

### BUSINESS SCENARIO AND NEED

The telecom service provider (TSP) landscape today constitutes rapid technology adoption and far greater agility in new service launches with a larger multi-vendor eco-system than before. The advent of virtualized and software defined networks in such a changing landscape has resulted in undesirable 'shift-right' in operational accountability, with far greater burden of testing and validation on TSPs than ever before.

**Business goals** of any testing solutions of today's **telco networks, devices & applications** must address the ever increasing OPEX and the need for faster time to market for networks and services launch. It is also important for any solution to preserve TSP's CAPEX investment on existing testing infrastructure on equipment and tools.

### OUR SOLUTION

HCL TURBO is an AI, SW BOT and Analytics based automation platform geared towards the business and technical challenges faced by TSPs. It provides E2E automated test life cycle management functions for telco networks, devices & applications.

TURBO automates all phases of testing lifecycle – from Planning, Execution to Reporting.

### TURBO AUTOMATION PLATFORM

#### KEY COMPONENTS



#### AI-driven Intelligent Test Planning

- BOT-driven test planning and selection
- Impact-based testing
- Customizable BOTs



#### Automatic Test Orchestration

- Scheduling Defect Management
- Parallel Execution Threads
- Interface with Test Equipment
- Comprehensive Test Libraries
- Flow Testing for various domains



#### Test Visualization & Reporting

- Planning Metrics
- Execution Tracker
- Visualization
- Reporting
- Analytics-based advanced Insights



#### Lab Management

- Lab consolidation frameworks
- Lab management frameworks

### BUSINESS BENEFITS TO CUSTOMER



UP TO 30% OPEX REDUCTION



UP TO 40% IMPROVEMENT IN TTM



REDUCED TEST CYCLE



FASTER ROLLOUT OF NETWORKS AND SERVICES



OPTIMAL TEST RESOURCE USAGE

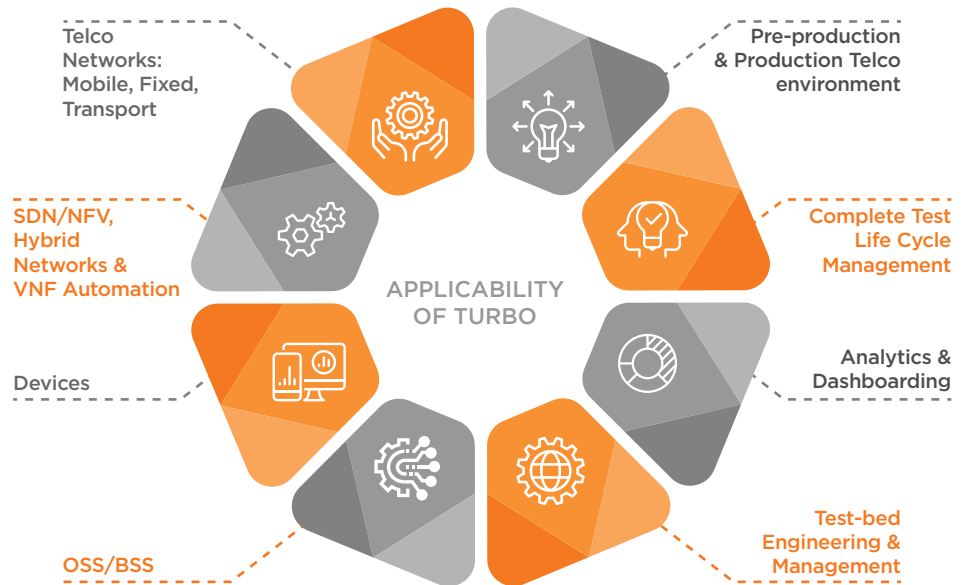


OPTIMIZE CAPEX INVESTMENT

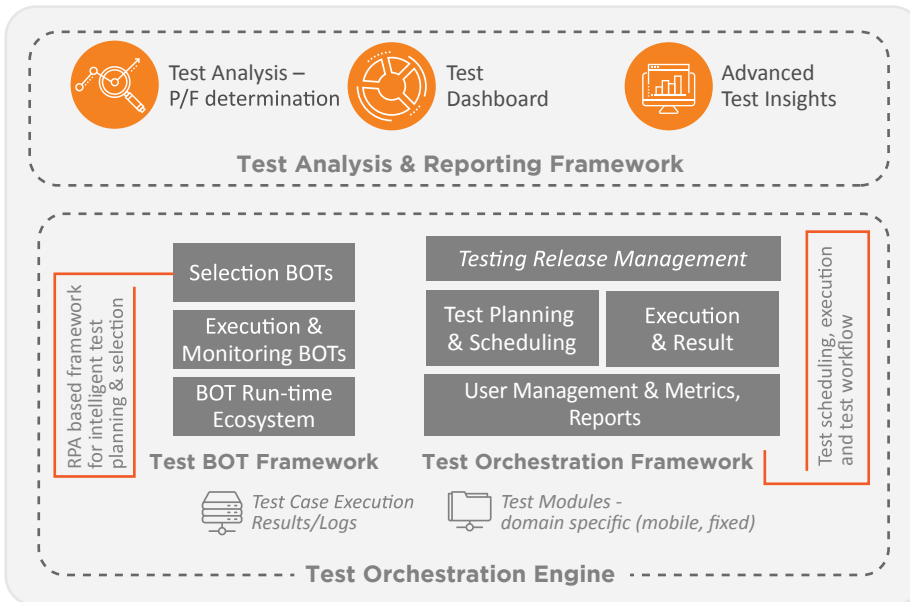
## KEY DIFFERENTIATORS

- AI and RPA based E2E test lifecycle automation
- Intelligent test planning with customizable BOTs
- Ease of Integration into existing Test ecosystem
- Flexible deployment modes - cloud/on-premise/hybrid
- Supports traditional, virtualized & hybrid networks including automated VNF testing
- Reusable telco testing modules

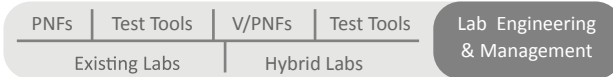
## APPLICABILITY OF TURBO



## TURBO ARCHITECTURE



### Test Infrastructure & environment



## CASE STUDY

### 30% OPEX REDUCTION FOR US TIER 1 SERVICE PROVIDER

A leading US-based service provider was grappling with increased operating expenses (OPEX) & longer time to market issues due to a predominantly manual testing methodology for their 3G/4G network. HCL's Test Automation Solution was successfully deployed for end-to-end testing of Access, Core & Transport Networks & Services. HCL solution resulted in significant business benefit to customer including an overall 30% OPEX reduction with 40% improvement in Time-To-Market in Network/Services launch. HCL solution automated the entire Network test case suite with an automation technology based on Robot framework, Selenium & Python. The solution also included Web Services and Work-flow automation.



Hello, I'm from HCL's Engineering and R&D Services. We enable technology led organizations to go to market with innovative products and solutions. We partner with our customers in building world class products and creating associated solution delivery ecosystems to help bring market leadership. We develop engineering products, solutions and platforms across Aerospace and Defense, Automotive, Consumer Electronics, Software, Online, Industrial Manufacturing, Medical Devices, Networking & Telecom, Office Automation, Semiconductor and Servers & Storage for our customers.

For more details contact: [ers.info@hcl.com](mailto:ers.info@hcl.com)

Follow us on twitter: <http://twitter.com/hclers> and our blog <http://ers.hclblogs.com/>

Visit our website: <http://www.hcltech.com/engineering-services/>

