

QUARTZ



Digital Identity



Challenge

In the age of rampant and sophisticated cyber-attacks, sharing identity documents (in physical or electronic form) for verification exposes personal data and poses risk of identity thefts and phishing scams. The consequences of these risks are far-reaching, irreversibly impacting not only the financial and emotional well-being of the identity holder but also reputational risk for organizations.

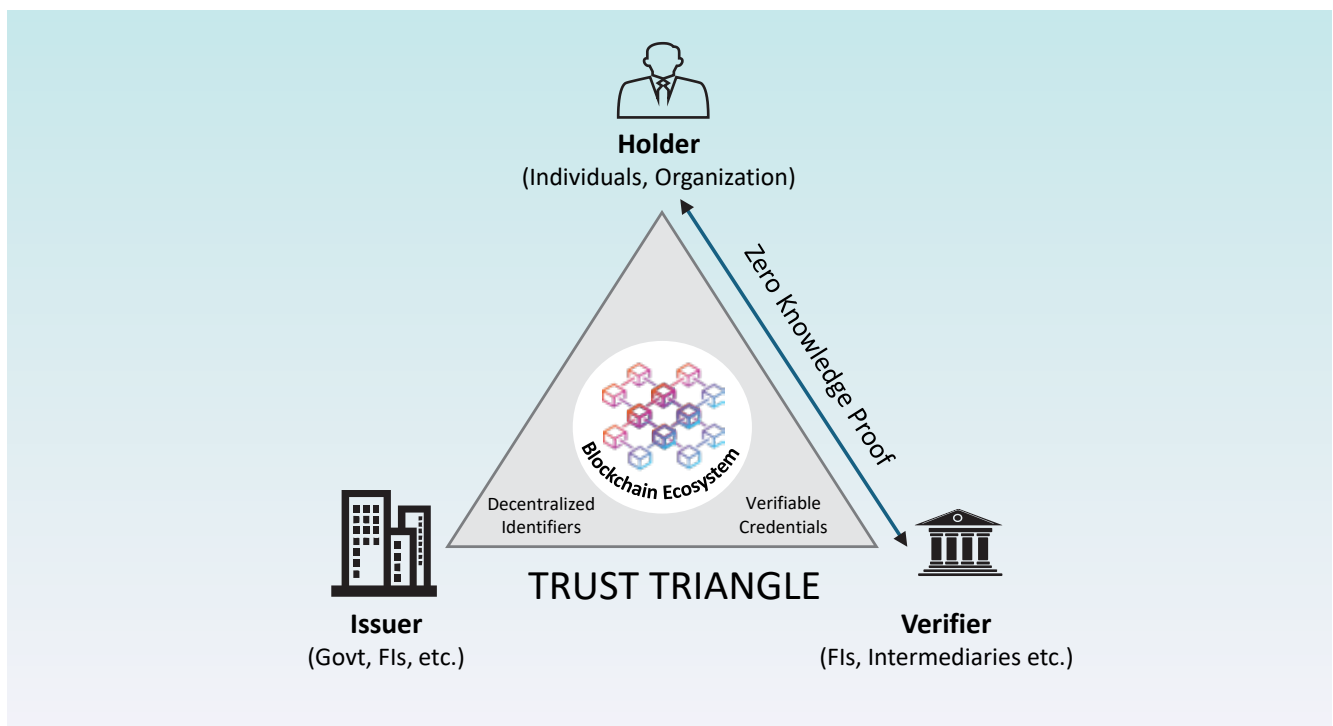
Traditional identity management systems involve identity credentials being managed in a centralized database, with verification being done manually against credentials issued by issuing organizations. This is not only resource-intensive and time consuming but also prone to single point of failure and risks due to fraud or forgery. In addition, it results in delays for the customer in availing services.

Solution

Quartz for Digital Identity streamlines identity management by bringing together various stakeholders including identity issuers, verifiers and identity holders in a decentralized blockchain network. Users can own, manage, and share their identity information securely based on explicit consent, and on a need-to-know basis, without relying on third-party intermediaries.

The solution enables the creation and management of unique Decentralized Identifiers (DIDs) on blockchain, which can be used for identity issuance, proof request and verification. Identity credentials are validated cryptographically via a digital wallet linked to the Decentralized Identifier (DID), in line with World Wide Web Consortium (W3C) standards.

The Digital Identity solution supports Zero Knowledge Proof (ZKP) protocol, a method of establishing proof over blockchain without disclosing identity information. The solution also supports Selective Disclosure, a mechanism using which the holder can disclose only specific information to the verifier based on the business need.





Benefits

- Enables user-controlled identity verification, thereby empowering identity holders with trust, security and data privacy
- Supports decentralized identity verification, and selective disclosure of identity information based on the need
- Simplifies identity issuance using customizable templates for Verifiable Credentials
- Reduces operational costs through reusable KYC, elimination of paper-based KYC

Quartz Advantage

- Aligns to W3C standards for issuance of Verifiable Credentials
- Designed using a hybrid, co-existent architecture with a combination of on-chain and off-chain services to ensure scalability
- Seamlessly integrates existing systems of Issuers and Verifiers with blockchain using Quartz Gateway

Awards & Accolades



About Quartz

Quartz provides foundational technology, tools and business components that harness the power of next-gen technologies including DLT, AI/ML (including GenAI) for organizations across varied industries, including Financial Services, Banking, Supply Chain, Energy & Utilities and eGovernance. Backed by awards from Juniper Research (Gold Winner for Digital Identity Innovation 2024), the Asian Banker (Best Fraud Prevention Technology Implementation 2023), Financial Technology Forum (Best New Post Trade Solution of the Year 2022), Asset Servicing Times (Outstanding Innovation Award 2022) and recognition from Analysts (ranked #1 Best Performing Fraud Management Solution by IBS Intelligence 2022) Quartz can help organizations operate at the forefront of technology innovation.

To know more about Quartz, please write to us at tcs.quartz@tcs.com, or visit our website <https://www.tcs.com/what-we-do/products-platforms/quartz>

About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services (TCS) (BSE: 532540, NSE: TCS) is a digital transformation and technology partner of choice for industry-leading organizations worldwide. Since its inception in 1968, TCS has upheld the highest standards of innovation, engineering excellence and customer service.

Rooted in the heritage of the Tata Group, TCS is focused on creating long term value for its clients, its investors, its employees, and the community at large. With a highly skilled workforce of over 607,979 consultants in 55 countries and 180 service delivery centers across the world, the company has been recognized as a top employer in six continents. With the ability to rapidly apply and scale new technologies, the company has built long term partnerships with its clients – helping them emerge as perpetually adaptive enterprises. Many of these relationships have endured into decades and navigated every technology cycle, from mainframes in the 1970s to Artificial Intelligence today.

TCS sponsors 14 of the world's most prestigious marathons and endurance events, including the TCS New York City Marathon, TCS London Marathon and TCS Sydney Marathon with a focus on promoting health, sustainability, and community empowerment.

TCS generated consolidated revenues of over US \$30 billion in the fiscal year ended March 31, 2025. For more information, visit www.tcs.com