G Cloud 14 - Framework Service Definition

Infosys Service Offering – ERP On Cloud Testing

May 3, 2024

Proposal No.	
Version No.	1.0
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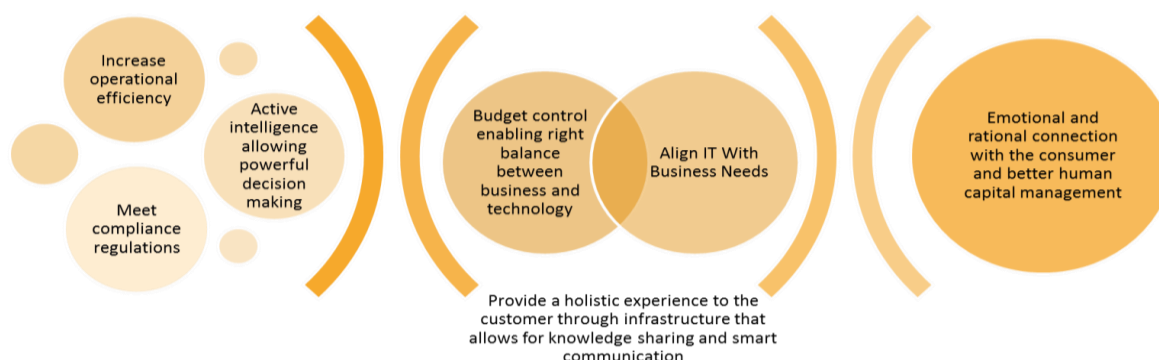
1. Infosys ERP Cloud Test Offering

Infosys is a global leader in consulting, technology, and outsourcing and next-generation services. We enable clients in more than 45+ countries and 72 major cities to stay a step ahead of emerging business trends. Our people represent nearly 83 nationalities. This helps in delivering time-to-market solutions, reduce cost of operations and cost of quality. Global development centres across the globe expand the capabilities of Infosys' global delivery model in leveraging talent and infrastructure in different parts of the world.

Our experience gives our clients a distinct advantage. In addition to helping them manage their business, we can power their transforming into a smarter organisation as well. This allows them to focus on their core business priorities.

Infosys has a dedicated practice for Package Testing services which comprises of specialised testing professionals from which we have earmarked our key testing personnel for meeting the validation requirements. Our global skilled resource pool relevant to Oracle Cloud, Salesforce, Microsoft Dynamics, Oracle NetSuite, Kronos, Coupa, Workday, S4 Hana, Siebel on Cloud, PeopleSoft on Cloud, JD Edwards on Cloud experience.

Package implementation initiative is one of the most transformative investments an organisation makes with

below business imperatives met.

Key Focus areas and Best Practices which help us to deliver quality various ERP on Cloud testing services efficiently

QA / Testing Services Domain Knowledge – Infosys has strong QA / Testing Services expertise, domain knowledge and maturity as the result of multiple global and local engagements.

Best in Class – Infosys has best of breed tools, methodologies, assets and skilled resources to deliver and active projects and clients.

Automation First– Bring Infosys philosophy of Automation First thereby driving cost optimisation, reducing cycle time and enhancing quality

Global processes, methodologies and tools / assets – all the Infosys staff follows similar processes, wherever they are located

Strong Partner Ecosystem – To bring in best in class tools and solutions to address the needs of Xerox current and envisioned landscape

CMM/CMMI (Capability Maturity Model)/(Capability Maturity Integration) – rated level 5, we will bring recognised processes, tools and standards to your business units thereby bringing continuous improvement

Scale – We have QA specialised professionals across all geographies

## 1.1   Package Testing Service Offering - Salesforce

Salesforce Test Service Offering

An integrated set of End-to-End testing capabilities to address your need to improve business relationships with customer.

Infosys Salesforce Testing competency brings a globally integrated Salesforce Testing services focused on Design Thinking, E2E Integration services, Process Engineering & Total Cost of Quality Reduction. Our experiences gained from numerous successful testing engagements enables us to build a continuous improvement framework for our clients.

Infosys Salesforce practice started in the year 2006 with a practice size of 50 people and premier alliance with Salesforce. This practice is now 500+ consultants strong of which 150+ consultants are Salesforce certified focused on business value realisation. We are currently engaged with 100+ active client organisations to deliver value in partnership with Salesforce. Infosys Salesforce CoE has developed a number of proprietary assets and methodologies designed to help clients achieve business results faster. Infosys has a platinum partnership with Salesforce and has implementation experiences on Sales Cloud, Service Cloud, Marketing Cloud, Commerce Cloud, Apttus CPQ, Health Cloud and ServiceMax.

High Level Offering
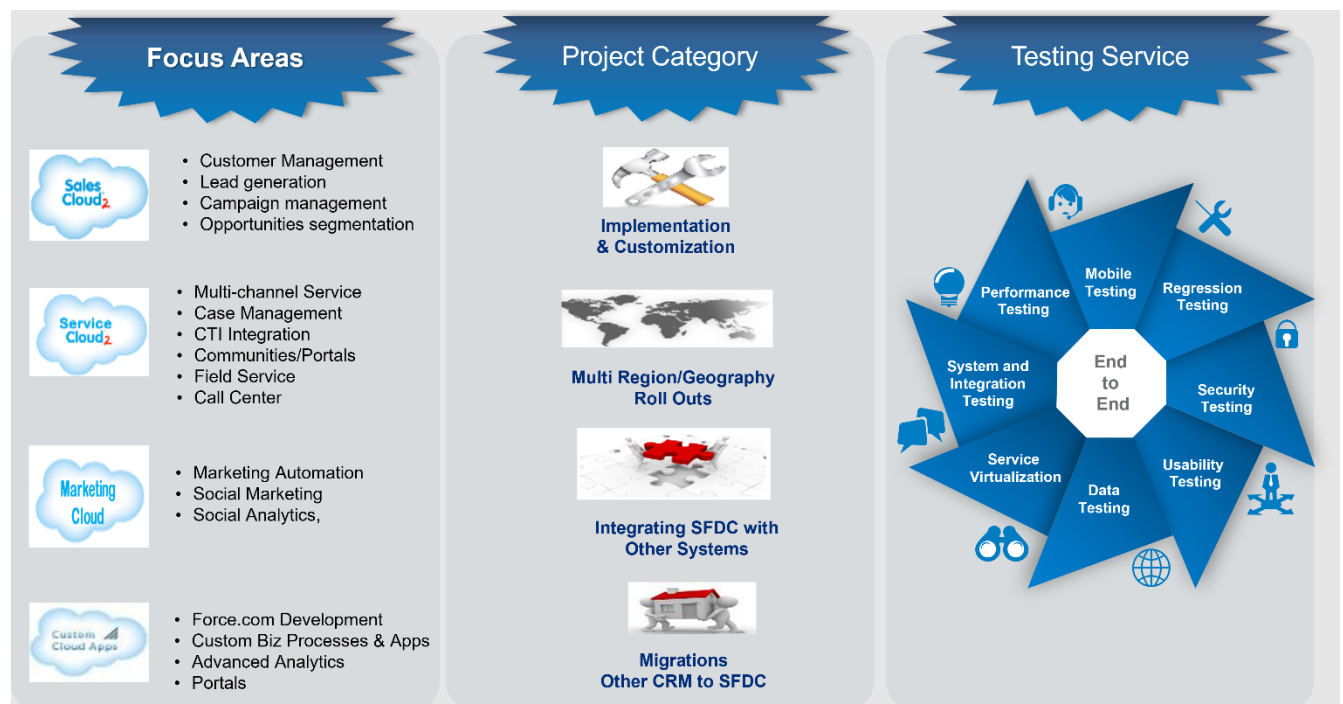
Infosys test approach addresses the technical challenges with a comprehensive testing approach based on learnings from SFDC project experiences.

Infosys Salesforce testing solutions / differentiators to achieve high quality time to market
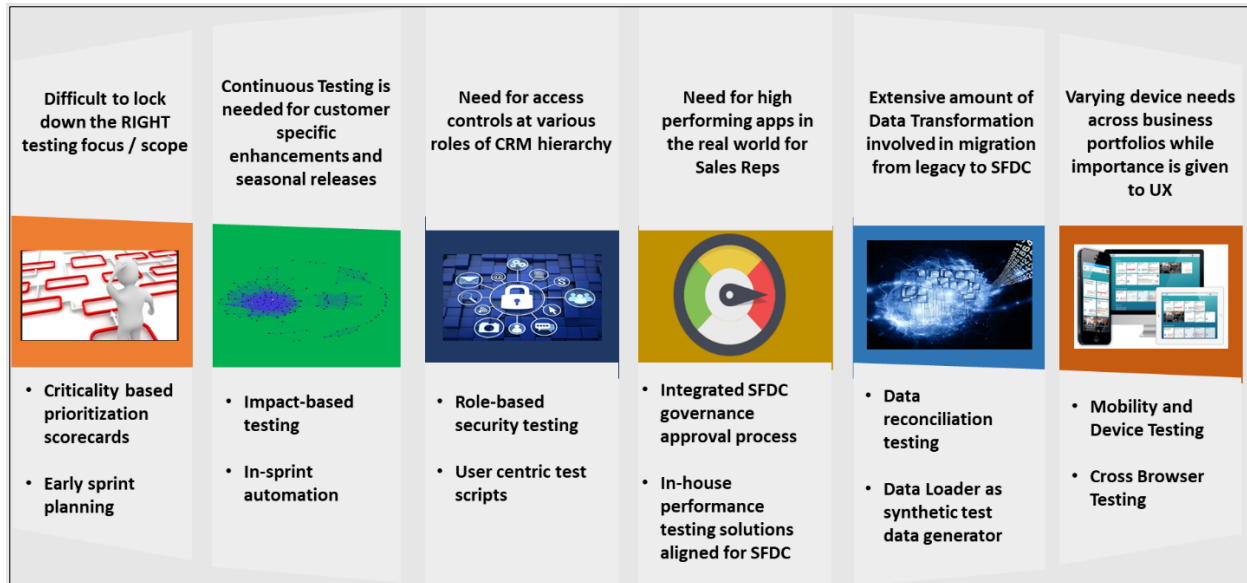
Key local of multi country rollout engagement types applicable for Salesforce testing are:

- **Migration from CRM/ Legacy to Salesforce**: Infrastructure, database schema enhancement, new UI, new workflows, business rules, and functional implementation

- **New Implementation Project**: New functional implementations (Lightning, Einstein Analytics), such as new and changed business processes, workflows

- **Enhancement Release**: Infrastructure, UI and functional enhancements.

1.2 Oracle Test Service Offering

Oracle Strategic Partner (Cloud Catalyst)

Infosys and Oracle have the unmatched capability to quickly transform organisations into resilient cloud-connected enterprises by leveraging our award-winning partnership, joint solutions, multi-cloud adoption, and deep domain knowledge across industries. Infosys and Oracle have been consistently recognised year after year as leaders by top analyst and advisory firms such as Gartner, IDC Research, Everest Group and Avasant. This is a true testament of the value we bring to our clients through business, infrastructure, and experiential transformation.

- Over 15+ Years of experience in On-Premises and cloud Application testing.
- 50+ Active clients in Oracle Cloud, EBS, Peoplesoft, JD Edwards & Oracle Retail.
- 500+ Experienced Functional consultants & Testers with Oracle ERP experience.
- 3000+ Manual scenarios and scripts for Finance, HCM, SCM covering all Modules and functions.
- 1000+ pre-automated scenarios for Oracle cloud, EBS, Peoplesoft, JD Edwards and Oracle Retail.
- Pre-built automatic framework and components for automation tools like Work soft, TOSCA, OATS, Selenium.
- User of Infosys IP tool IPAT for E2E automation.
- Domain expert and experienced test consultants AI-led QA.

Why this offering required?

- From quality point of view, testing an application is very important before delivering it to the customer. However, there are certain limitations that can make testing a daunting task. These limitations include:
- Limited Budget for Testing: Many test cases are designed and executed with different tools, incurring high costs per test. However, most of the companies have limited budget for internal testing. Also, maintenance overhead involved in using different testing tools adds up to the estimated budget. The responsibility to test an application is not confined to Test Engineers, developers may also perform testing if needed. For example, if any developer wants to test a single module (unit testing) to check if it is working fine. So, there is a wide set of audience when it comes to testing and purchasing license to cater this audience is not feasible considering limited test budget.
- Reduction in overall cycle time through proven methodology and efficient best practices, leveraging regression automation framework, Infosys Oracle Cloud re-usable test cases and ready to use automated scripts.
- Ensuring stated Business requirements are successfully implemented with minimal production risk using Risk Based Testing
- Comprehensive validation of reports/dashboards. Ensuring effective knowledge retention through effective documentation of test artifacts
- Regression testing through automated scripts will avoid any unforeseen impacts to production Cloud environments and day-to-day business operations
- Reducing timelines of a rollout project in turn results in shorter duration available for testing, Delays in upstream activities absorbing the testing timelines

Key focus areas for Oracle Cloud Testing to support complex programmes

- Configurations and Customisations performed on the cloud modules
- User Roles and profile (security and compliance)
- Business Process Flows, System Validation Rules
- Assignment Rules, Workflows and Approval process
- Inbound, outbound & batch validations

- Request & response validations
- End to End Testing across all systems including SaaS and PaaS components
- Validation of similar process in EBS but executed differently in Oracle cloud
- Validation of new processes in cloud and impact on other processes

1.3   MS Dynamics ERP Test Service Offering

Our robust MSD 365 Quality Engineering service offerings assure consistency in success of various MSD 365 implementations. QE capabilities cater to business processes and functional areas, data migration / BI and resilience of MSD 365 platforms across multi-channel integrations. The key differentiators comprise of pre-built MSD 365 test assets and scalable modernised E2E test automation solutions leading to tangible IT cost savings and business benefits.

MSD E2E QE Capabilities
- Domain Assurance (700+ reusable assets)
- Automated API & Microsoft Azure DevOps integration
- IP-led MSD Test Automation Platform solution
- IP-led solution for Data migration / BI validations & NFR testing for resilience.
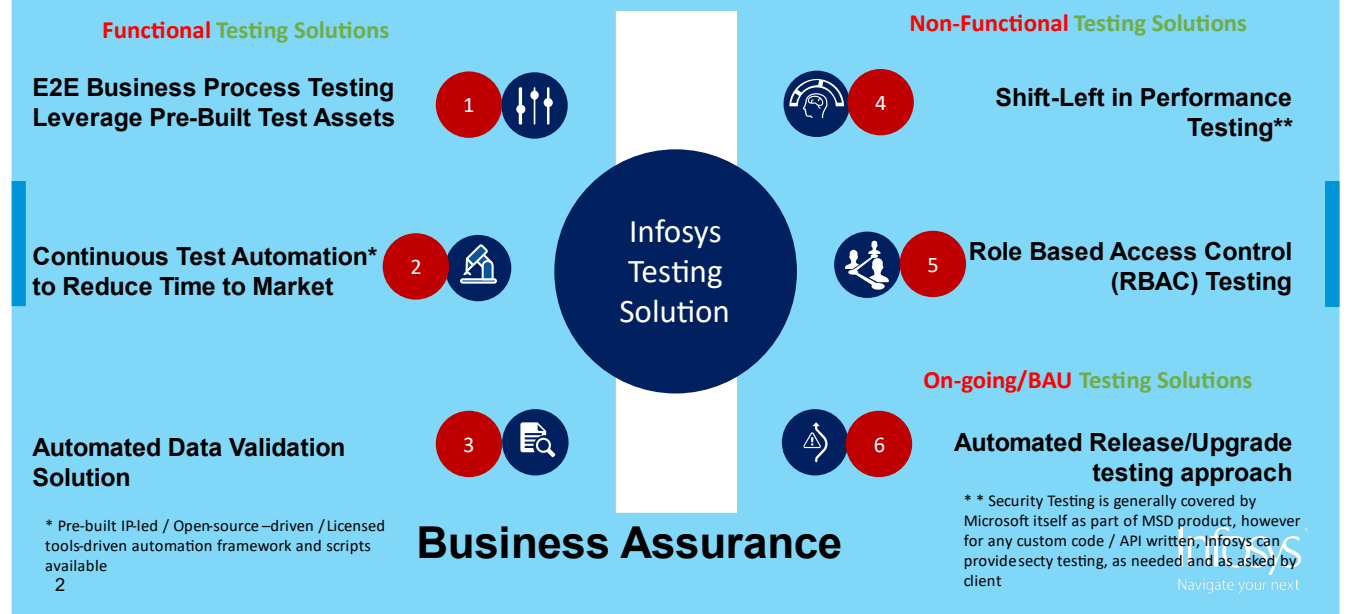
Value Proposition / Benefits
- Pre-Built Test Assets (25% effort savings)
- Continuous Test Automation (35% execution effort savings)
- Improve End User Experience (0% performance bottlenecks)
- Optimised Test Coverage & Continuous Testing (30% TCO reduction)
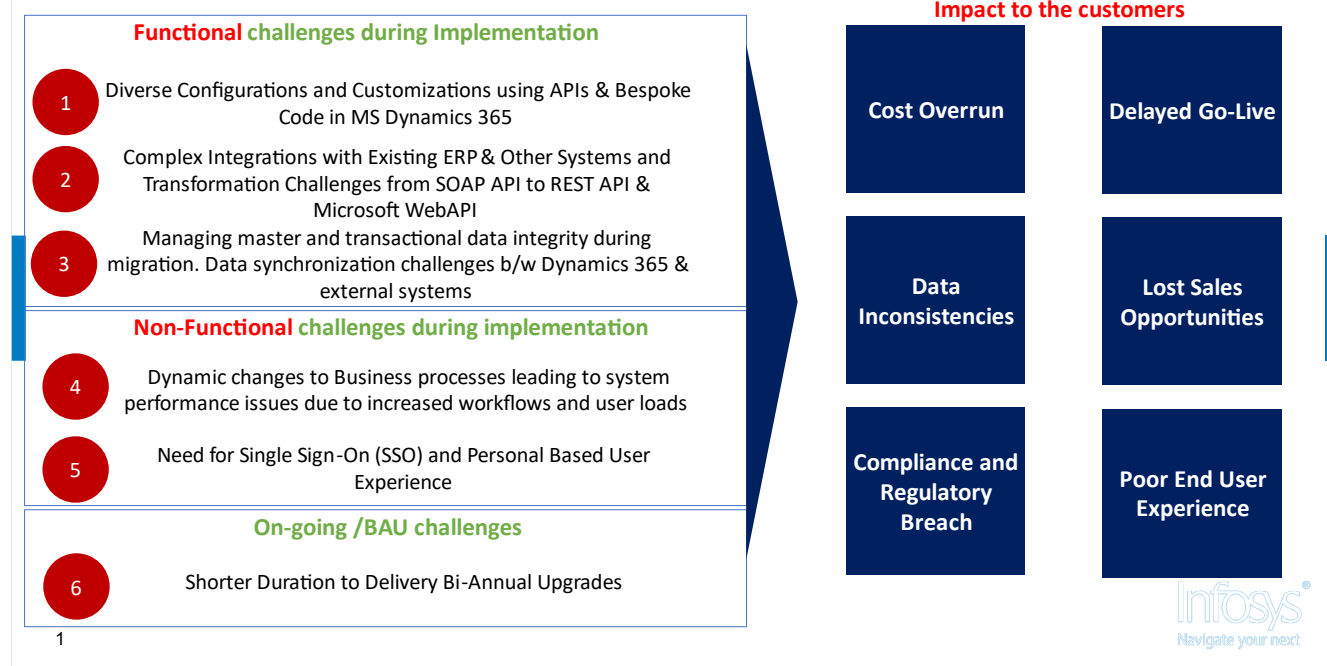
Microsoft Dynamics 365 ERP & CRM Testing Service Offerings addressing the challenges

Functional Testing Solutions

E2E Business Process Testing Leverage Pre-Built Test Assets

1

Continuous Test Automation* **to Reduce Time to Market**

2

Automated Data Validation Solution

3

* Pre-built IP-led / Open-source –driven / Licensed tools-driven automation framework and scripts available
2

Infosys Testing Solution

Non-Functional Testing Solutions

4

Shift-Left in Performance Testing**

5

Role Based Access Control (RBAC) Testing

On-going/BAU Testing Solutions

6

Automated Release/Upgrade testing approach

* * Security Testing is generally covered by Microsoft itself as part of MSD product, however for any custom code / API written, Infosys can provide secty testing, as needed and as asked by client

Business Assurance

Infosys
Navigate your next

Solution

Infosys accelerators for Microsoft Dynamics 365 Testing :

- **Automation enabler - IPTAP**
- **In-built solution and reusable libraries using 3rd Party AI led tools – AutonomiQ, ACCELQ , RSAT**
- **Reusable automation libraries for MSD365 ERP & CRM functions built on Open -source Selenium framework**
- **CI/CD solution – Extreme Automation**
- **MS Dynamics and Automation trained/certified resources**
- **IDTW & ICDVS – Data migration accelerators**

MSD Upgrades Testing

Business Process Validation

BDD driven Automation First Approach, Impact based regression

MSD365 QE Strategy

Roles/Persona Based Validation

Data Validation, NFR compliance

Cross-browser Testing, UX Testing

Business Process Oriented Testing

ST & SIT/E2E Automation

Regression Test Automation

Performance & Security Testing

API / Microservices Testing

Infosys
Navigate your next

1.4   SAP Test Service Offering

Infosys delivers comprehensive SAP testing solutions with a proven track record of success. Our team of 1000+ highly skilled functional and technical test engineers ensure the quality and reliability of your SAP implementations. Our key strengths:

- **Deep SAP Expertise:** Our team possesses extensive knowledge of SAP modules, functionalities, and best practices.
- **Proven Testing Experience:** We have successfully executed over 150 projects, applying rigorous testing methodologies to identify and mitigate risks.
- **Strong Client Relationships:** We maintain active partnerships with more than 50 clients, fostering a collaborative and successful project environment.
- **Vendor Alliances:** We leverage strategic relationships with over 10 leading SAP vendors, providing access to cutting-edge testing tools and expertise.

Key Challenges in SAP S/4 HANA migration Testing and our solutions to overcome them.

Infosys has successfully implemented many S/4 migration projects globally. Based on the learnings from multiple large SAP S/4 testing engagements for global customers, Infosys has come up with the list of testing challenges that occurs in such implementation projects. Below are the challenges that we foresee and identified major types of testing needed to overcome the challenges.
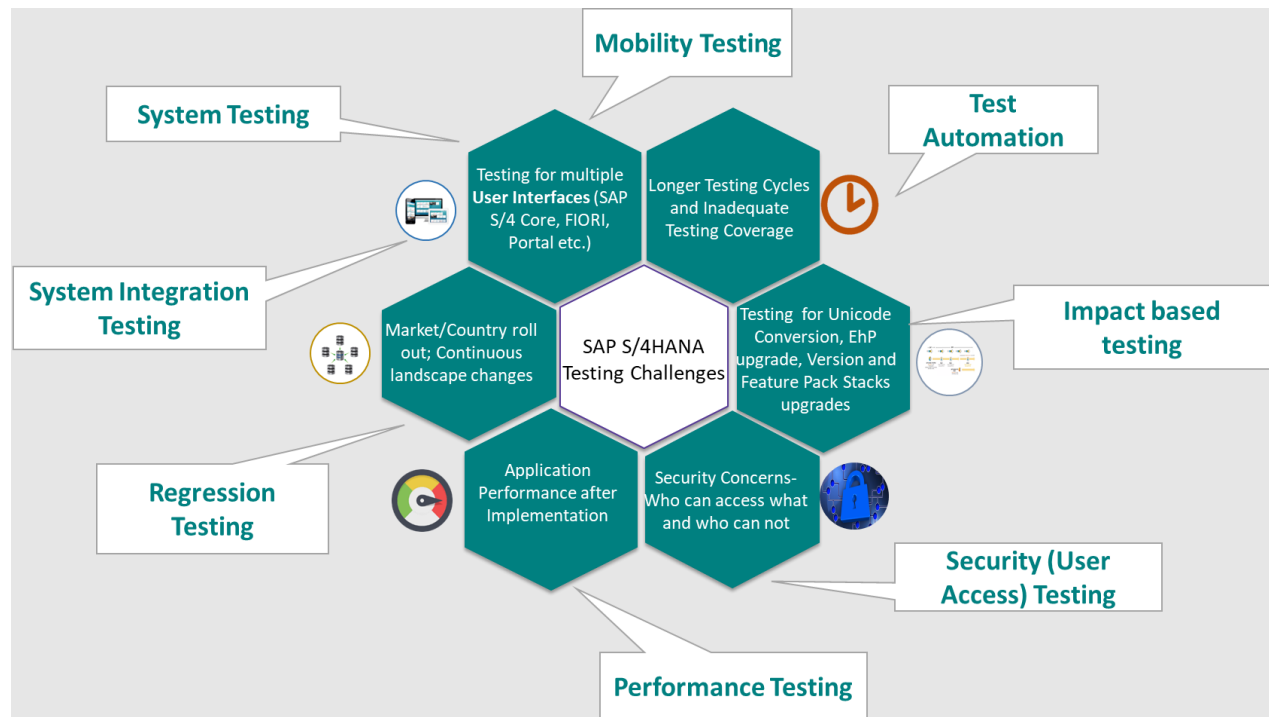
Our SAP cloud migration testing approach employs a multi-layered strategy to ensure a smooth and secure transition
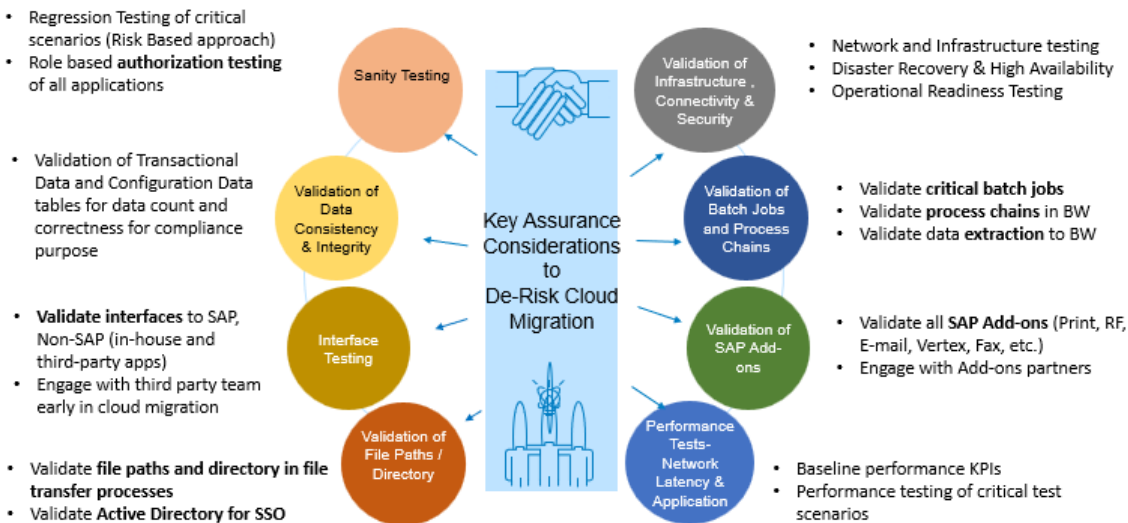
Our S/4HANA QA strategy is supported by award winning solution tools & accelerator-based approach backed by re-existing reusable test artifacts.

iManuScript: *Pre-Built test case repository* **-** 4000+ readily available test cases
IConfig - Automated *Config validator – Validation of config, rules.*
IDEAS - *Automated test data mining in SAP-* Pre-built SQVI queries across SAP modules
Service Virtualisation -for API Testing and Automation -used to replicate non-available /not connected systems.

Panaya Impact Analysis- to implement Risk Based Test strategy
Gen AI SAP Testing Solution – Automated test authoring, defect analytics

Pre-Built Test case Repository - ~4000+ readily available Test Cases - *30% cost savings in Test Planning phase*

1mRT is Infosys reusable test repository for accelerated test planning - prebuilt, standardize, detailed and ready to use across platforms

iManuscript	
SAP	# Test Cases
Finance & Controlling	154
Asset Management	28
Procurement	129
Production	47
Sales & Distribution	170
Master Data	45
Supply Chain	129
Transportation Mgmt	90
Warehousing	26

Automated configuration validation in SAP S/4 – Pre-Built Automated components to validated config across SAP modules - *drive effort saving ~ 30%*

Automated Test data mining in SAP- Pre-built SQVI queries across SAP modules *reduce SME dependency by 60%* and helps in *effort savings during test execution by 30%*

IDEAS is Infosys IP developed for master data mining and data integrity validations with 400+ prebuilt queries to fetch test data from SAP

IDEAS Data Retrieval	
S4 HANA	# Queries
Finance & Controlling	31
Procurement	70
Production	42
Sales & Distribution	134
Supply Chain	4
Warehousing	7
Total	**288**

Service Virtualization
Automated Interface testing through Service Virtualization Tools and Approach with ZERO dependency on Interfacing application availability

Panaya *Impact Analysis*
Strong Change Impact Process Through Panaya integrated with Automation tools

Gen AI SAP Testing Solution
Test coverage analysis, Automated test authoring/scripting
Defect analytics Improved defect detection and test coverage

2.   Case Studies

2.1   Oracle

Case Study	Objective & Challenges	Approach Solution	Benefits
Client is one of the largest engineering and professional services firms in the world, providing management and consultancy services.	• Very diverse landscape of applications but equally critical for business. • Project scope includes migrating the Legacy systems into Oracle Fusion Cloud across multiple operating companies. • The client is looking for a Global Test Strategy and automation framework to streamline their testing needs.	• The testing team has successfully established and executed Oracle cloud test strategy across various Oracle modules for clients. • Automation using in-house-built IP tool iPTAP helped to make testing successful at client. • Reusable automation framework registered more than 70% automation resulting in faster time to market for the client.	• Team created and executed around 8000+ test cases. • Automation of 1400+ business critical scenarios 2000+ • The reusable function libraries can be leveraged to optimise automation development effort by 40-50% and reduce test cycle time by 60-65%.

Client is one of the world's largest banking and financial services organisations in the UK.	• Disparate Finance, EPM, and tax applications and process across countries. Due to this they had challenges in financial consolidation, Lack of transparency, Complex systems and manual processes. • Added complexity due to multi country rollouts, duplication of test cases, difficulty in regression.	• Global Template approach for functional country variants and Risk based test scoping depending on available execution window • Proper tracking and review mechanisms implemented. Automation for interfaces at the database layer using Python and MongoDB • Leveraged Tosca automation yielding in reduced cycle time.	• Cycle Time Reduction of Testing by 30 to 40% due to automation • Proactive Identification of defects Pre UAT leading to Zero to Minimal Defect slippage in UAT or Production • Implementation of a global Oracle financials cloud; provides greater transparency.

SAP references

Case Study	Objective & Challenges	Approach Solution	Benefits
Client is a 136+ year-old Manufacturing Company in USA. It provides services in Beverage concentrates, Syrups and Finished Beverages.	• SAP S/4 HANA Finance, master data implementation for 150+ countries • Optimal QA cost with complex landscape – 38 interfacing apps	• E2E Business Process Integration Testing. • Alignment of QA phases with DevOps & introduction of String testing phase • Early automation of critical business components	• Successful go-live with 100% schedule adherence. • 65% automation resulted into cost saving by 25%. • 80% effort saving in dashboard reporting.

Client is a 150+ year-old Banking Financial institute in Australia. It provides services in Banking, Wealth advisory, Insurance, Trading, loans and Cards.	• Testing for Migration of Peoplesoft to SAP SuccessFactors (All modules of SuccessFactors)	• Functional Testing – SIT, Regression Testing • Product Testing • Automation using Tosca • Performance Testing • UAT Support • MI Reporting • Test Data Management	• Reduction in Cycle time for Integrations by 40% • 60% increase in test effectiveness. • Automation of critical process areas leading cycle time reduction by 25%.

Salesforce

Case Study	Objective & Challenges	Approach Solution	Benefits
Client is a Oil and Gas Company from UK	• In-Adequate Automation • Slow deployment cycles leading to higher cost • Lack of mobile testing coverage • No streamlined E2E execution process	• **Resusable Automation Framework** for mobile and Desktop. • **100% coverage of E2E testing** with coverage of Salesforce, Chatbot, MyHR+ SharePoint, Workday & Genesys Telephony. • Leveraged **Infosys best practices for mobile / desktop testing.** • **Business friendly framework** for future maintenance levering BDD	• **Quality :** 100% coverage with 97% deployment in-Sprint • **Speed:** > 20% reduction in cycle time • Achieve up to 70% in-Sprint automation • **Cost:** > 15% cost reduction.

2.2 MS Dynamics

Case Study	Objective & Challenges	Approach Solution	Benefits
Client is a Telecommunications and digital services corporation headquartered in Auckland City, New Zealand.	• Migration from ERP SAP to MSD ERP 365 • Complex SAP integration systems • Multiple testing phases • Automation due to complex integrations	• The MSD ERP system was deployed and integrated with various legacy applications managing the enterprise business processes. • 360 testing coverage of E2E workflow on different modules such as HR, IT Billing, Sourcing, Supply Chain management, Warehousing and Finance. • Migration Testing from one system to other system.	• MS ERP 365 with enhanced navigation of Workflow as per the business rules, Audit Functionality • Reuse of pre-built ERP test cases and best practices, templates reducing overall test design effort • Automated Regression Test suite, reducing overall Regression effort and easy to maintenance and re-run as required.

3. Tool Solutions

3.1 Infosys Package Test Automation Platform - IPTAP

Scalable solution designed to address modern day Package validation challenges onboarded to Azure Cloud

Infosys Package Test Automation Platform is an end-to-end hyper automation and self-healing automation solution that helps streamline and accelerate testing of various business transformations, digital transformations, migrations, upgrades and roll-outs. It is a UI-based tool to perform automation activities in script less approach and accelerate test cycles to perform ST, SIT, E2E, Reg, UAT and BAT. This platform uses pre-built re-usable components created for multiple package applications like Microsoft Dynamics, Salesforce cloud, Pega, various applications on Cloud, Oracle on Cloud and utilise custom built libraries to enhance test quality and speed. The solution helps to accelerate test planning and execution efforts reduced by 50% and ensures 100% test validation coverage.

With rapid and increasing speed of deployments as the organisations are moving to adopt more digital approach, Infosys Package Test Automation platform enable your organisation to strengthen their quality assurance processes to make sure that the tests performed are consistent, relevant and timely. It is a scalable, performance-oriented, and highly secure Package automation solution with below features

1. *Hyper and End-to-End Automation*
2. *Easy to Maintain*
3. *Workflow Schedule - Unattended and scheduled run*
4. *Performs API, UI, DB test automation*
5. *Interactive dashboards with detailed reports*
6. *Data Driven testing Approach*
7. *Multiple framework support – Selenium with Java, Python, BDD, and Protractor*
8. *Import – Export functionality to download or upload automation scripts*
9. *Multi - Browser testing*
10. *Integration to achieve end to end QA Journey.*

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