3i Infotech®
Innovation • Insight • Integrity

Structured Approach to Testing

- Android in an Agile Environment

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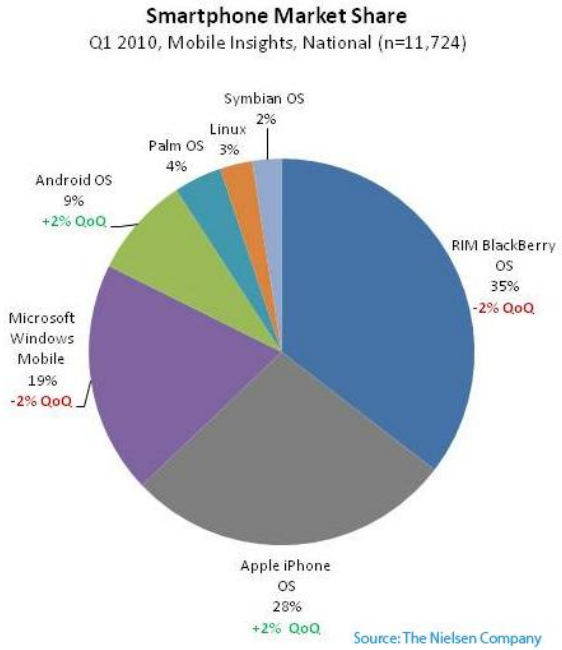
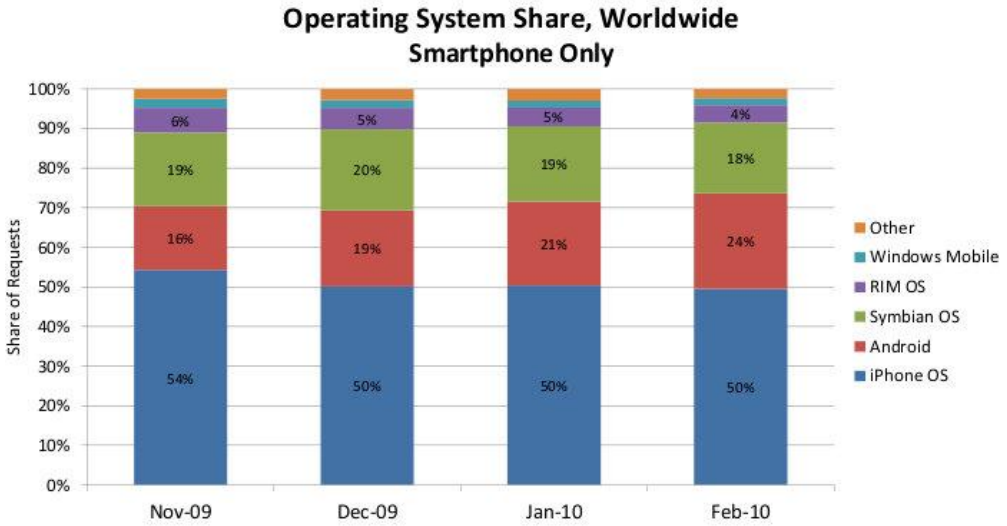
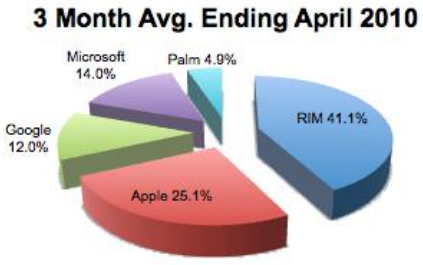
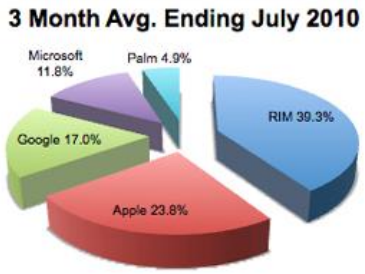
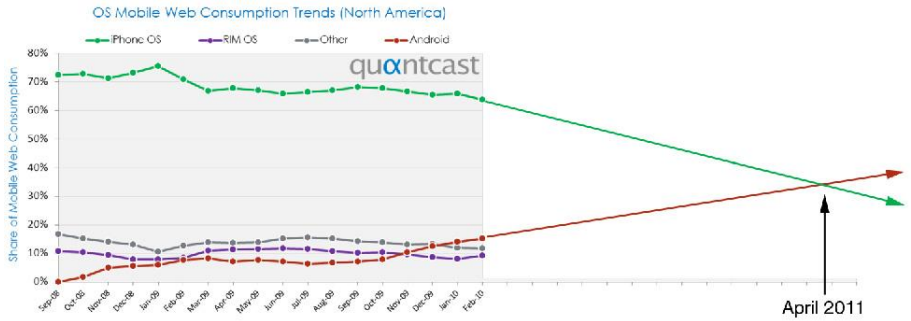

Smartphone Market Share
Q1 2010, Mobile Insights, National (n=11,724)
Symbian OS 2%
Linux 3%
Palm OS 4%
Android OS 9%
+2% QoQ
RIM BlackBerry OS 35%
-2% QoQ
Microsoft Windows Mobile 19%
-2% QoQ
Apple iPhone OS 28%
+2% QoQ
Source: The Nielsen Company

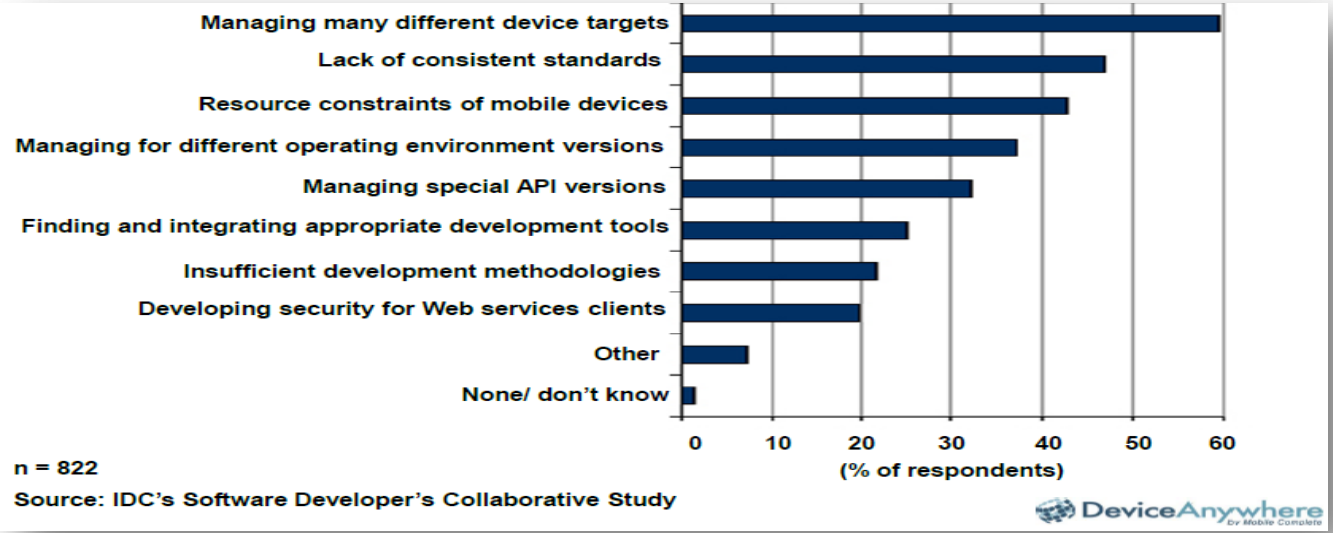

Operating System Share, Worldwide
Smartphone Only
Share of Requests
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Nov-09
Dec-09
Jan-10
Feb-10
6%
19%
16%
54%
5%
20%
19%
50%
5%
19%
21%
50%
4%
18%
24%
50%
Other
Windows Mobile
RIM OS
Symbian OS
Android
iPhone OS

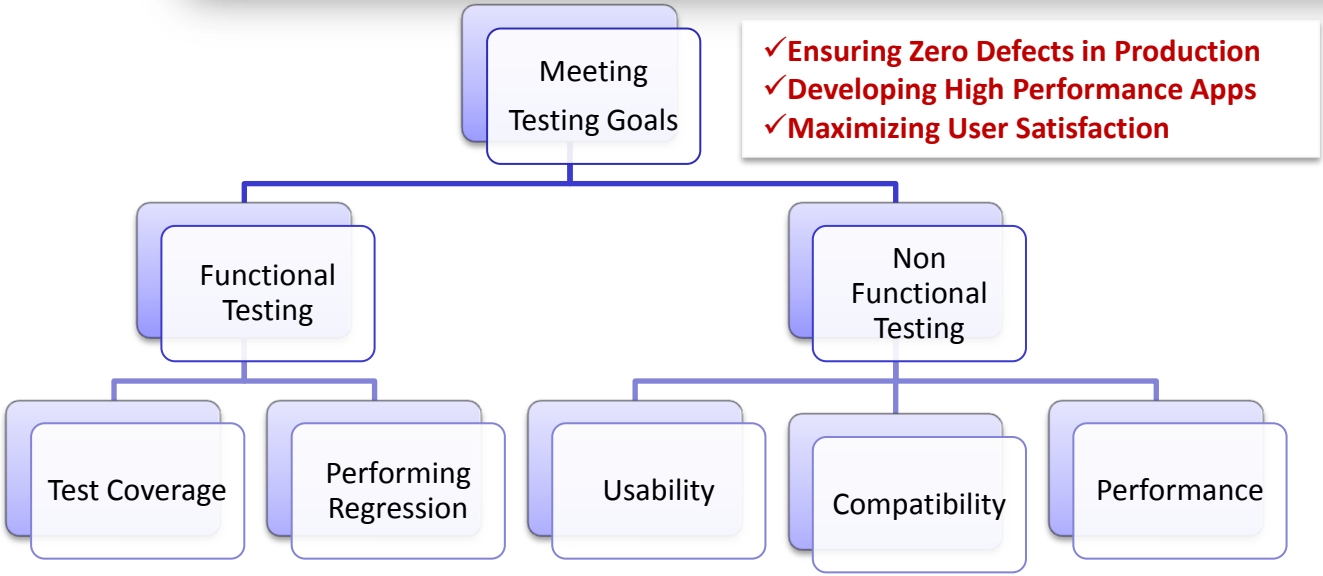

3 Month Avg. Ending April 2010
Microsoft 14.0%
Palm 4.9%
RIM 41.1%
Google 12.0%
Apple 25.1%

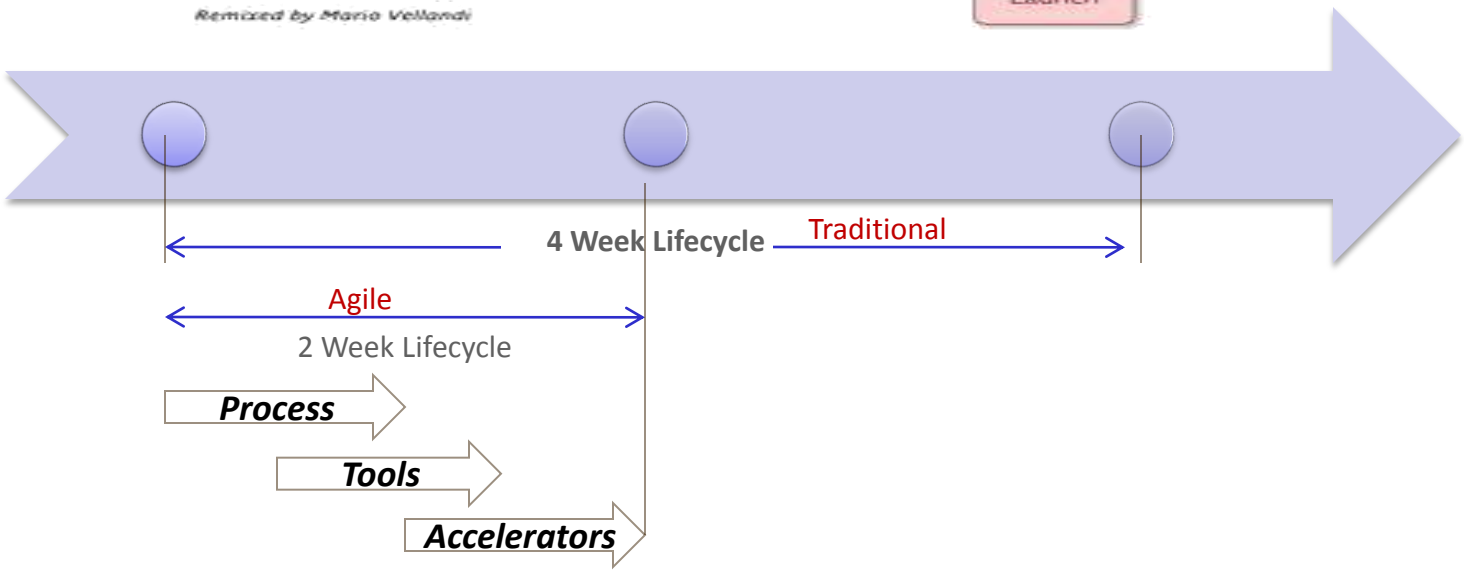

3 Month Avg. Ending July 2010
Microsoft 11.8%
Palm 4.9%
RIM 39.3%
Google 17.0%
Apple 23.8%


OS Mobile Web Consumption Trends (North America)
iPhone OS
RIM OS
Other
Android
quantcast
Share of Mobile Web Consumption
80%
70%
60%
50%
40%
30%
20%
10%
0%
April 2011

Top Challenges & Goals

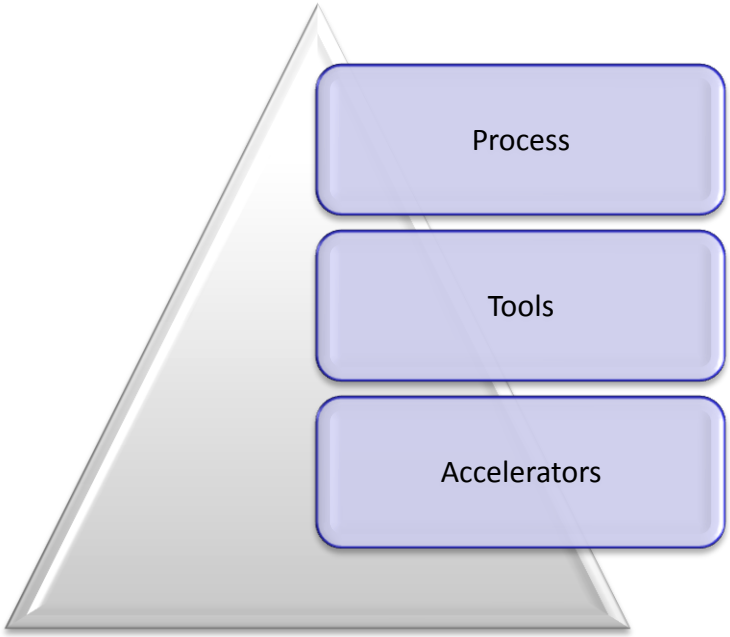






✓Assuming nearly 40% efforts goes into Testing in a mobile lifecycle
✓A traditional 4 week cycle would have at least 8 days of testing required
✓An agile development cycle of 2 weeks would have only 4 days dedicated to testing
✓Nearly 20% of TAT reduction – Standard Process Implementation, 40% - Automation using Industry Tools & 20% to Usage of Accelerators

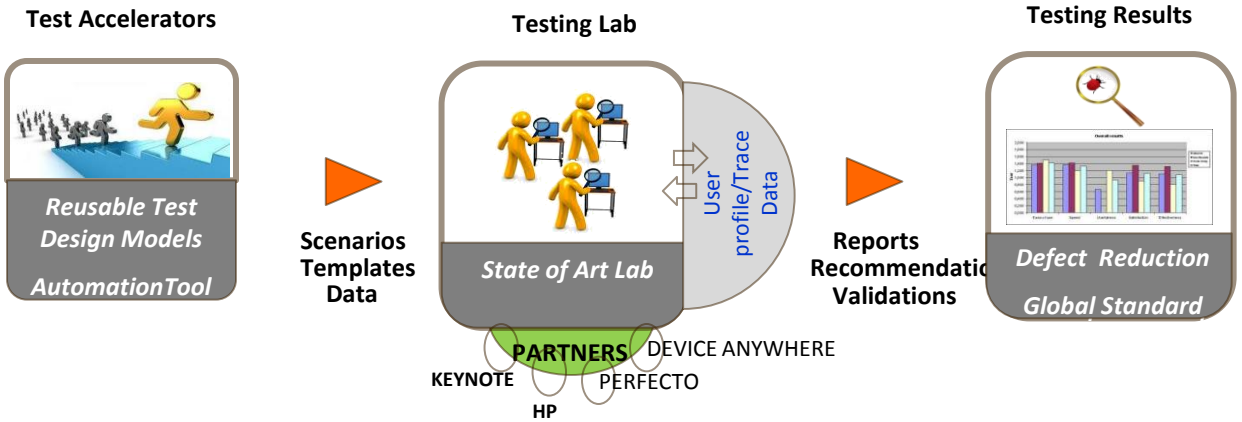
Elements of a Structured Testing Approach



Process Elements include
- ✓Best Practices & Reusable Assets
- ✓W3C Industry Standards
- ✓Continuous Iterative Improvements
- ✓Defined Controls
- ✓Post Implementation Checks

Tools include
- ✓Test Case Designers
- ✓Regression Automation
- ✓Emulators
- ✓Simulators
- ✓Research Lab

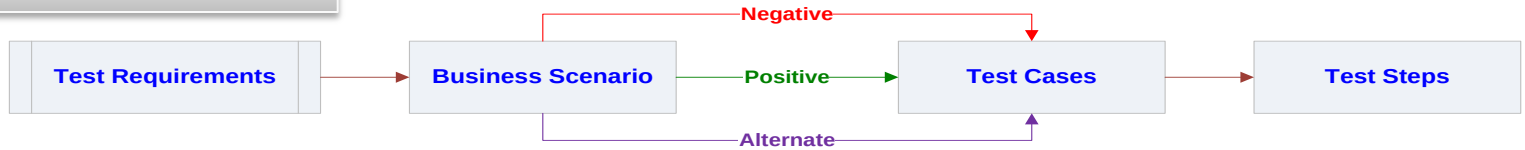
Accelerators include
- ✓Test Accelerators
- ✓ Platform Accelerators
- ✓Design Accelerators



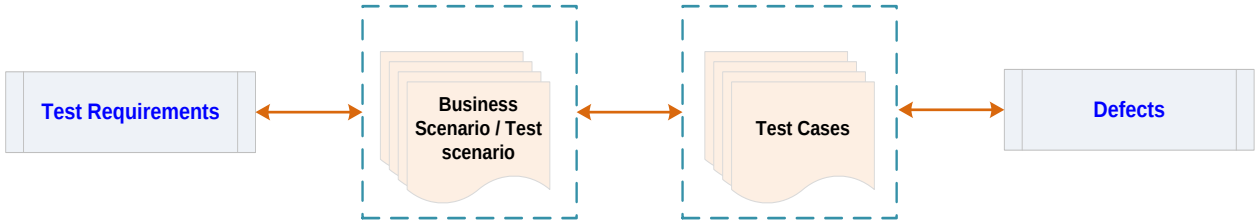
3i Infotech's Mobile Testing Elements

Process Elements

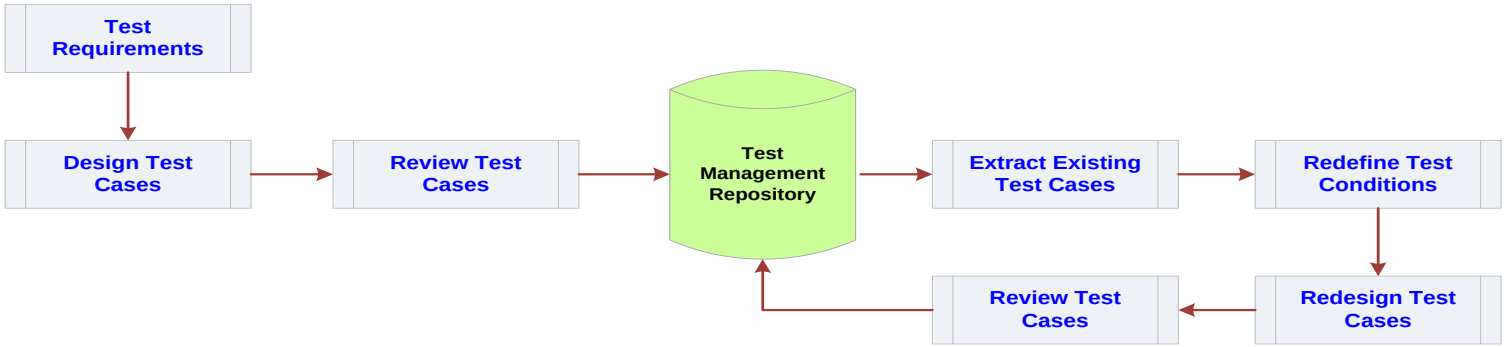
Maximum Coverage



Maximum Traceability



Maximum Reuse



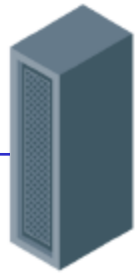
Process Elements

Analyze | Plan & Design | Execute | Report

Tester connects to smartphones in remote locations to test and troubleshoot mobile apps

Carrier/Operator

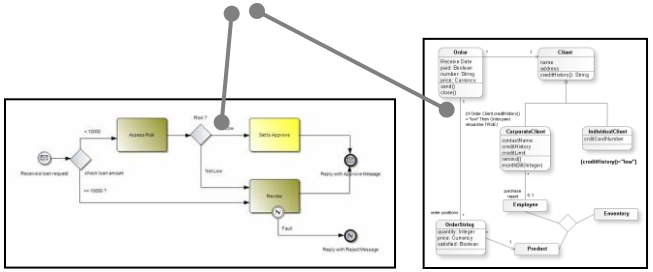
Your Apps Here



Mobile Content,
Services & Applications

Process Elements

Models for automated test generation



Business Needs

MBT Test Production

production engine

MBT Automated Traceability

Test Repository

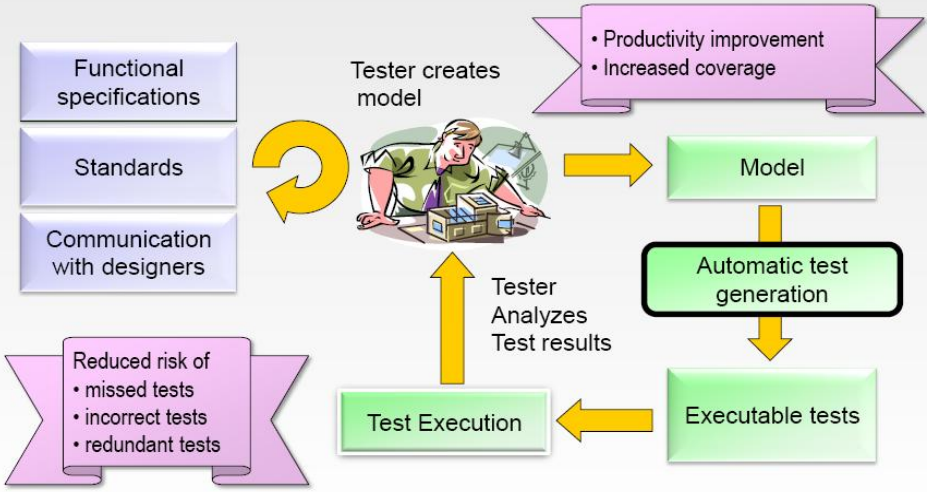
Business Analyst

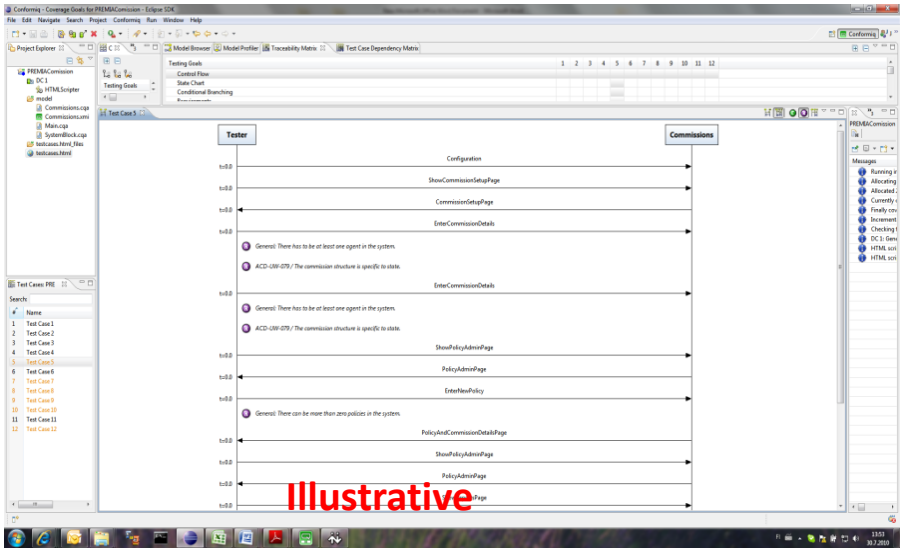
Collaboration

Automated test execution

Manual Test execution

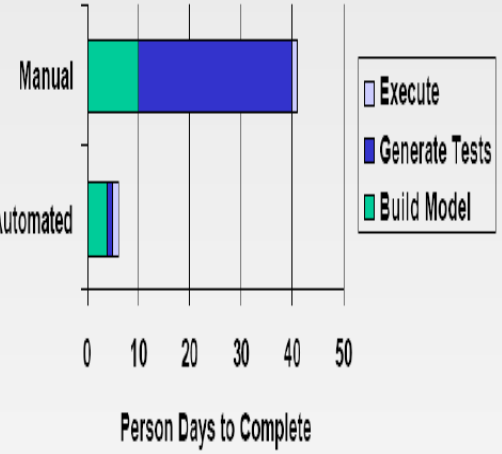
Automated Test Design – Automatic generation of tests from models



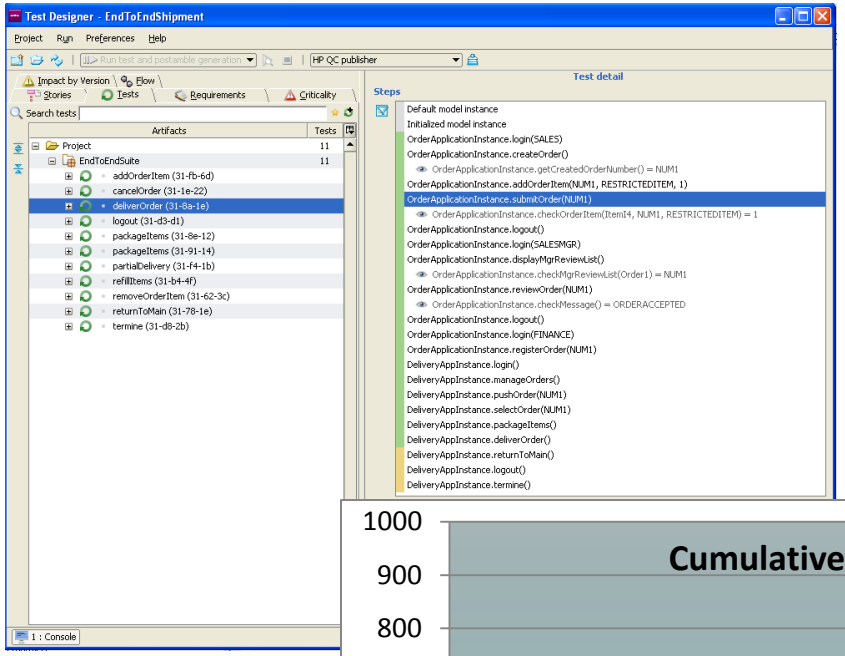


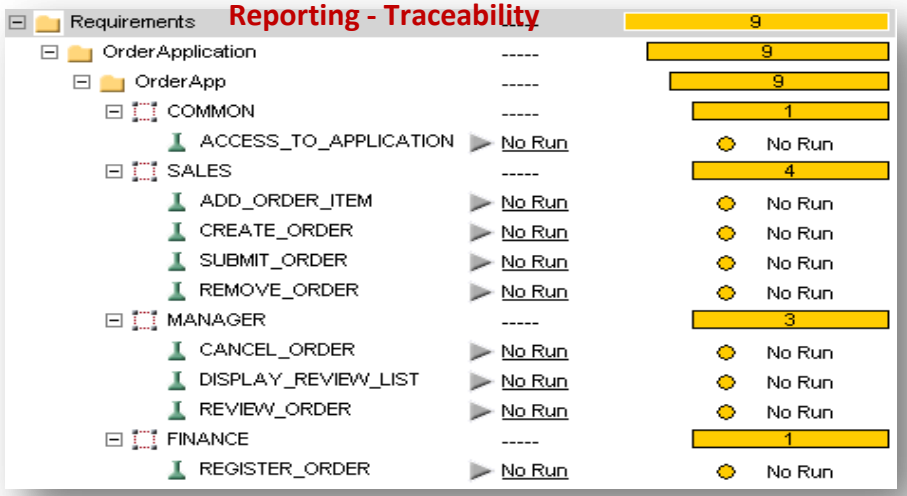
Automated Test Design Benefits

- $ Significant increases in productivity
- Improved quality tests
- $ Cost-effective test suite maintenance
- Guaranteed requirements coverage
- Independence from test execution environments
- $ Early detection of specification defects
- Flexible in regards to design processes

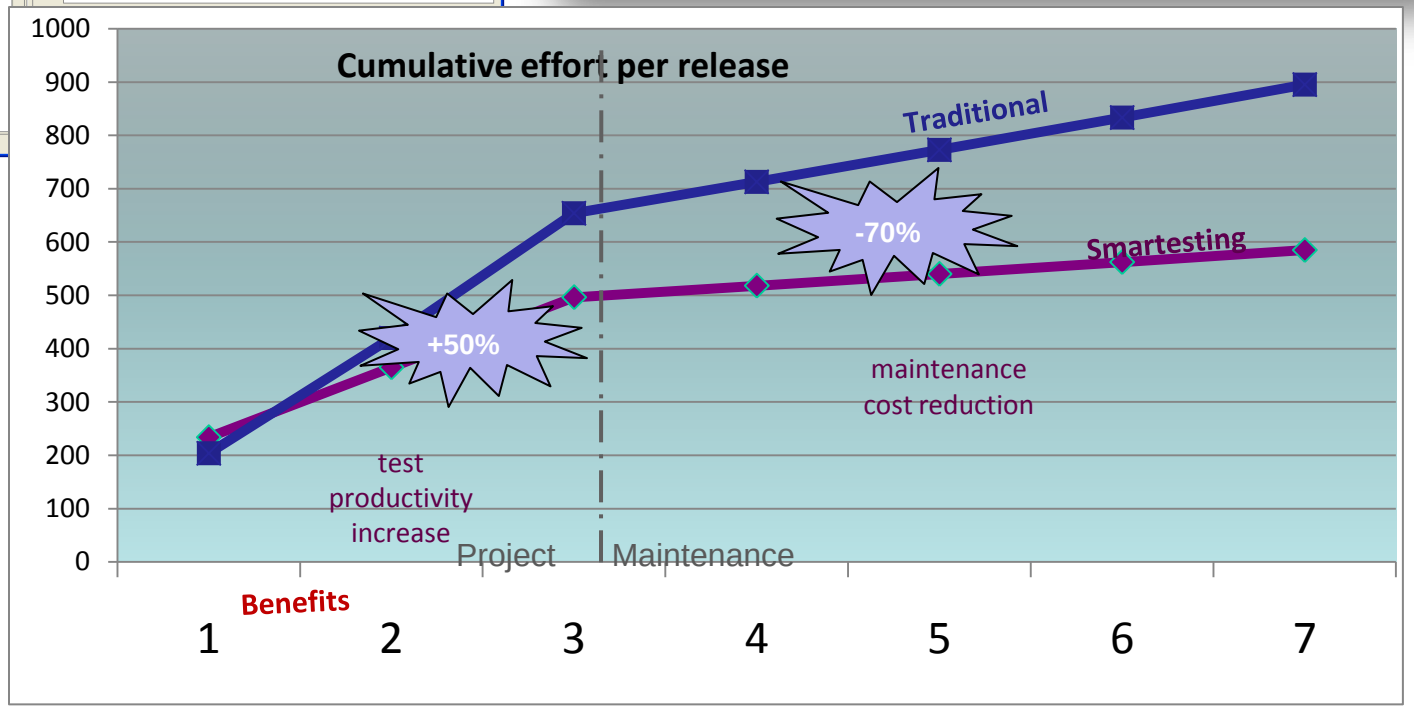


Test Design Automation

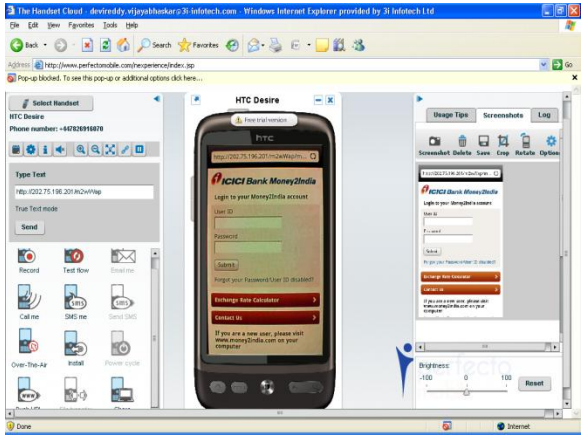


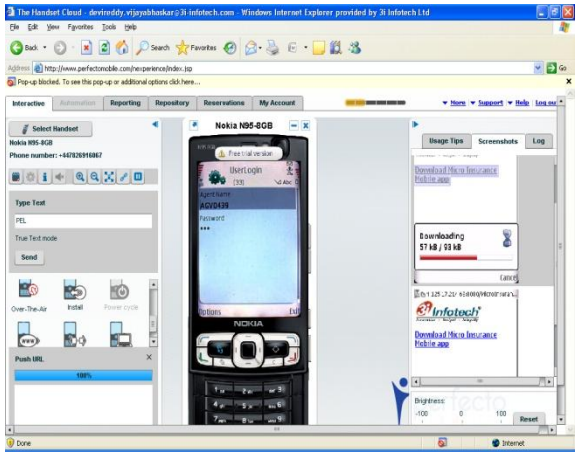


The test generation engine computes from the models all the test cases necessary to reach the defined coverage



*Source: **Business Case Tool™ Smartesting***





Benefits

Easy and efficient script creation

Reduced manual testing efforts on all platforms

Full flow control

Including conditions, loops, flow commands, expressions and data-tables

Detailed reports

Reporting results, screen captures in digital format, continuous video recording of the entire script and graphs showing statistics about the execution

Enhanced collaboration

Save time and money on problem reproduction by using real time online handset sharing with multiple participates

Open API

Integration into 3rd party tools such as test management, monitoring and defect tracking

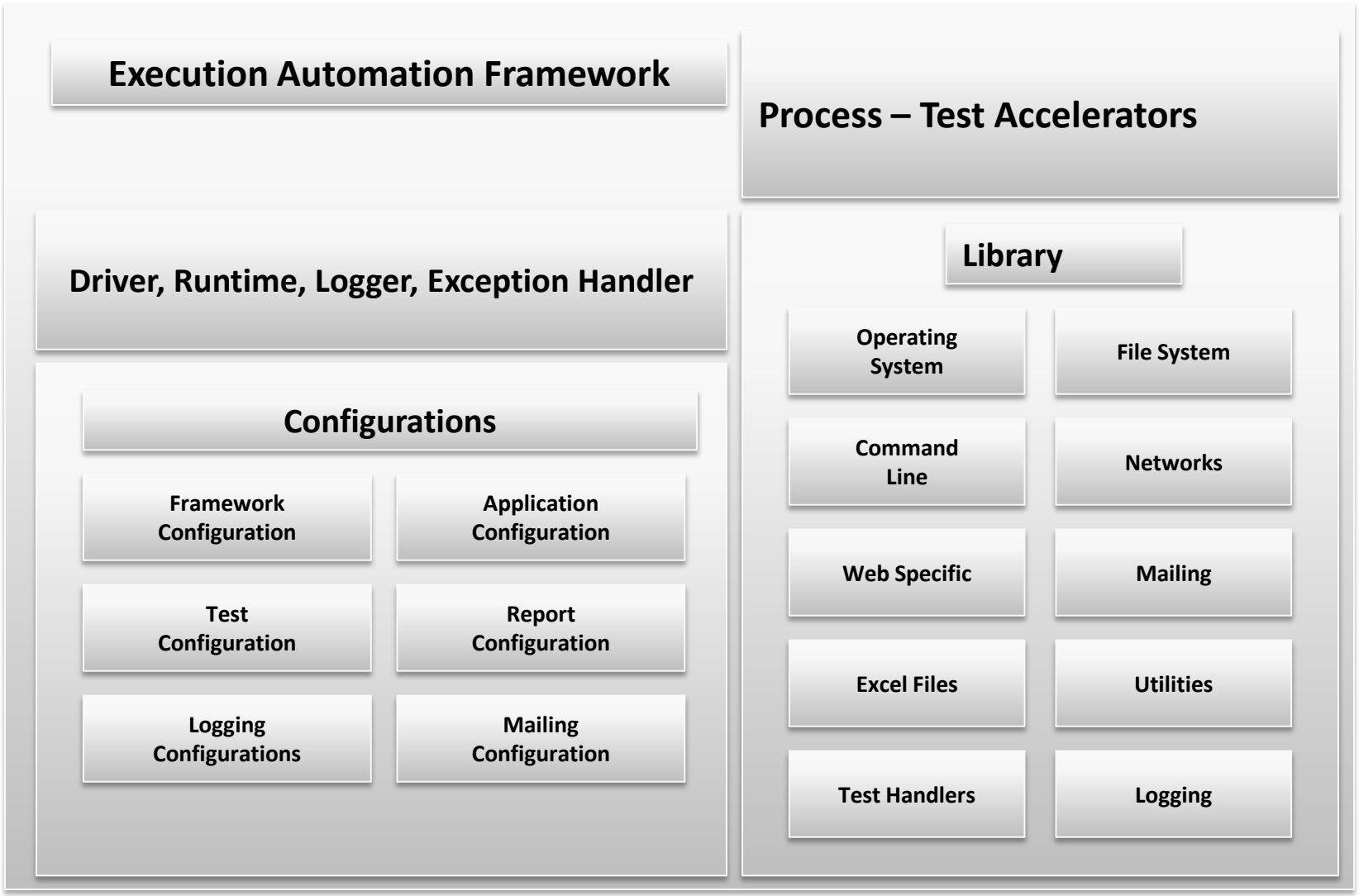
DeviceAnywhere

keynote
The Mobile & Internet Performance Authority

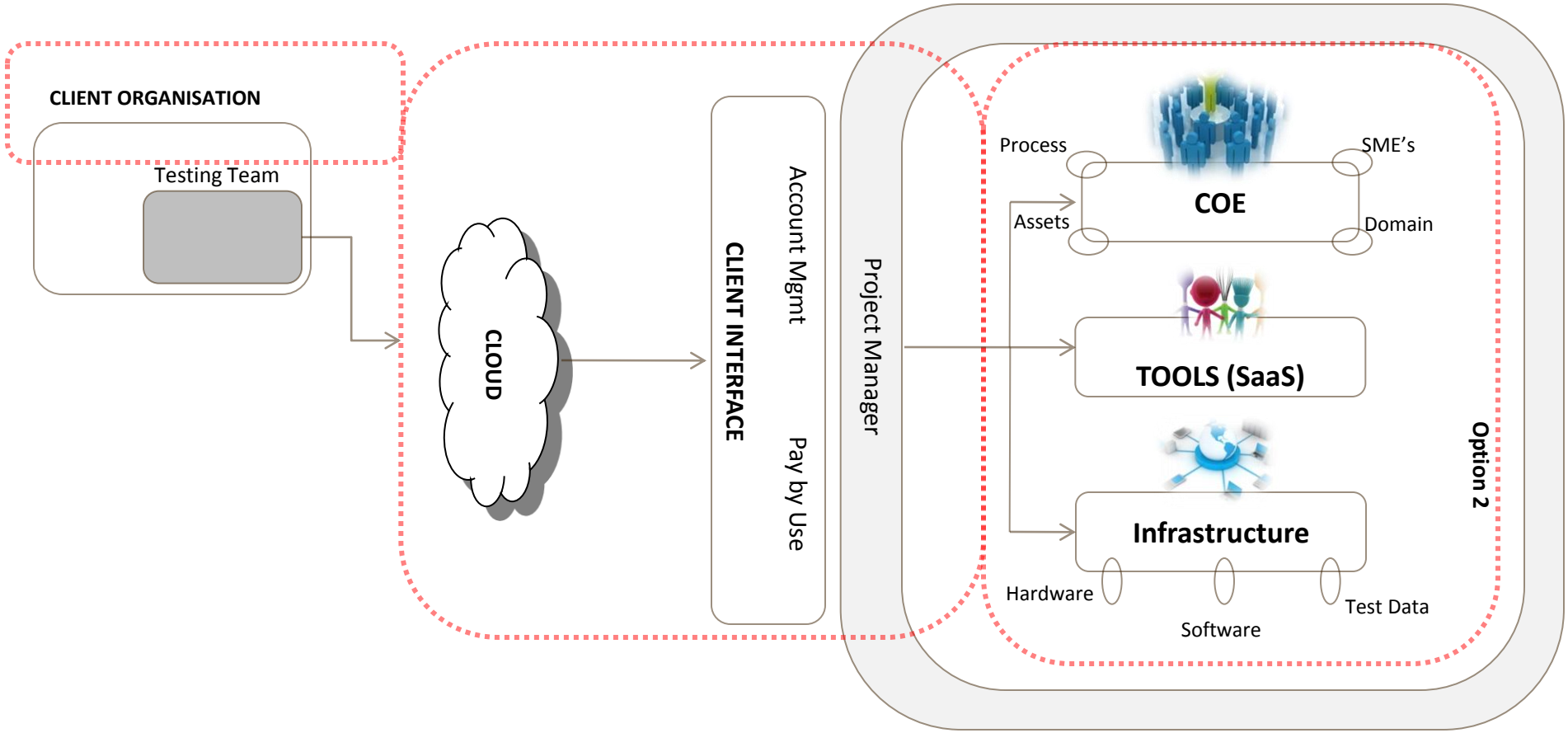
hp invent

smartesting

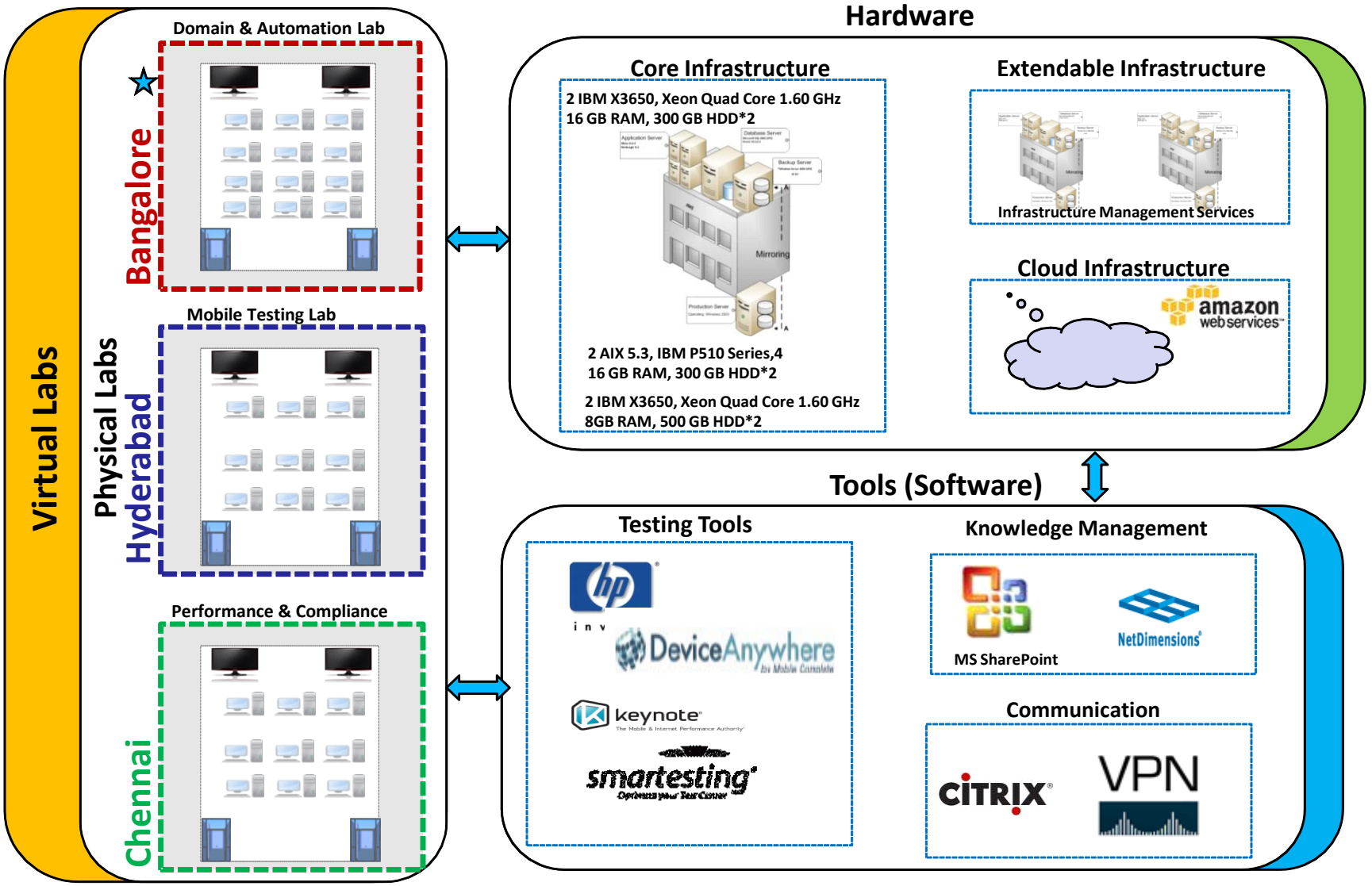
Accelerators Elements



Test Platform as a Service [TaaS] – Test Services on Hire



Access to Tools	Access to SME's on various testing techniques	Access to Domain Assets	Proven Process/Methodology/Best practices


Virtual Labs
Physical Labs
Bangalore
Domain & Automation Lab
Hyderabad
Mobile Testing Lab
Chennai
Performance & Compliance
Hardware
Core Infrastructure
2 IBM X3650, Xeon Quad Core 1.60 GHz
16 GB RAM, 300 GB HDD*2
Mirroring
2 AIX 5.3, IBM P510 Series,4
16 GB RAM, 300 GB HDD*2
2 IBM X3650, Xeon Quad Core 1.60 GHz
8GB RAM, 500 GB HDD*2
Extendable Infrastructure
Infrastructure Management Services
Cloud Infrastructure
amazon web services
Tools (Software)
Testing Tools
DeviceAnywhere
keynote
smartesting
Knowledge Management
MS SharePoint
NetDimensions
Communication
CITRIX
VPN

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THANK YOU