Cutting
  - Azure Active Directory
  - Azure Key Vault
  - Log Analytics
  - Azure Monitor

Tanla
- Messaging Layer
  - Event Hubs for Kafka
- Microservices Layer
  - Ingress API
  - Web Portal
  - Routing Engine
  - Aggregator
- Persistence Layer
  - Cosmos DB/ MongoAPI
  - Azure Cache for Redis
- Data Insights Layer
  - DataBricks
  - Postgres SQL
  - PowerBI
- Integration Layer
  - Logic App
- Blockchain Layer
  - Business Peer
  - Tanla Peer
  - Ordering Service
  - Telco Peer

All microservices developed in Go Lang

Telco
- Microservices Layer
  - Config Portal
  - Aggregator
  - CDR Processor
  - SMPP Client
- Persistence Layer
  - Redis Cache
  - HashiCorp Vault

Wisely – An Intelligent Cloud Platform
Edge Node

The Encryption Process

- Enterprise edge node and telco edge node shares public keys to the Exchange. The Exchange then sends the partner public keys to the corresponding edge nodes for encryption.
- All messages from Enterprise edge node are encrypted and decrypted at the telco Edge node.
- The encryption happens on asymmetric public and private key pairs that rollover based on time configured.
- The key length is AES 128 with RSA 2048 encryption technique.
- The data at rest does not include message content however meta data is stored, therefore ensuring highest level of privacy of information.
- The encryption method also factors forward and future secrecy since the keys are rotational.
Benefits
Secured with end-to-end encryption

End-to-end encryption
The platform provides fully managed end-to-end secured network with state-of-the-art encryption powered by patented cryptographic algorithms to prevent fraud.

Data privacy
Privacy is built into the core architecture and functionality. Platform ensures data privacy by allowing direct connectivity with no intermediaries and using cryptographic algorithms.

Data security
Wisely provides secure communication through forward secrecy, future secrecy, sender validation, message replay and certificate revocation list management that allows only authorized users to access data.

No access to message content
Wisely does not have access to message content as the message is encrypted. The platform uses meta data for processing and reporting.
End-to-end encryption using Cryptographic Algorithms

Audited by World’s leading Cryptographic company, nccgroup
Data security and privacy

Encryption process

Enterprise Edge Node
- Key vault
- Key Rollover
- Publish Enterprise Public Key
- Get Partner Public Key

Exchange
- Key vault
- JWKS Server
- Store Public Keys
- Verify Partnerships and Send Public keys to partner

Telco Edge Node
- Key Vault
- Key Rollover
- Publish Enterprise Public Key
- Get Partner Public Key
Data security and privacy

✓ Secure connectivity via Edge node
✓ Configuration of TTL for your Key
✓ Setup blockchain traces for audit
✓ Manage certificates on JWKS
✓ Verify partner key fetch
“Centrally Available” communication records written into Blockchain by stakeholders which provides accurate information about the status of the communication.

Wisely enables a trusted network ensuring no counterfeit call data records/DNs are generated by intermediaries as all records are written into the blockchain by telcos bringing immutable recording and complete transparency.

Wisely verified, zero dispute settlement reports generated from blockchain ledgers to enable settlement with your partners/suppliers.

Designed to be fully compliant with your local telecom regulations and data protection laws. Ensuring your communications comply with legal obligations.
### Single Source of Truth

Every transaction is recorded on blockchain and available to participants in real-time.

- **Message Length:** 159
- **Request Time:** 01/06/2020 08:40:20
- **Status:** Successfully Accepted
- **Block Chain ID:** 741d0814965c095 81b5c7ff39e1d9 3b4e3c924788eb 6821c922494d83507
- **Routing Status:** Success
- **Partner Name:** XYZ Aggregator
- **Operator:** Vodafone
- **Circle:** Vodafone-Punjab
- **Blockchain ID:** 65962c631a4caeb 8bc9c130a57942 75e706c1fd43dc 9a8b9b514a1e56f541
- **Part Details:**
  - **LM Ref ID:** 9199946599901892
  - **Part No:** 1
  - **Total Parts:** 2

**Delivery Notification flow**

**Enterprise Edge Node:**
- **DR Decryption Status:** Success
- **DR Handover Status:** Completed

**Core Exchange:**
- **DR Received Time:** 01/06/2020 08:40:23
- **DR Routed To Enterprise:** 01/06/2020 08:40:24

**Telco Node:**
- **DR Status:** FAILED
- **DR Received Time:** 01/06/2020 08:40:21
- **DR Routed To Enterprise:** Completed
- **DR Encryption Status:**
- **Blockchain ID:** 65962c631a4caeb 8bc9c130a57942 75e706c1fd43dc 9a8b9b514a1e56f541

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[Wisely – An Intelligent Cloud Platform](35)
Single Source of Truth – zero dispute settlement reports

Verified settlement reports generated from ledgers on the blockchain
Built for the Cloud

Cloud-platform agnostic
Wisely can be deployed over any public or private cloud platform. A flexible deployment model ensures you can use Wisely on the Cloud, or on-premise with an option for a fully managed model using our DevOps expertise.

Elasticity and scalability
Wisely uses multiple platform as a service components over the cloud to ensure core services are highly elastic and capable of scaling horizontally for any size of workload.

High availability
Wisely has been engineered to be a multi-region, multi-cloud setup geared for high availability and redundancy.
Best in Class QoS

- **Uptime**: 99.999%
- **Performance**: 800 ms
- **Connectivity**: 15 SMSCs
- **Scalability**: 40,000
- **Development**: Microsoft
- **Deployment**: Azure
- **Security**: ISO 27001
Cutting-edge analytics

Advanced analytics capabilities
Packed with next-gen technology, Wisely comes equipped with advanced analytics that provides value-additive recommendations and predictions that reduce costs and improve Quality of Service.

Intelligent insights
Powered by Power BI, the best-in-class data visualization tool, Wisely dashboards make it easier for you to find the needle of insight in the haystack of data.

Real-time dashboards
Get access to deep network analytics, insights on traffic trends, ROI, campaign performance, and more, all in real-time.
Reporting & advanced analytics

Key performance indicators, value-based recommendations to reduce cost and improve QoS
Analytics & Storage as a Service

Storage as a Service

✓ Unlimited SSOT records
✓ Unlimited CDR storage
✓ Unlimited Summaries
✓ Build your own reports

Out-of-the-box

✓ SSOT available for 65 Days
✓ CDR data available for 65 days
✓ Summaries for 6 months
Customer references
User story demonstration
Success stories
ABC Customer Banking
Roadmap
Product Road Map and Upcoming Features (Placeholder)
Next Steps
The Wise Team
Thank you
Appendix