

Tx's Capabilities in Fintech & Blockchain Testing

Jan 2025

WWW.TESTINGXPERTS.COM





Globally Top 3 Software Testing and QA Company, with a specialist division, for AI & Digital Engineering Services

 UNIVERSAL	US and UK Co-Headquartered 13 Global Offices	 EXPERIENCE	25+ years of Industry Experience	 DEMONSTRATED	Delivered for 480+ Clients
 RIGHT SCALE	1400+ people Agile & customer-centric culture	 CUTTING EDGE	5% Revenue on R&D & Innovation focused on Efficiency & Effectiveness	 MATURED	ISO 27001 ISO 9001:2015 Cyber Essentials certified

AI at the Core

Agentic AI-led end to end QE solutions | QA of AI systems

Recognized by Analysts and research organizations

 Leader Quality Engineering	 Leading vendor in Gartner Market Guide Application Testing Services 2025
 Leader and Star Performer QE Specialist Services	 Rising Star AI-driven ADM Services 2025

Recognized by Industry


Great
Place
To
Work
Certified
AUG 2024-AUG 2025
INDIA

Certified 6 times
in a row

Recognized by Community

 WINNER The Asia Pacific Software Testing Awards 2025	 FINALIST The AI Awards 2025	 FINALIST North American Software Testing Awards 2025
 FINALIST National DevOps Awards 2025	 FINALIST The European Software Testing Awards 2025	



Customer Satisfaction:
4.7/5 Average **Source Gartner Peer Insights Reviews

Types of Testing in Blockchain



Tx delivers comprehensive end-to-end blockchain testing solutions, with deep expertise across functional, non-functional, and specialized testing domains supported by industry-standard tools like Ethereum, Truffle, Hardhat, and major blockchain testing frameworks



Functional Testing

- Blockchain Core
 - Node
 - Client
 - Consensus algorithm
 - Virtual machine
- Smart Contracts/ DAPPS
 - Smart Contract Codes
 - API's/ Integrations
 - Business Logic
- Ecosystem Apps
 - Wallet
 - Oracles



Non – Functional Testing

- Blockchain platform performance test
- Blockchain scalability & stability test
- Load test
- Usability testing
- Security testing
 - Access and authentication
 - Secure hash, consensus algorithm
 - Wallet signature method
 - Private keys
 - OWASP guideline for mobile and web application
 - Vulnerability assessment



Other Specialized Testing

- Specialized smart contracts testing
 - Edge case testing
 - Encryption and transmission
 - State transition testing
- Peer/Node testing:
 - Transaction Consistency
 - Network Resiliency

Tools & Technology



Tx Differentiators

Industry Expertise

End-to-End Testing Solutions

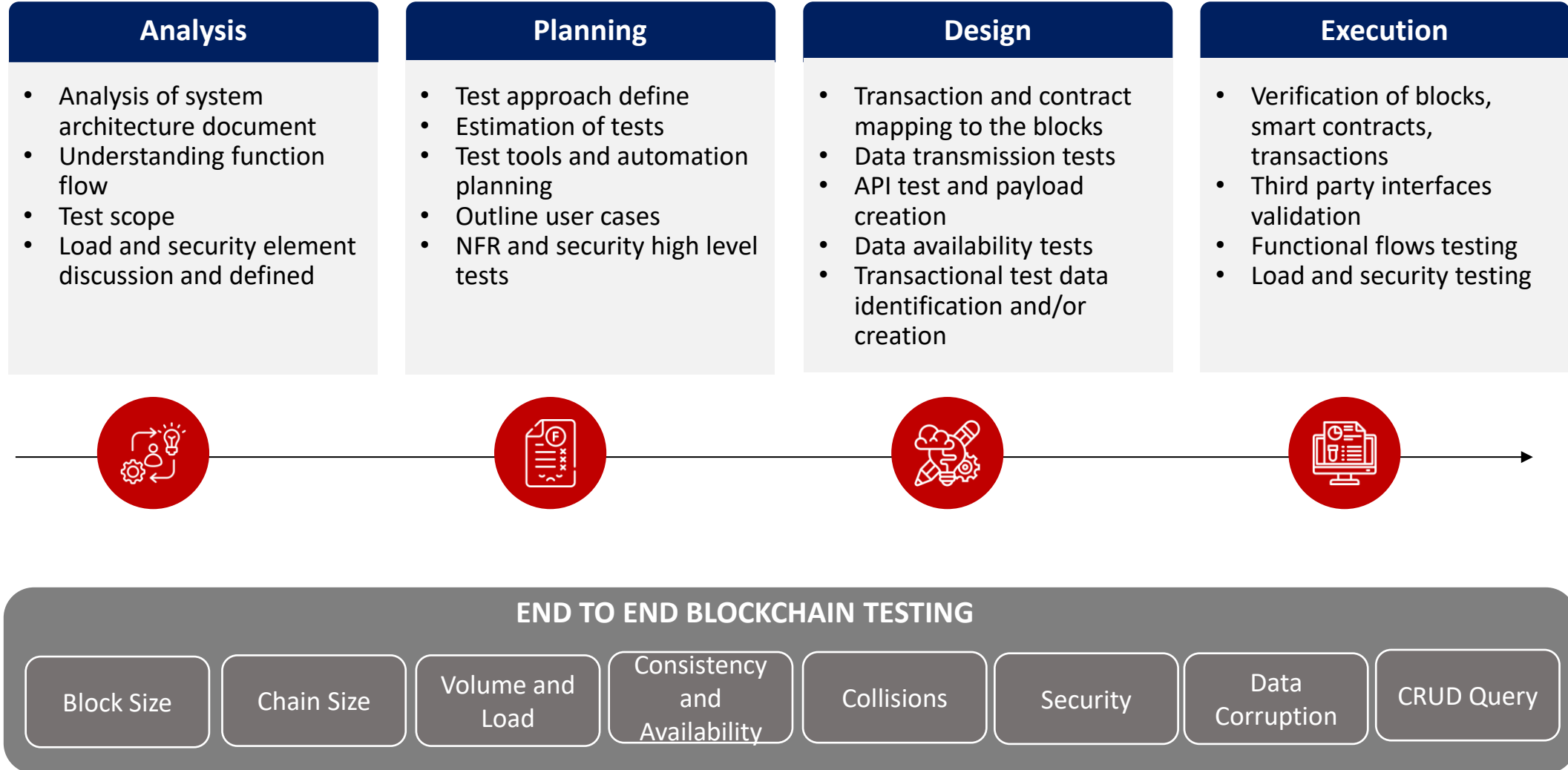
Tailored Blockchain Testing Strategies

Innovative Approach

Tx Blockchain Testing Approach



Tx implements a robust four-phase blockchain testing methodology from analysis through execution, supported by comprehensive end-to-end testing parameters that ensure thorough validation of block size, security, data integrity, and system performance



Case Study 1: Functional Testing for the Leading Blockchain Venture



The Client: Client partner with founders and start-ups to create new products and services using blockchain or distributed ledger systems

Business Needs:

- Identify a quality assurance partner to meet high testing volume requirements.
- Ensure a high-quality, process-oriented approach to functional testing for their blockchain application.
- Deliver consistent outcomes in a dynamic development environment with frequent changes.

Challenges

- Developing a reliable test bed for validating core functionalities.
- Managing the high complexity of the application with tight delivery timelines.
- Adapting to frequent application changes in an agile development environment.

High-level Approach/Solution

- Collaborated with the client right from the beginning to understand their objectives, critical features, and timelines
- Designed a comprehensive testing framework, including a checklist tailored to the unique challenges of blockchain technology
- Integrated functional testing seamlessly into the client's Agile environment, performing continuous testing for every update and change
- Managed the entire QA lifecycle, including:
 - Test case design
 - Automated and manual test execution
 - Defect logging, tracking, and re-testing
 - Regression testing for every release
- Maintained an open communication channel with developers, providing instant feedback and ensuring quick fixes for reported issues
- Monitored testing metrics (e.g., defect detection rate, test coverage) and regularly optimized the testing approach

Key benefits realised

- **Maximized test coverage** by ensuring thorough validation of all critical workflows and functionalities, including edge cases and complex scenarios
- **Reduced long-term costs** by minimizing expenses by catching and resolving defects early in the development cycle, reducing the need for costly fixes later
- Built a **reusable and scalable testing framework** that can be leveraged for future blockchain initiatives

Case Study 2: Functional Testing and Security Testing for Blockchain Company in Switzerland



The Client: Client partner with founders and start-ups to create new products and services using blockchain or distributed ledger systems

Business Needs:

- The primary need to the client is to digitize and secure the talent engagement process through blockchain technology to save time, cut costs, and enhance compliance
- Integration of testing frameworks within the development lifecycle to maintain continuous quality assurance
- Documentation and validation of all credential management processes

Challenges

- Absence of pre-existing testing documentation, requiring creation of all testing frameworks from scratch
- Complex application architecture involving multiple blockchain components and integration points
- Need for comprehensive security testing while maintaining development velocity

High-level Approach/Solution

- The Tx team implemented a risk-driven functional testing methodology to ensure optimal test coverage early in the development cycle
- Developed comprehensive understanding of application security requirements, including user roles, access levels, and authentication protocols
- Conducted thorough vulnerability scanning based on OWASP Top 10 standards using customized security testing framework
- Created automated testing cycles for continuous validation of credential management workflows
- Established daily and weekly testing reports with detailed statistics and actionable recommendations
- Integrated security testing within the development pipeline to ensure continuous compliance
- Developed automated overnight testing capabilities for non-critical components

Key benefits realised

- Achieved significant **reduction in verification time and costs** by automating the credential validation process and eliminating manual verification steps through systematic testing frameworks
- Enhanced platform security and compliance by identifying and remediating critical vulnerabilities early, resulting in **zero security incidents** during credential transfers and updates
- **Improved time-to-market** through automated overnight testing and continuous security validation, enabling faster feature releases

A background image showing a close-up of two hands shaking in a firm grip, symbolizing a business deal or agreement. The image is dark and moody, with a large, solid red diagonal shape overlaying the right side. The text 'Thank You' is centered in a white box on the left side.

Thank You