

Smart Test Management System through Open Interfaces



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SofTec Conference 2010 Pune

November 24, 2010

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- **Approximately 9,000 employees in 59 countries, including 600+ in India**
- **300+ airline customers in 113 countries**
- **Sabre's systems process more than 19,000 transactions per second – about 2 billion every day**

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- Innovation using cutting edge technology
- Excelling in world class delivery
- Excellent compensation & benefits



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The Myth of Sisyphus

- Sisyphus is a Greek mythology
- Sisyphean challenge can be equated to Testing & Automation challenges



Problem statement

- QA Teams use different tools/methods for testing different requirements ex: Manual testing, QTP, FitNesse, Jmeter, SOAtest, Selenium etc..
- QA's would be using different Testing engines, repositories, defect tracking systems.
- How to ensure traceability across various tools [Project Management, Test Management, Automation tools, Defect Trackers etc]
- ❖ *So how does IT develop a standard framework for Quality Assurance?*

The Goal

- One single Integrated execution and test management environment for commonly used QA tools in the organization at different QA phases
- Integrate tools using Open API's
- Drive Standardization across the organization

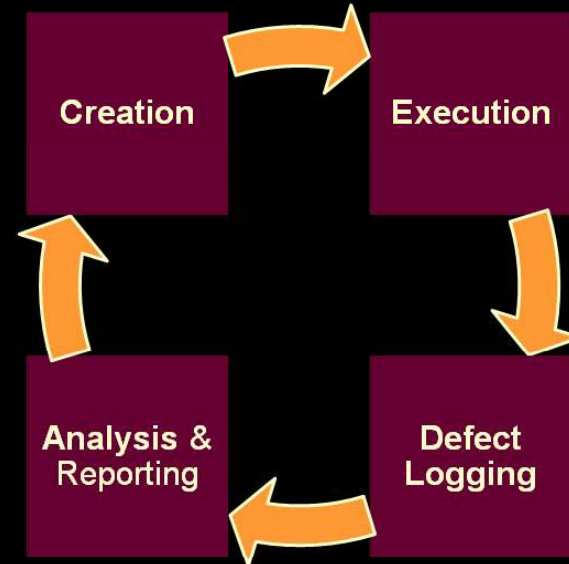
The Approach

- Develop creation, execution, defect analysis capabilities within one single Test Management System
- Use **O**pen **T**est **A**rchitecture Model to develop plug-ins for different test engines, defect tracking tools.

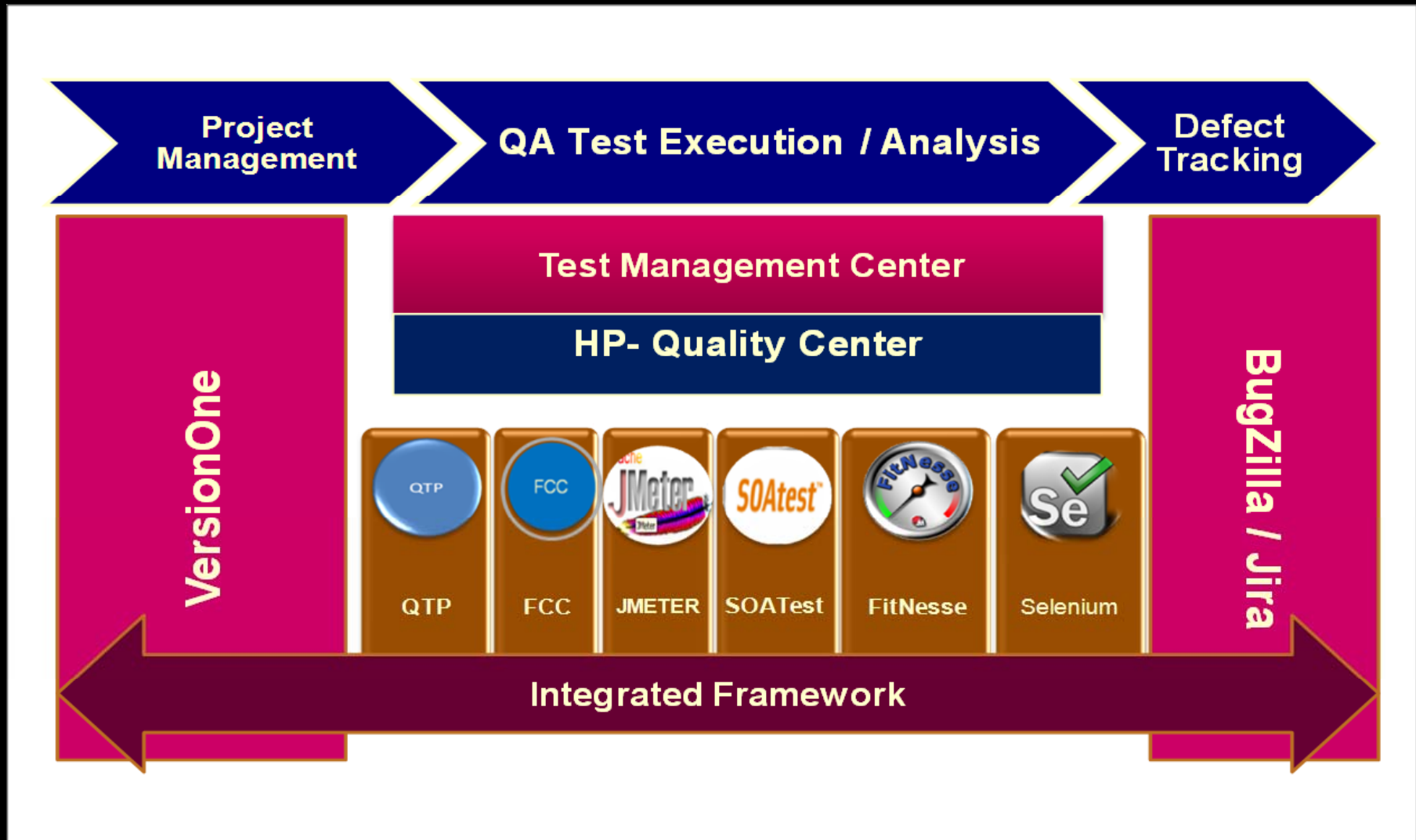
One Stop Shop: The need

- Technology agnostic
- Single point of execution for all Test Engines
- Maintenance of Test artifacts becomes easy and efficient
- Single repository of all *Test Results*
- Single repository for *Analysis* of test results

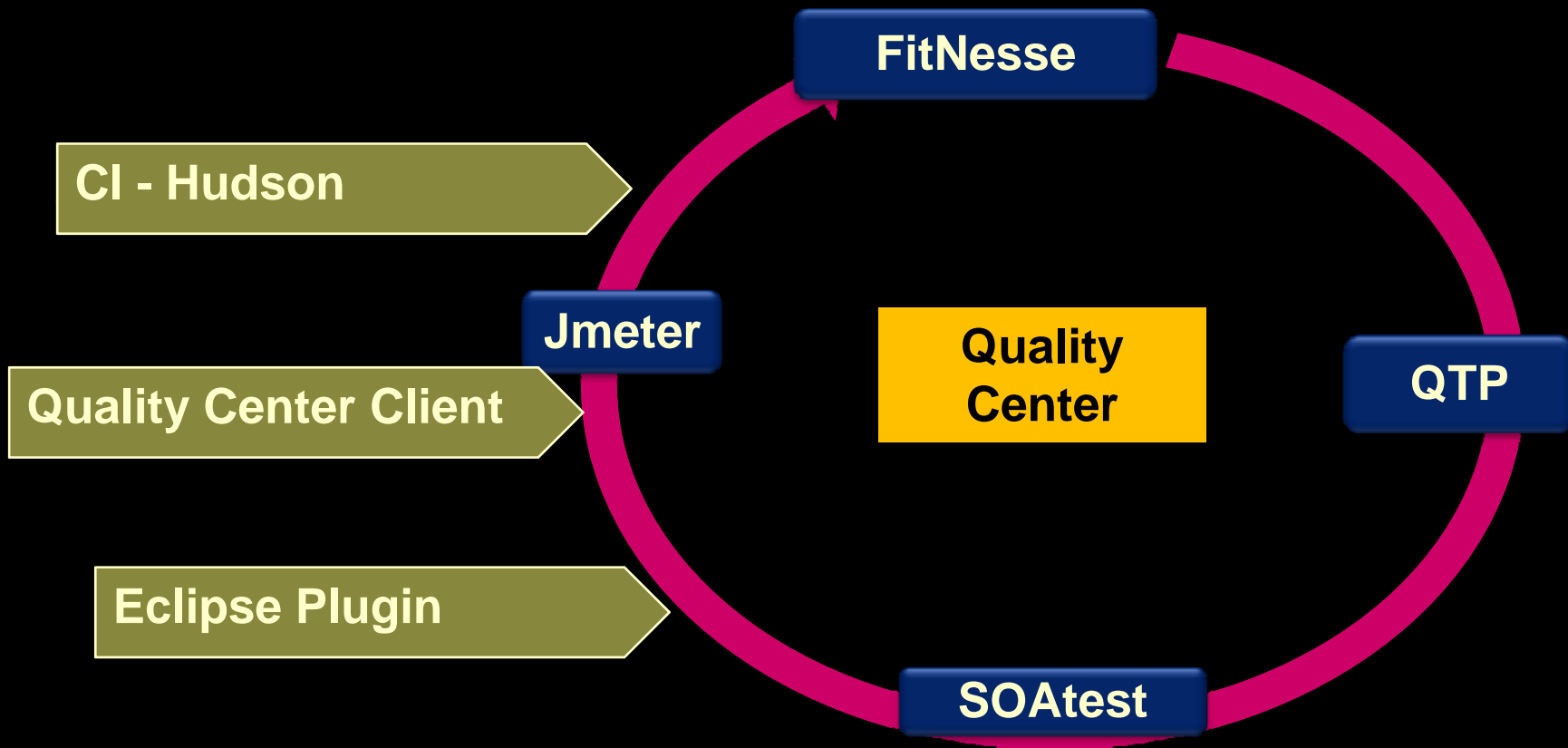
Goal- One Stop Shop for Every Phase



QA Tools / Framework

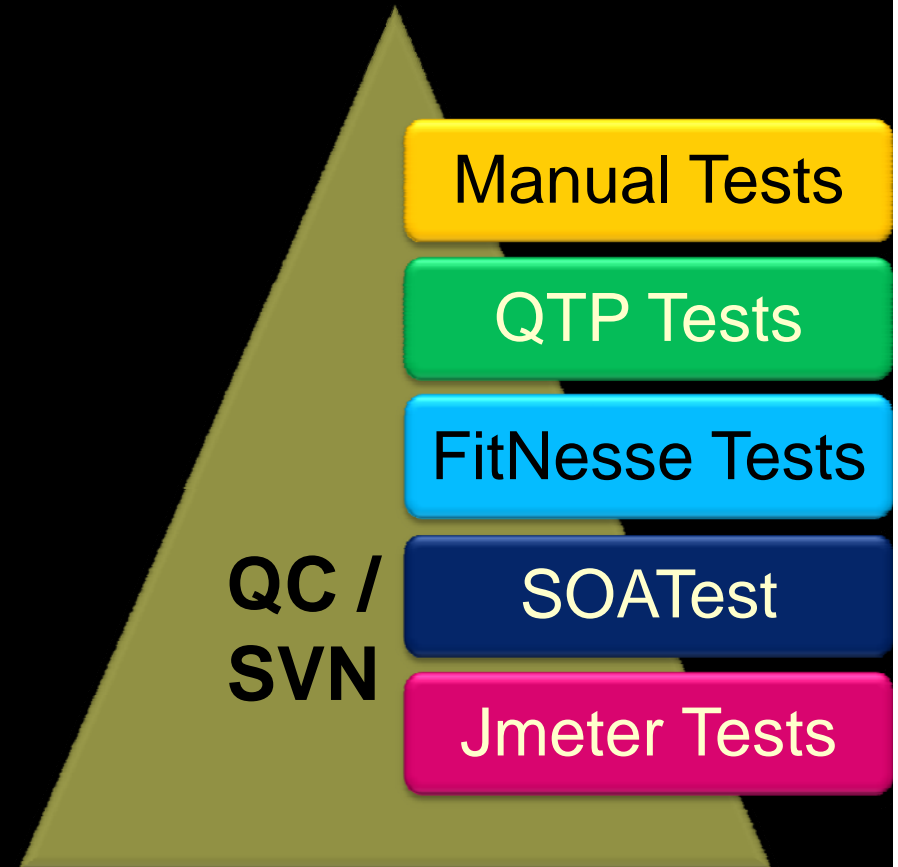


Central Execution Engine



Single & Central Repository

- Options for repositories:
 - Quality Center
 - Pros
 - In-built execution capability with other HP/Mercury tools like QTP, LoadRunner etc.
 - Extensible OTA API for adding more plug-ins
 - Cons
 - License based
 - SubVersion
 - Pros
 - Open source
 - Versioning built-in
 - Support for Java frameworks
 - Cons
 - No in-built database support



Integrated Defect Tracking

- Integration with defect tracking tools like BugZilla, Jira, Merrant Tracker etc. (supported by OTA)
 - Bi-directional traceability between QC and Defect Tracking System
 - Bi-direction traceability between PMT and DTS

JIRA

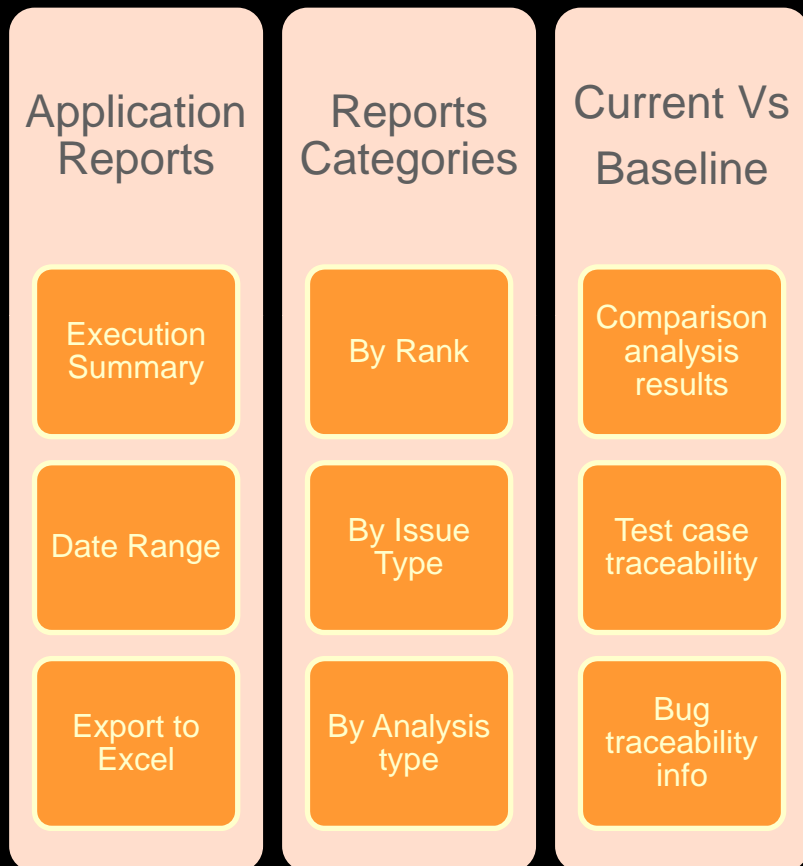
MERANT TRACKER™



Bugzilla

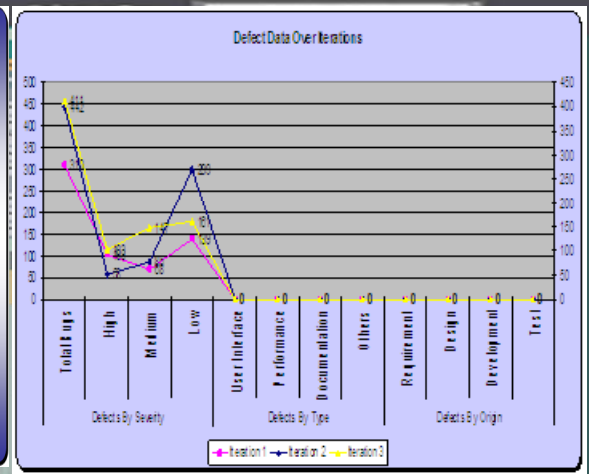
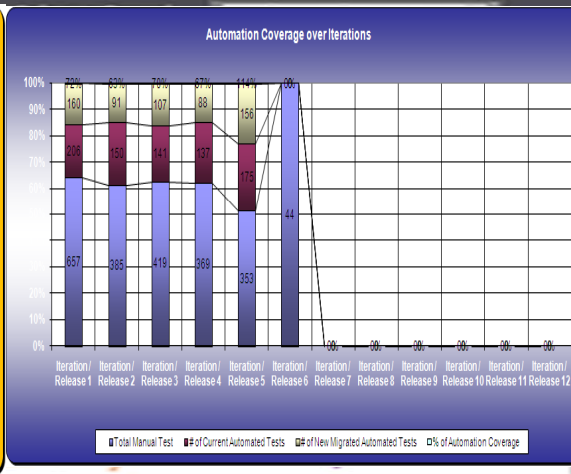
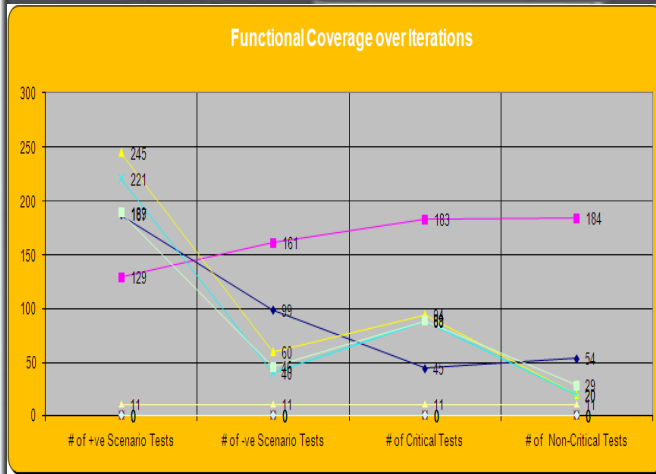
Integrated Analysis

- **Interact with Quality Center (QC) and access the test artifacts from QC**
- **Benefits:**
 - **Consolidated view of execution details such as results, run details, log files etc**
 - **Facilitates comprehensive analysis of the test scripts results**
 - **Validate the Current Test results against a baseline results**
 - **Generate Product-Area wise Reports (with failures categorized by Severity)**
 - **Ability to update the baseline for all test artifacts**
 - **Ability to alert the Product area functional SME for any corrective action/fix.**



Metrics & Reporting

Integrated Framework



Test ID : 565 QC Path : Subject\VersionOne\Test_V1_QC

Details Relationships Links Attachments Discussions History Summary Bugzilla

Defect

Main

ID: D-29295

Title: Test ID : 565 QC Path : Subject\VersionOne\Test_V1_QC

Project: TQI

Iteration:

Team:

Theme:

Description: Test Description For Test ID : 565 QC Path : Subject\VersionOne\Test_V1_QC

Estimate:

Extended

Owners:

Status:

Priority:

Type: **Bugzilla**

Source: Bugzilla

Reference: 117

Split From Defect:

Split From Defect ID:

Test Name: Test_V1_QC

Baseline:

Designer: Outstep Repository

FT Test Sub:

Last_Execution_Time:

Regression Set:

Status: InProgress

Test ID: 565

Acceptance Test Name:

Creation Date: 2/20/11

PC Case Page:

Process URL:

Project Name:

Release ID:

Story Card Number:

VersionOne ID: 05-3039

Description:

Comments:

Bugzilla - Bug 117

Test ID : 565 QC Path : Subject\VersionOne\Test_V1_QC

Product: TQI

Component: comp1

Version: unspecified

Platform: PC

Importance: P3

Assigned To: (nil)

URL:

Product Selection:

Functional Grouping Selection:

VersionOneURL: http://versiononeqa.dsv.sabre.com/Version

Reported: 2010-03-03 17:04 by (nil)

Modified: 2010-03-03 17:04 (history)

CC list: Add me to CC list

0 users (nil)

Only	Est.	Current Est.	Hours Worked	Hours Left	%Complete	Cost	Deadline
0.0	0.0	0.0	0	0.0	0	0.0	

Conclusions

- Integrated QA environment is possible with Open Interfaces
- Enables Integration of various tools like, Quality Center, FitNesse , QTP, SOA Test and the PM tools seamlessly

Acknowledgements

- Srinivas Chintha [Director, Testing, Quality & Consulting]
- Sandeep Meesarapu [Development Manager]
- Vikram Gudur [Automation Architect]
- Nafees Ahmed [Project Manager]
- Sundeeep Raghavachary [Tech Lead]
- Raghuvir Konanki [Software Engineer]

References

- <http://www.sabre-holdings.com>
- <http://www.hp.com>
- <http://www.versionone.com>
- <http://www.bugzilla.org>
- <http://www.fitnessse.org>
- <http://jakarta.apache.org/jmeter/>

Demo

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Q & A

For more information about the integrated framework, Please get in touch with Srinivas.Chintha@Sabre-Holdings.com

Thank You



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