HCL

QEx **Success Story**

HCL HELPS A TELECOM CLIENT SAVE USD TWO MILLION BY REVOLUTIONIZED TESTING AND ENHANCED EFFICIENCY

BUSINESS ASSURANCE & TESTING
Business value founded on proactive quality

LET'S TALK APPLICATIONS

TELECOM

BUSINESS ASSURANCE & TESTING

CLIENT BACKGROUND

As a leading telecom OEM based in the US, the client delivers secure, dependable infrastructure to customers with strategic networking requirements.
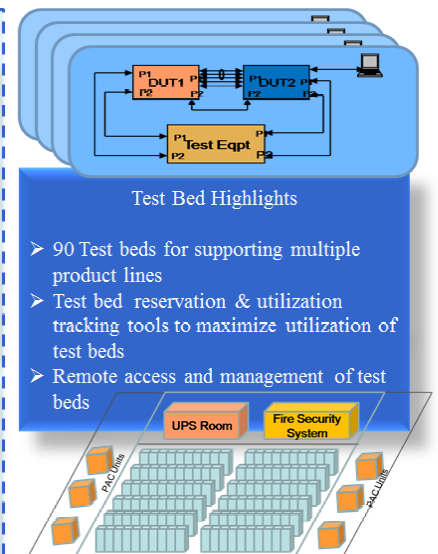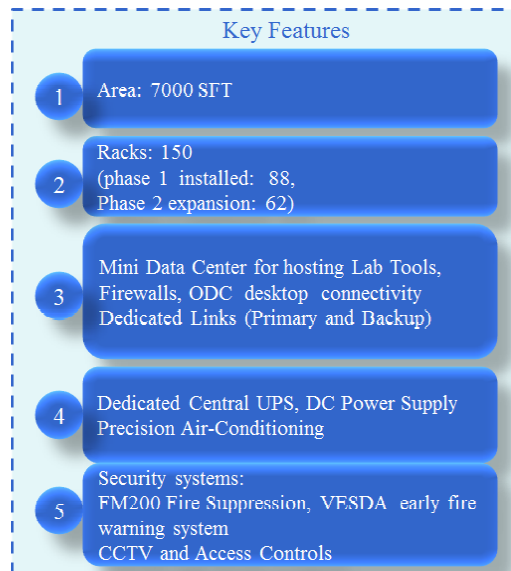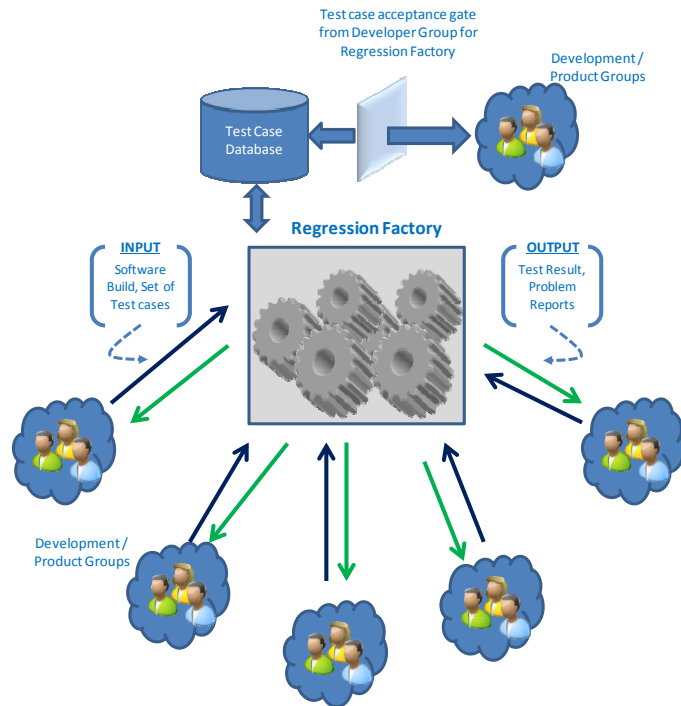
ENGAGEMENT AREA

The client engaged with HCL to transform the regression testing cycle. Toward this, HCL performed the following activities:

- Execute daily sanity regressions, MR/SR regression and on-demand regressions across multiple platforms

- Revamp the ownership of regression testing of Core, Edge and Access routers/ switches and security products for development branch, Top-of the-Tree (TOT), Beta, maintenance and service release regressions to HCL

- Build test beds for products of various business units along with executing regressions to reduce defects

- Manage & Execute the upcoming release of regression testing offshore

DEPLOYMENT OF THE REGRESSION TEST FACTORY HELPED IN ACHIEVING THE FOLLOWING:

- Reduced time to market for product

- Reduced testing cycle through use of frameworks

- Reduced cost through value creation and operational excellence

- Established a 360 degree relationship with the client as an engineering partner and a system reseller

- Invested in advanced labs and R&D units to accelerate product development

Test case acceptance gate from Developer Group for Regression Factory

Development / Product Groups

Test Case Database

Regression Factory

INPUT
Software Build, Set of Test cases

OUTPUT
Test Result, Problem Reports

Development / Product Groups

Key Features

1. Area: 7000 SFT

2. Racks: 150
(phase 1 installed: 88,
Phase 2 expansion: 62)

3. Mini Data Center for hosting Lab Tools,
Firewalls, ODC desktop connectivity
Dedicated Links (Primary and Backup)

4. Dedicated Central UPS, DC Power Supply
Precision Air-Conditioning

5. Security systems:
FM200 Fire Suppression, VESDA early fire
warning system
CCTV and Access Controls

Test Bed Highlights

- 90 Test beds for supporting multiple product lines
- Test bed reservation & utilization tracking tools to maximize utilization of test beds
- Remote access and management of test beds

ENGAGEMENT MODEL

A designated team with clear organizational structure and definitive delineation of responsibilities aided one-to-one mapping of roles between HCL and the client.

The client's engagement model is designed to provide touch points for customers across all levels. It has a dedicated engagement director along with executive sponsorship from HCL's engineering leadership team, thereby ensuring accountability in executing project and redressing grievance. HCL followed this model across its engagements to ensure the highest levels of commitment to all customer projects.

Model diagram
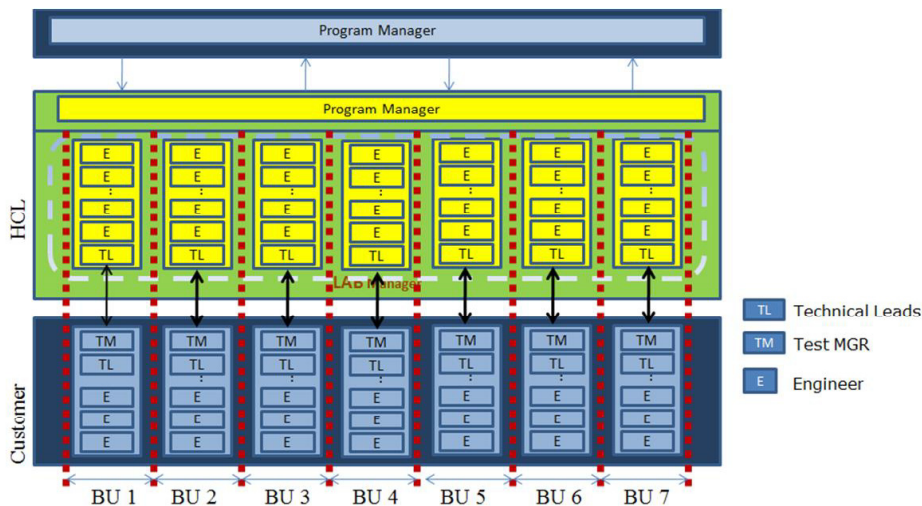
HCL ONBOARDING PROCESS

A time-bound onboarding process was deployed to enhance operational efficiency. For this purpose, a training academy was established with defined KRAs and frameworks along with a formal induction program.

Training Academy	HCL Induction
▪ E-learning courses & clears evaluation test	▪ Introduction to HCL Tools, Processes, Frameworks
▪ Introduction & product training	▪ KRAs linked to efficient use of the above
▪ Relevant Technology brief & evaluation	▪ Periodic process & operation improvement meetings
▪ Lab Exercises & Evaluation	▪ Behavioral Training & Career Counseling
▪ Testing Process, Planning & Methods	▪ Knowledge Management Sessions
▪ Regression tools, Perl, Automation framework	▪ Quality Process & ways of working induction
▪ Scripting, Debugging & Defect Tracking	

The definitive outcome of this onboarding process was that HCL was able to ramp-up 103 engineers in eight months, resulting in operational efficiency.

Flagship HCL Engagement - Regression
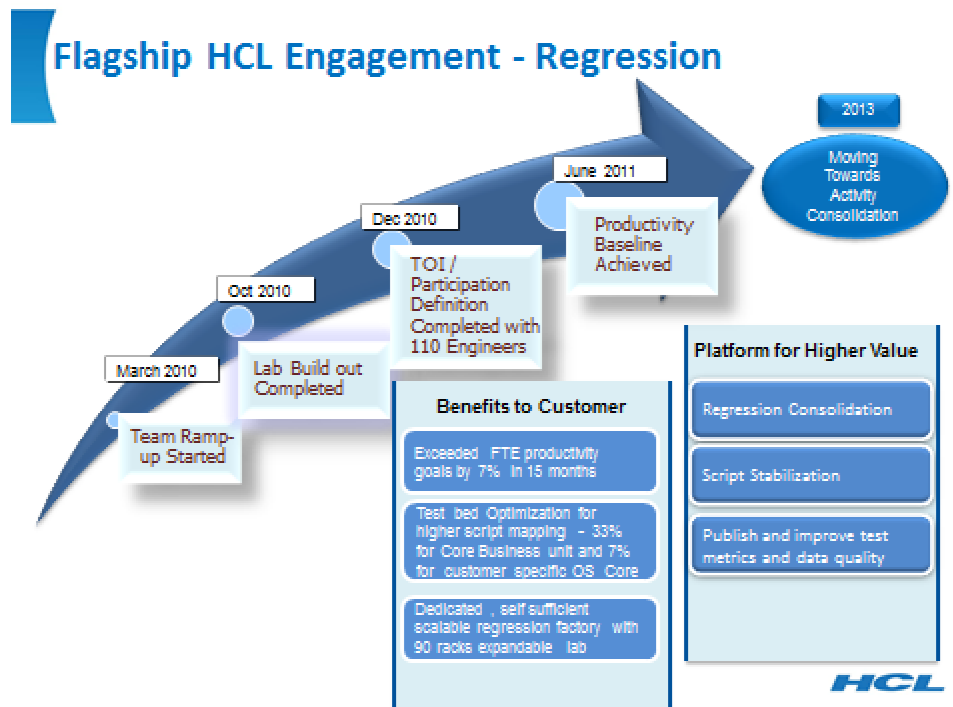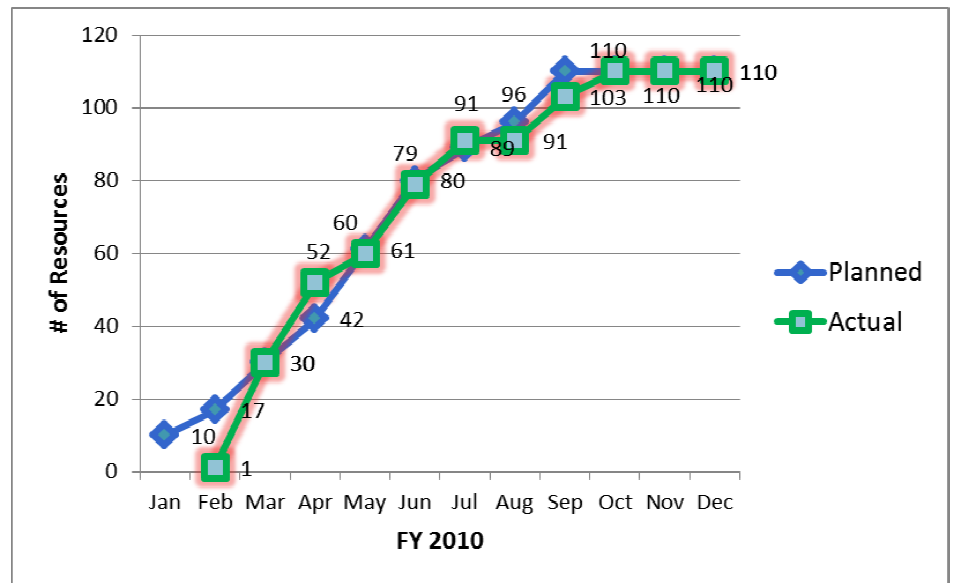
TECHNOLOGY/TOOLS USED

The following technology and tools were leveraged:

- Networking protocols across Layer 2/Layer 3 technologies: OSPF, ISIS, BGP, MPLS, LDP, P2P, P2MP, RSVP-TE, L3VPN (v4 and v6), L2VPN, HA, VRRP, Multicast, HA and VRRP

- Tools: Agilent N2X, Ixia and Spirent TC

HCL SOLUTION

A team of more than 100 specialists was deployed by HCL to conduct a comprehensive analysis of the client's business pain and proposed a regression test factory for regression testing. The activities undertaken were:

- Analyzed the regression pass rates, test execution percentage and understood the requirements to optimize resource-intensive tasks

- Received code commits for regression run from the client's product and developments teams and performed the following:
  - Sanity runs
  - Scheduled regression runs
  - Ad hoc request regression runs

- Analyzed the results, raised problem reports and tracked development fixes

- Worked in tandem with the client's development team to deliver bug fixes, migrate the fixes across branches and validate them

- Augmented existing regression suites with additional scripts for new features

BUSINESS BENEFITS

By entrusting the regression testing to HCL, the client benefitted in the following ways:

- Transformed the execution of regression testing for nine business units across various technologies (routing, switching, security, VPN/Mcast services, etc.)

- Built 90 test beds along with all the infrastructure required to establish them

- Released the client's engineers at customers' side for other core projects

- Ensured 100% on-time performance for all testing engagements

- Reduced time-to-market for the customers

- Exceeded productivity to 112 FRE output

- Created more than 25 engagement-specific frameworks for productivity enhancements

- Resulted in USD 2 million potential savings through operational efficiency

- Worked across business units and product lines

APPLICATION SUPPORT & MAINTENANCE	BIG DATA & BUSINESS ANALYTICS	BUSINESS ASSURANCE & TESTING	CLOUD, DIGITAL EXPERIENCE & MOBILITY	COLLABORATION, CONTENT & SOCIAL	CUSTOMER RELATIONSHIP MANAGEMENT	DIGITAL SYSTEMS INTEGRATION	E-COMMERCE & OMNI-CHANNEL	ENTERPRISE RESOURCE PLANNING	HUMAN CAPITAL MANAGEMENT	MODERN APPLICATION DEVELOPMENT	PLATFORMS & INTEGRATION

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