



Tx Data Warehousing Capabilities

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WWW.TESTINGXPERTS.COM



An overhead photograph of a group of people in business attire sitting around a large wooden conference table. They are engaged in a meeting, with papers, laptops, and coffee cups visible on the table.

AGENDA

1 Tx-Overview

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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


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





Our Data Warehousing Capabilities

Incompatible & duplicate data



Missing business flow information



Trouble acquiring and building test data



Unavailability of Inclusive test bed



Loss of data during ETL process



Volume and complexity of data is very huge



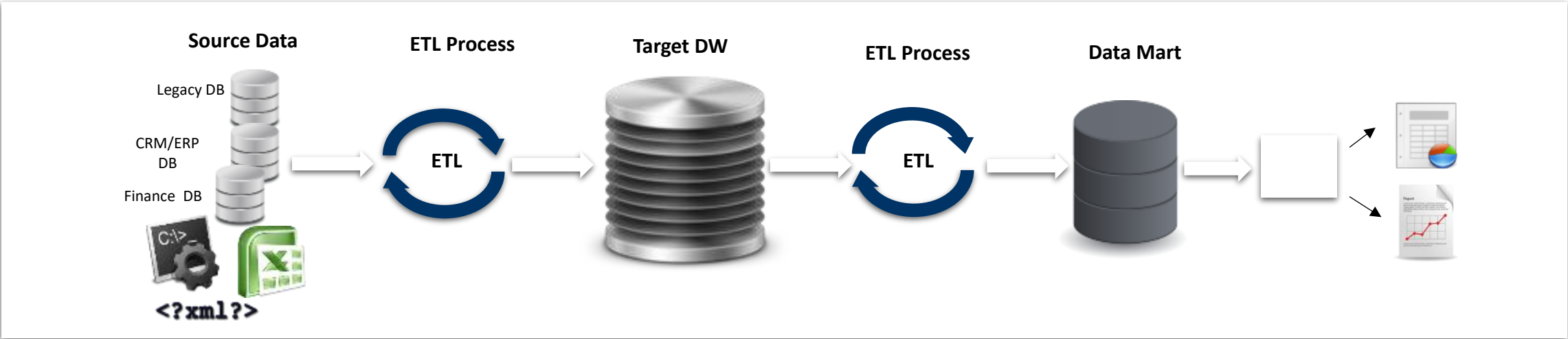
Regression Testing



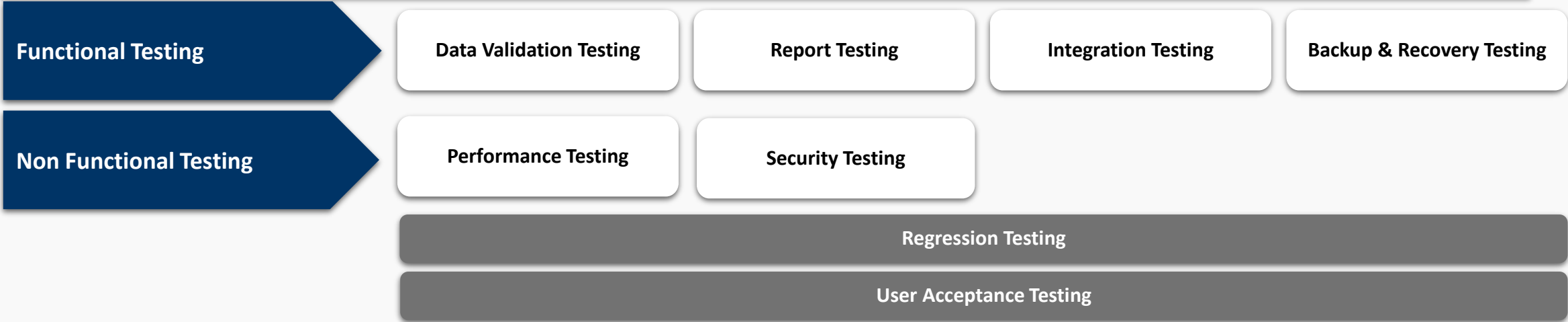
Tx Solutions

- Provide testing across different platforms, All data warehouse vendors (**Oracle, Teradata, IBM, Microsoft, SAP, Amazon, HP, Cloudera, Pivotal**), all of the **Hadoop** and **NoSQL** vendors, traditional databases, flat files, Excel, web services, JSON, XML and others.
- Speed up testing up to hundreds of times while providing up to 100% data coverage.
- **Continuous Delivery:** Integrates an out-of-the-box DevOps solution for most Build, ETL & QA management software.
- Deliver shareable, automated email reports and data health dashboards.
- Provide a huge Return On Investment (ROI).
- Easily automate the manual testing effort for repeatability.

Following is the Architecture of a typical data warehouse specifying the source data, the target data warehouse, and various data marts.



The architecture below depicts the various types of testing that can be performed for any data warehouse testing engagement:



The complexity and criticality of data warehouse testing projects are growing rapidly each day. Data warehouses need to be validated for functionality, quality, integrity, availability, scalability, and security based on the defined business requirements of an organization.

■ Testing the Data warehouse includes testing the following:

- ☐ Conceptual Schema
- ☐ Logical Schema
- ☐ ETL Procedures
- ☐ Database
- ☐ Front-end

The following is the mapping of testing types and the areas of to be tested:

Testing Type	Conceptual Schema	Logical Schema	ETL Procedures	Database	Front-end
Functional Testing	✓	✓	✓		✓
Usability	✓	✓			✓
Performance		✓	✓	✓	✓
Back-up & Recovery			✓	✓	
Security			✓	✓	✓
Regression	✓	✓	✓	✓	✓



Data Validation Testing

- Data Completeness
- Data Quality
- Data Cleanness
- Field to Field Testing
- Constraint Testing
- Source to Target Testing
- Business Rules Checks
- Granularity
- Aggregation
- Data Refinement



Report Testing

- Standards, Prompts, Drill Down, Summary, Look & Feel, Graphs / Charts, Measures / Dimensions
- Verify report data with the data source
- Create SQL queries to verify source/target data



Backup & Recovery

- Data Recovery
- Data Backup
- E-mail functionality
- Audit Logs Standards



User Acceptance Testing

- End User Representative
- Validate Usability



Integration Testing

- ETL Modules Integration
- DB-Report Integration
- Verify the initial load of records and the incremental loading of records on data warehouse
- Test error log generation

The objective of this testing is to ensure that the system meets the security and performance expectations of the business users. It aims to prove that the entire system operates effectively in a production environment, and that the system successfully supports the business processes from a user's perspective.

Performance Testing



Load the database with peak expected production volumes to ensure that this volume of data can be loaded by the ETL process within the agreed-upon window

Compare these ETL loading times to loads performed with a smaller amount of data to anticipate scalability issues. Compare the ETL processing times component by component to point out any areas of weakness



Monitor the timing of the reject process and consider how large volumes of rejected data will be handled

Perform simple & multiple join queries to validate query performance on large database volumes. Work with business users to develop sample queries and acceptable performance criteria for each query



Security Testing



ETL Security Checks:

- The front-end applications must not be accessible from outside company network
- Data entry points of the warehouse needs to be secure



Database Security Checks:

- Sensitive data is accessible only by certain people
- Data movement needs to be monitored



Reports Security Checks:

- User must access Reporting and OLAP with only specific credentials

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