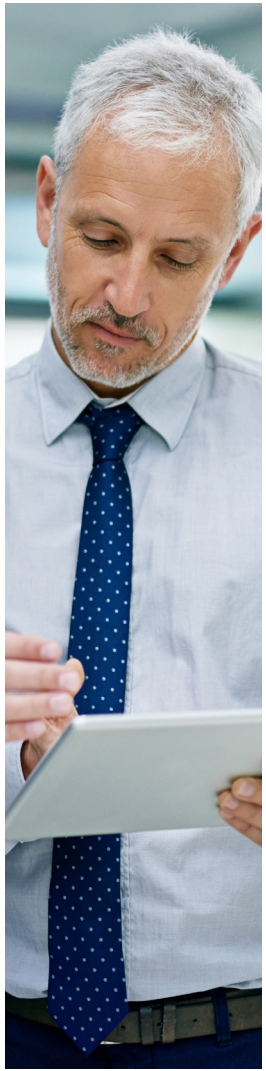

TESTING NEW APPROACHES FOR DIGITAL TRANSFORMATION

As organizations adopt new applications and channels to cater to customers across both traditional and non-traditional touchpoints, they are collecting more data and implementing analytics in order to identify new opportunities, which in turn would lead to smarter business moves, more efficient operations, higher profits, and happier customers.

However, the challenge here is managing the increase in volume, variety, and velocity of data; the ability to analyze this new complexity in real-time; the need to integrate this data in the broader Business Intelligence (BI) strategy; and most importantly, the need to keep data infrastructure and architecture up to date to ensure data types are supported and ultimately have a positive business impact for the organization.

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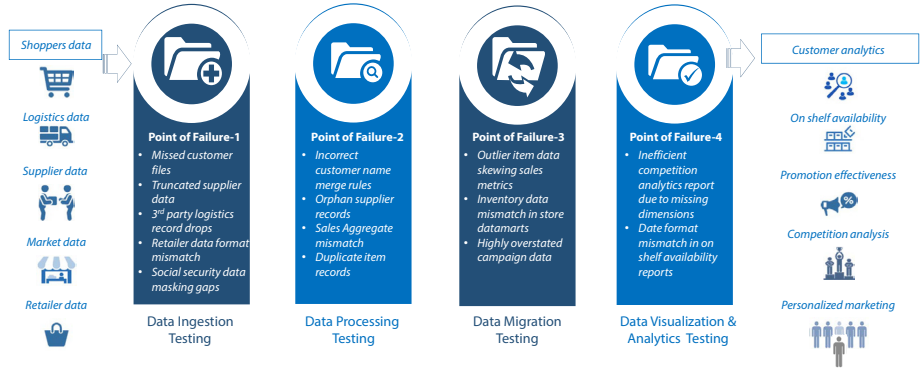
These challenges are rather well-known to the technology community. A recent study by Greyhound Research, a leading global analyst firm, confirmed the same. 87% respondents in the study were unsure of their approach to tackling big data, and 62% were grappling with issues around business processes, methodologies, governance, and security.

TACKLING BIG DATA CHALLENGES

These challenges are common for organizations trying to ascertain the best approach to managing big data and a great starting point for such projects is to identify the possible **points of failure** and define a testing strategy accordingly. Organizations need to have an **optimal test environment** supported by a comprehensive, and preferably automated, **validation framework** to certify that data is as per their business requirement.

Big data programs are growing at several retailers, as they look to take on digital-born rivals and improve efficiencies in the face of growing costs, and testing will play a major role in ensuring the success of these programs. Here's how possible points of failure can be identified and a suitable testing strategy be defined in a retail scenario.



WINNING AT OMNICHANNEL RETAIL

A **US retailer**, for lack of **visibility into inventory and pricing data** across various retail channels, was being forced to sell at rock-bottom prices to keep up with competition. Infosys took on the task of integrating their inventory and pricing data so they could implement **omnichannel retailing** effectively.

Infosys helps clients across industries facing similar problems to achieve benefits of quality, time-to-market and costs. The Infosys big data testing solutions not only **automate data quality monitoring** but specialize in testing through the entire data journey and ensure data integrity, leveraging the **Infosys Data Testing Workbench**. On an average, we deliver **100% completeness on data quality** for accuracy in reports for decision making, speed to market through automated testing with **20% shorter test cycles**, and **40% reduction in cost** due to test automation and the re-use of test artifacts.

As the retailer's data repository resided across varied data systems such as Oracle, XML5, and Teradata, Infosys tapped into the **Hadoop ecosystem** to build a big data validation framework. We used this framework to ingest raw data and validate business intelligence reports. The ingested data would flow in several layers where it was validated, transformed, and consolidated across various tables and layers based on source-to-target mapping. We ensured data validation, schema validation, and data quality checks were implemented at every point to ensure accurate data was uploaded on the tables. We also **automated the validation process** with in-built quality rules, which would reject identical data coming from different sources, and metadata validation.

While data integration was a baseline expectation from Infosys, the challenge at hand truly demanded an approach that consolidated, validated, and transformed data. Ultimately, the key for this client was to use a validation framework that allowed for flawless testing and ensured complete visibility across inventory and retail channels. Infosys put this to practice and helped the client save operational costs to the tune of US $700,000. Also, the client saved effort in the range of 15 – 20% and was now able to validate data in an automated manner.

TESTING NEW APPROACHES FOR DIGITAL TRANSFORMATION: THE FIVE TAKEAWAYS

1. **Identify** possible points of failure in big data projects
2. **Build** a big data validation framework capable of ingesting data from varied sources
3. **Ensure** data validation and quality checks at every point to ensure accuracy of data being uploaded for analytics
4. **Automate** to validate data at scale with in-built quality rules
5. **Strategize** for a new big data validation plan to replace traditional validation strategy

BIG LEARNING:

Organizations successfully implementing big data projects have one thing in common – their ability to link the project to organizational metrics and measure outcomes on an ongoing basis. Organizations that have truly excelled in such projects recognize the need to test and validate data sets, automate to test at scale and most importantly, ensure independent testing certification for high accuracy in decision making.

WE DID THIS FOR THEM. WE CAN DO IT FOR YOU.

To learn more about our big data testing solutions, reach out to us at askus@infosys.com

For more information, contact askus@infosys.com

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