

# Implementation Testing: A British specialist distributor case study

## *Introduction*

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Implementation Testing means testing a software end-to-end before it is actually implemented at customers' site.

A multi-site business enterprise and British specialist distributor has decided to implement a market leading Enterprise Resource System (ERP) which fits its business structure. This ERP system caters to the Distribution, Wholesale, and Merchant industries.

## *Purpose*

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The main purpose of implementing ERP systems by this leading player of building and plumbing supplies is same as others, that is,

1. cost reduction,
2. technology and process improvements,
3. supply chain integration,
4. better control and reporting on operations and so on

## *Requirements*

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The typical requirements from this system were that it should:

1. Enable the business enterprise to view its critical business variables (e.g. Stock, cash-flow, logistics) to be viewed from many different vantage points.
2. Answer some critical questions like: How is the business performing as a whole? Is one branch more successful in comparison to others?
3. Be capable of coping with organization's future expansion plans

4. Protect its existing legacy data and enable seamless access to the information pre/post implementation era
5. Be user-friendly with windows-based usability and so on

## *Solution*

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It was time for testing after the finalized solution has been customized to the existing and re-engineered business processes. Though the "normal" software testing activities were performed during entire lifecycle of the system development and customization, careful test planning was needed to ensure successful implementation of this solution. **TestQ Technologies's** test engineers teamed up with the organization's system and solution integrator to provide the software testing services

## *Challenges*

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**Some of the major challenges observed during testing are:**

1. Initially demonstrate that the solution designed was as per the specifications and does the job as intended. Later the challenge was to make sure a robust testing framework exists which could be replicated across its multiple sites, warehouses, typical vendors etc. demonstrating that the implementation goes as per the implementation plan.
2. The system has been build (and customized) using the proprietary development environment which added a resource cost as some of them were scarce and few needed training
3. Make sure that the overall testing strategy is applicable to existing legacy data and systems integrated into the main solution, standard and customized solution components
4. Take stakeholders on-board for the implementation testing activities by presenting the test strategy and approach and obtain the sign-off

## Approach

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The approach taken for the implementation testing consists of:

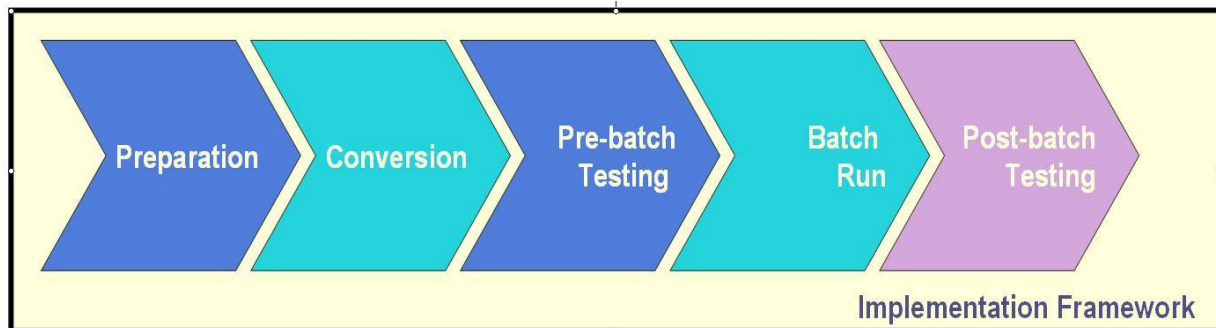
- Business and Technical sign-off
- Revise implementation sequence
- Re-visit each implementation plan
- Sign-off from the business [Produce a high-level doc for each department (giving snapshot of the interfaces modified/switched on-off/de-commissioned etc.)]
- Technical sign-off of implementation sign-off from technical experts
- Prepare for Dry-run testing

## Implementation

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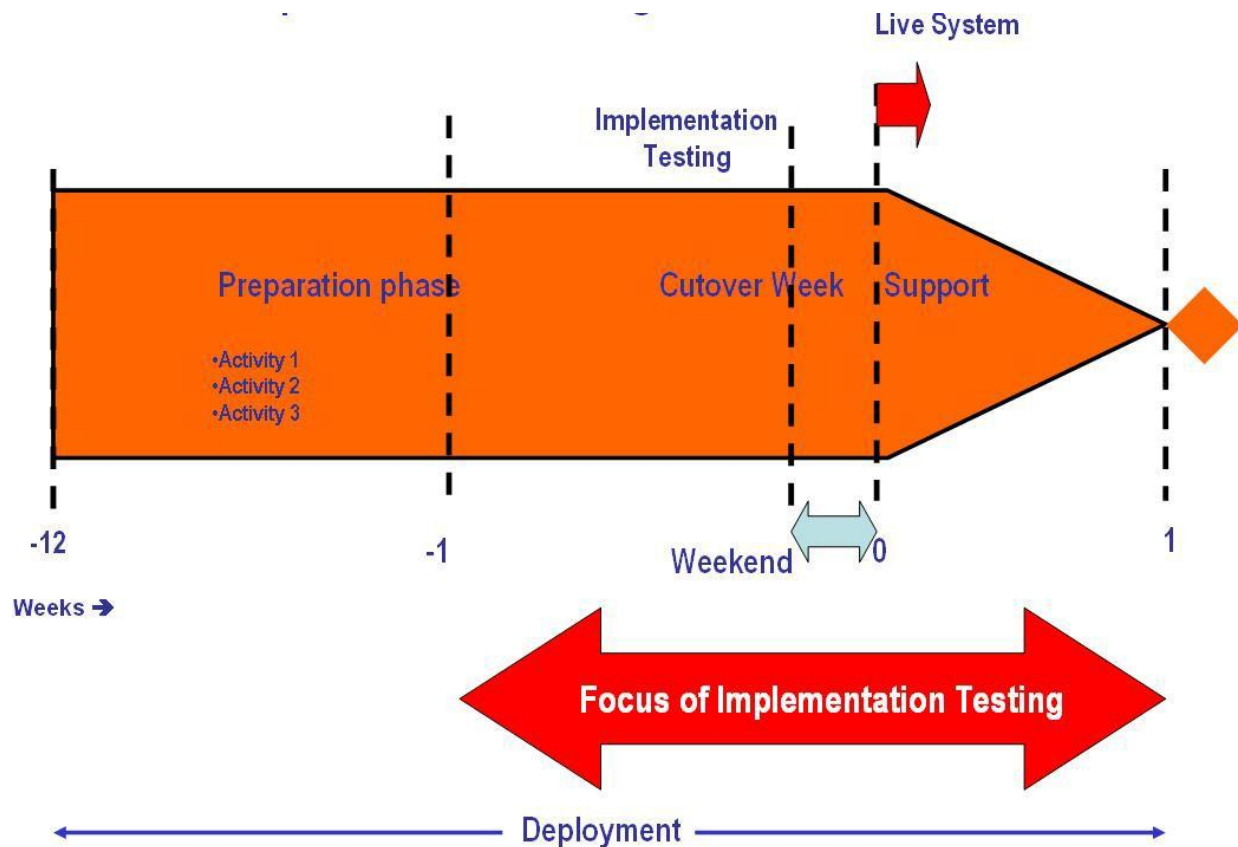
After few discussions and analysis, the Implementation Testing Framework was finalized as below:

Figure 1 shows the Implementation Testing framework



**Figure 1: Implementation Testing Framework**

Contrary to dry-run testing which focuses on entire span of system deployment, implementation testing focused only the later phases such as:



**Figure 2: Implementation Testing Strategy**

The typical activities of each phase of implementation testing:

**Preparation**

- Check object for right version i.e. check if correct Object is going live
- Object promotion
- Historic data load

**Conversion**

- Run data conversions
- Run data extracts
- Loading data into the System
- Checking if conversion ran e.g. Check the total tally on legacy and the System file

### ***Pre-batch Testing***

- Table/screen level - Testing to check if data Available in the system screens
- Executed by development Resources Sample functional scripts (Pre-agreed with BPOs)

### ***Batch Run on Legacy and the System***

- Daily
- Weekly
- Monthly

### ***Post-batch Testing***

- Smoke test involving Batch processes run
- Run by Business Process Owners
- In second cycle, the outputs of tests run in Pre-batch testing would be verified to validate batch run

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**Note:** The implementation testing framework has been executed twice on each implementation item with an objective of executing the initial cycle was to get through as quick as possible, find problems early and rectify them. This rectified implementation has been used in **Cycle 2** for thorough execution in which the Business Process Owners were involved.

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