

# Global logistics major boosts agility and efficiency with automated testing for SAP Rollout

## Abstract

To achieve its vision of being the best logistics company in the world, a global logistics major needed to boost operational agility and efficiency. The company's existing IT landscape was fragmented and hence they opted for an IT transformation program with SAP. Comprehensively testing the transformation changes was extremely complex and time consuming, underscoring the need for faster Business Process Validation (BPV), and automated testing. The company decided to deploy Worksoft Certify®, an automated business process validation software, and partnered with Tata Consultancy Services (TCS) to ensure a successful implementation.

TCS integrated the Worksoft Certify software with the firm's application lifecycle management platform. Following this engagement, the company has significantly improved the quality and coverage of testing while reducing the cost and effort of validating critical business processes.

## Client

A leading global logistics company

## Industry

Logistics / Transport management

## Offering

Successful SAP Rollout using Worksoft Business Process Validation (BPV) solution

## About the Client

Headquartered in Europe, the company is a leading global logistics provider, with presence in over 200 countries and territories. The organization offers end-to-end transport management solutions, including international express deliveries, industrial warehousing, customs brokerage, and freight forwarding. Serving over 50 percent of Forbes 500 companies, the firm is the global market leader in air freight, and ranks among the top two ocean freight vendors worldwide.

## Business Challenge

Through years of sustained organic growth and strategic business acquisitions, the company's IT landscape had become highly complex. This fragmented environment, comprising over 960 enterprise applications, resulted in lack of transparency across multiple systems, with operational silos making data interchange and customer order tracking difficult. Hence the company decided to invest in an IT transformation, to fulfill their vision of bringing in uniformity across their IT landscape.

A large number of global regulations including transport, customs, and other domains necessitated amendments to business rules in the standard SAP Transport Management (TM), thereby requiring changes to standard SAP TM. Manually testing these changes was cumbersome and complex. Additionally, these systems supported business processes across the logistics cycle, necessitating the rapid testing and rollout of patches.

In keeping with the company's vision, the logistics provider needed to simplify the IT landscape, streamline business processes, and enhance operational efficiency by implementing SAP TM solution.

To implement the common IT landscape across geographies and business units, the landscape had to be thoroughly tested before deployment. The company aimed to leverage automation to reduce the cost and effort of testing, in addition to improving quality and infrastructure management.

To ensure faster validation of changing business processes, the company decided to deploy Worksoft Certify, a leading automated business process validation (BPV) software. The firm chose to partner with TCS due to our experience and expertise in assurance services.

## TCS' Solution

TCS and Worksoft collaborated to deliver a combination of implementation services and software. To help the company realize their objectives of reduced costs and timely delivery, TCS adopted a test factory based quality assurance (QA) approach to execute various phases of the testing cycle. In collaboration with the client, TCS defined a test factory model for SAP TM that addressed QA for solution design, and mitigated potential risks of timeline and effort overruns in the area of QA. To ensure that the Test Factory was operational before the test design was complete, TCS worked closely with the firm's

subject matter experts to identify the various business scenarios.

To automate the complete QA lifecycle for end-to-end business processes, TCS adopted Worksoft's automated BPV software, Worksoft Certify, and a risk-based testing approach to assign priority to regression test scenarios. This helped the company realize an optimal balance between the test effort and test coverage specifically for regression testing. TCS consultants also created reusable assets (generic test scenarios and test cases) that were leveraged for business process, business migration, data migration and business intelligence related testing.

TCS implemented Worksoft Certify in the company's IT landscape as a codeless, automated functional testing solution for end-to-end business processes. The solution helped the automation consultants easily identify business processes across the middleware, legacy, and SAP applications—including SAP GUI, SAP Portal, HTML, Silverlight, AS/400, Mainframe/3270, and Web services (SOA). Using Certify also enabled functional consultants to quickly generate automated scripts, which were resilient to changes in the underlying applications.

TCS used the following five-step methodology to automate various phases of the validation cycle—integration, system, and regression testing—as well as to configure test data, and accelerate execution:

- Propose and emphasize automation
- Conduct automation feasibility
- Build the test automation suite
- Execute the test automation suite
- Improve the test automation suite

TCS also defined the following automation-related metrics for each of the above steps:

- Return on investment (ROI)
- Percentage of automation achieved in selected area
- Defects in test scripts per test case (Defects density)
- Maintenance effort per release
- Effort to build Test Bed

By defining a progressive roadmap that accounted for various milestones and tracked progress through measurable metrics, TCS and Worksoft worked closely to ensure the success of this implementation.

## Experience certainty

True certainty of success comes from working with a partner you trust to provide the insight, support and expertise that will propel your business forward. Experiencing certainty with TCS means you can count on results, partnership and leadership.

### Results

Through this engagement with TCS and Worksoft, the company has made significant progress in realizing its ambition of being the best logistics company in the world. With 100 percent on-time deliveries, customer satisfaction has increased. The successful execution of automated testing has improved throughput by 75 percent for regression and data migration testing. With early identification of defects, instances of functional defects reaching the production stage have declined by 25 percent, accelerating SAP rollouts and ensuring quality.

Apart from realizing substantial improvements in quality, by using Worksoft Certify, the firm saved nearly 17,000 person days of testing effort in the span of one year of the program's implementation in the area of regression, data migration, middleware and data migration testing. The firm has reduced test design time and maintenance time by 40 percent by leveraging highly reusable automated scenarios across its global business processes for regression testing. With round-the-clock automated validation of business processes through TCS' 'Lights Out' testing, the company ensures operational continuity and efficiency for data migration testing.

Additionally, by fully integrating Worksoft Certify with HP Quality Center - the company's application lifecycle management (ALM) tool - the logistics provider has improved reporting, traceability, and test management of its transformation program.

By adopting several unique practices, TCS helped the logistics company ensure the success of this project, on schedule, and within budget. With this engagement, the company:

- Ensures zero compromise of quality and coverage, with an independent test team that does not report to the development group head, eliminating any conflict of interest.
- Sustains the success of this project through an Assurance Management Office (AMO) that conducts independent, objective analysis of testing status, evaluates issues and manages risks, and negotiates with stakeholders.
- Reduces the risk of QA delays through the early launch of QA tasks, in parallel with requirements gathering. Early interactions between the QA group and the business and implementation teams ensure stronger design, better documentation, and early detection of defects.
- Minimizes the cascading impact of 'critical path' (bottleneck) items on overall program timeline with focused tracking of these items.
- Through this engagement, delivered by TCS and powered by Worksoft Certify, the logistics company is assured of the success of its current as well as future SAP rollouts. Compliance with regulations, through the rapid validation of impacted business rules, is now simplified. In addition to enhancing organizational agility and operational efficiency, the program enables the company to strengthen their global operations - taking them a step closer to realizing their vision.

### **About TCS' Assurance Services Unit**

With one of the most comprehensive portfolios of independent test capabilities on offer, TCS addresses both business and quality challenges for its global clients. We empower organizations across domains to optimize overheads, realize first mover advantage and improve customer satisfaction.

TCS offers assurance services across the testing value cycle, including test consulting and advisory, test services implementation, and managed services for test environment and test data management. We continually redefine testing and QA paradigms to help our clients stay ahead of the curve. Our library of domain-based reusable business functions and proven engagement model founded on the twin pillars of product and process quality enable us to deliver certainty to our clients.

Over 27,000 testing consultants, strategic alliances and partnerships with key product vendors, more than 65 dedicated test centers of excellence and our innovation labs power our tailored solutions, testing assets and accelerators. With specialized test environments and labs, TCS drives the delivery of assurance in a non-disruptive, agile, and automated manner, making the entire development lifecycle more efficient.

### **About Worksoft**

Worksoft® is a leading global provider of software for automated business process validation (ABPV) and automated business process discovery (ABPD). Fortune 1000 companies use Worksoft's top ranked on-premise and cloud-based solutions to innovate faster, lower technology risk, reduce costs, improve execution quality, and deeply understand their real end-to-end business processes. Blue-chip companies across all industry sectors choose Worksoft to validate web, cloud, mobile, and dozens of other enterprise applications, including SAP®.

For more information, visit [www.worksoft.com](http://www.worksoft.com)

### **Contact**

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### **About Tata Consultancy Services (TCS)**

Tata Consultancy Services is an IT services, consulting and business solutions organization that delivers real results to global business, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled infrastructure, engineering and assurance services. This is delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development. A part of the Tata Group, India's largest industrial conglomerate, TCS has a global footprint and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

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