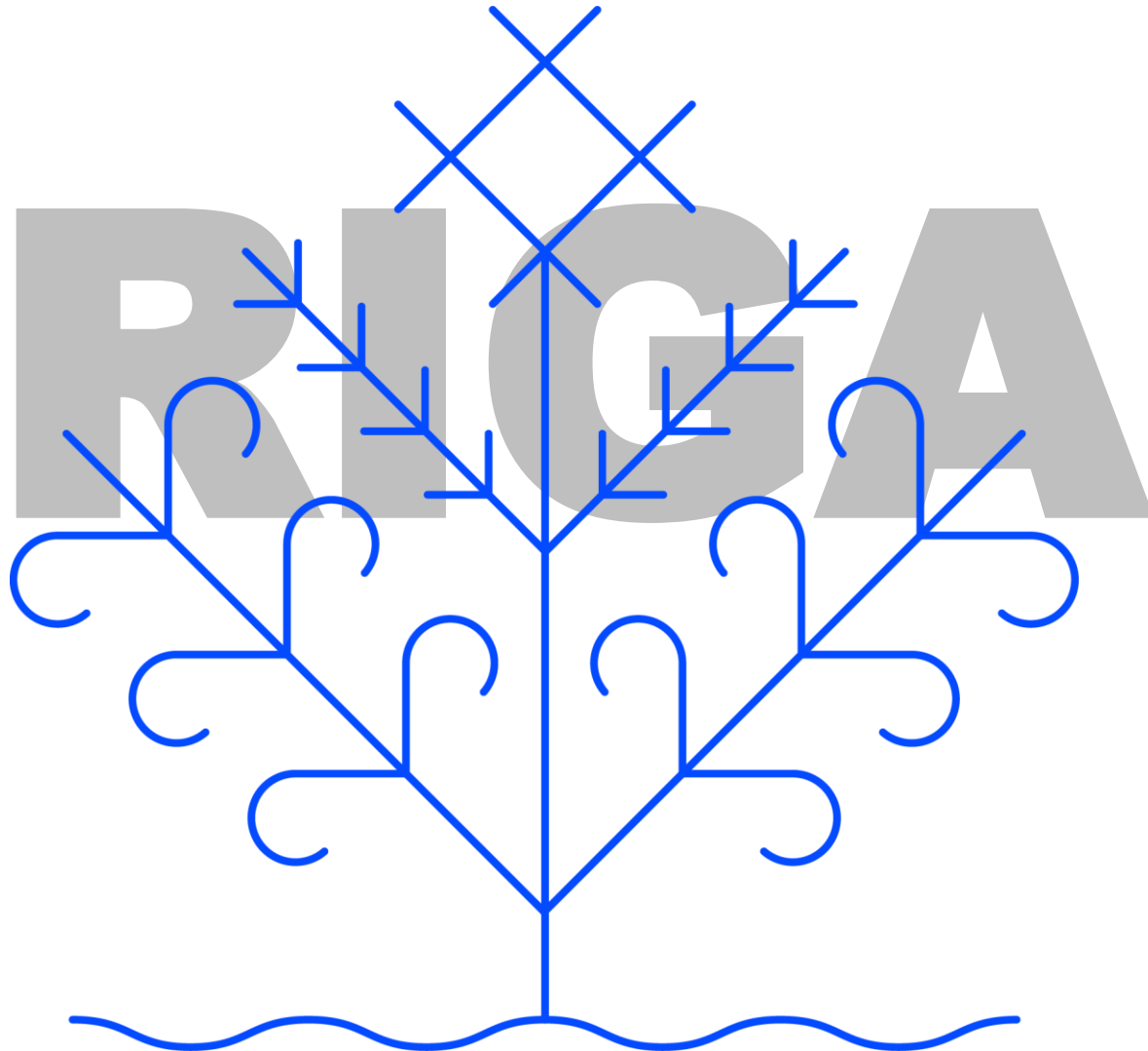# WHO AM I

- MORE THAN 16 YEARS IN DEVELOPMENT
- ~5 YEARS AT ACCENTURE
- DEVELOPMENT LEAD
- CI &TEST AUTOMATION ARCHITECT
- TEST AUTOMATION ARCHITECT
- TRICENTIS TOSCA EVANGELIST

WHY AUTOMATED TESTING IS SO IMPORTANT?

MOST EXPENSIVE BUGS

Jun 1996 - Ariane exploded after 40 sec $500 Millions

Sep 1999 Mars Climate Orbiter explosion due unit measure BUG $ 327 Million

Aug 2003 Race Condition Bug Creates Blackout   50 Million People

FREE COFFEE! STARBUCKS

April 2015

Affected : 7,000 stores in the US and 1,000 in Canada

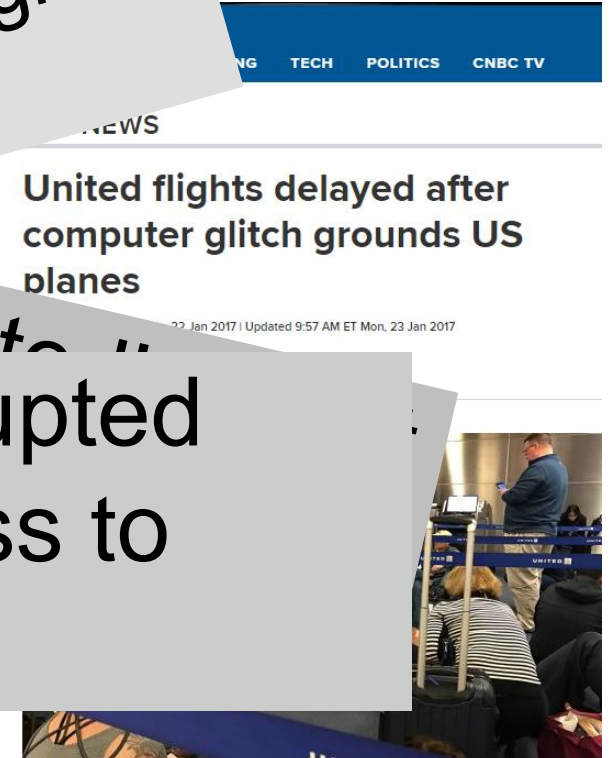**At the end of the day approximate looses was :**

$3 or $4 million

UNITED AIRLINES DOMESTIC FLIGHTS GROUNDED FOR 2 HOURS BY COMPUTER GLITCH

In June, software plan briefly

Ja

Affected

July

In October, thousands of United passengers were delayed worldwide after a computer glitch temporarily halted departure

Ca

after computer problem blocked access to reservations records.

airline's flights were disrupted

United flights delayed after computer glitch grounds US planes

22 Jan 2017 | Updated 9:57 AM ET Mon, 23 Jan 2017

TECH   POLITICS   CNBC TV

NEWS

TCB SOFTWARE MIGRATION FAIL

April

**Truing
cuton**

Migrating to a new core banking system is a horrendous task and there are so many thousands of things that have to happen exactly as expected, or disaster can unfold."

(https://www.computerweekly.com/news/252439859/TSB-IT-meltdown-has-the-makings-of-an-epic)

Affec

1.9 million people to lose access

12.5 K Customers gone

Source : https://www.theguardian.com/business/2018/apr/23/tsb-online-banking-failure-prompts-complaints`
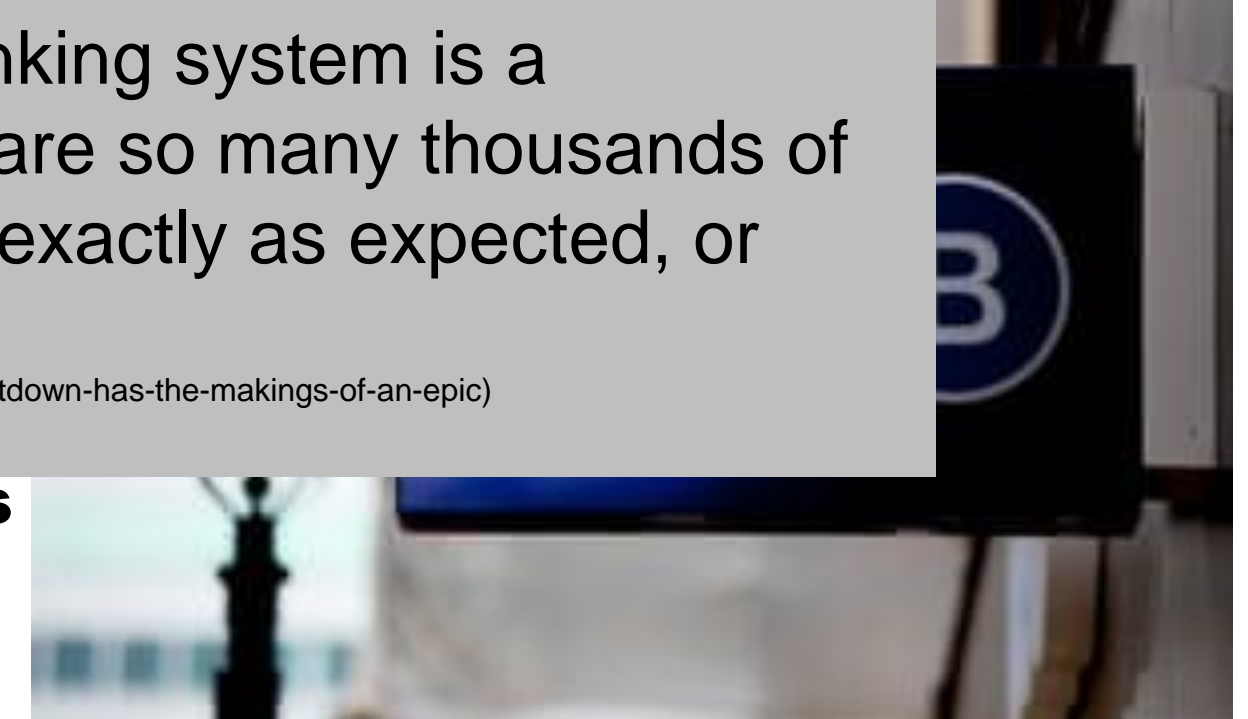
MAIN ISSUES FACED

- LIMITED TIME &RESOURCES
- BIG OR UNCLEAR SCOPE
- CROSS PLATFORM
- TEST DATA
- DISTRIBUTED SERVICES

TRICENTIS TOSCA

TOSCA IS MORE THAN JUST A TESTING TOOL…

TRICENTIS IS CONTINUOUS TESTING COMPANY

Founded	2007

Strong GSI Partnership

NTT DATA · Qualysoft · SQS · accenture · Infosys · SOGETI · wipro

Worldwide Operations

400+

Austria (HQ) USA (HQ)   Australia   India   The Netherlands   Germany   Switzerland   Poland   UK

500+ Blue Chip Enterprise Customers

Banking

HSBC · ANZ · Westpac · Bank of America · Deutsche Bank · Julius Bär

Financial Services

DEUTSCHE BÖRSE GROUP · AMERICAN EXPRESS · UBS · charles SCHWAB · vantiv · Virgin money · ICS International Card Services VISA · STANDARD & POOR'S

Insurance

GENERALI GRUPPE · Allianz · SwissLife Swiss Re · ZURICH · AEGON Transform Tomorrow

Travel & Hospitality

virgin atlantic · IATA · Southwest · IHG InterContinental Hotels Group · Austrian · Sabre

Energy

ExxonMobil · Shell · AGL · OMV · EDISON INTERNATIONAL · DUKE ENERGY

Telco

orange · TELEKOM AUSTRIA GROUP · vodafone · swisscom · Telstra · Telefónica · airtel

Healthcare/Medical

ESSILOR · PHILIPS Healthcare · VARIAN medical systems · BAYER Bayer HealthCare · WellCare Health Plans

Manufacturing

TOSHIBA Leading Innovation >>> · Johnson Controls · SIEMENS · INEOS · Lexmark · BOSCH

Retail & Other

WHOLE FOODS MARKET · SWAROVSKI · TOYOTA · STARBUCKS COFFEE · DHL · BMW · HBO · Dolby · BAUMARKT GLOBUS WER BAUT BRAUCHT GLOBUS! · ROSS DRESS FOR LESS · Kellogg's

Continuous Testing Platform

Explore

Optimize & Manage

Automate

Exploratory Testing

Risk-based Testing

Test Data Management

Service Virtualization
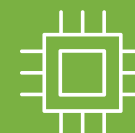
Test Automation

Load Testing

Integration / DevOps Toolchain

JIRA   Jenkins   docker   puppet labs   XCode   VERACODE   eclipse   Visual Studio   flood IO   sonarqube   Windows Server 2016

GitHub   Visual Studio Team Foundation Server   OWASP   Android Studio   fastlane   SOASTA   ANSIBLE TOWER by Red Hat   JFrog Artifactory   AppDynamics   TRINEGY PROFILE • PREDICT • PREPARE   vmware

PLAN → CODE & TEST DESIGN → BUILD → CONTINUOUS TESTING → DEPLOY → MONITOR

PLAN · CODE & TEST DESIGN · BUILD · CONTINUOUS TESTING · DEPLOY · MONITOR

PLAN	CODE & TEST DESIGN	BUILD	CONTINUOUS TESTING	DEPLOY	MONITOR

Plan · **Code & Test Design** · **Version** · **Build** · **Provision** · **Automated Test** · **Deploy** · **Monitor**

Plan
- Tosca Connect
- Test Management
- Requirements

Code & Test Design
- HP UFT Selenium...
- Exploratory Testing
- Model-Based Test Automation — 30+ Technologies Packaged Apps
- Cross Browser
- Mobile
- SAP
- BI & Big Data
- Risk-based Testing
- Test Data Management
- API

Build / Provision
- DEX Server
- Service Virtualization

DevTest: Daily executions or check-in based, covers unit tests, ST and SIT

Automated Test
- ToscaCI
- Load Test

Deploy
- Integrations

Release Test: Executed with a reduced velocity, covers E2E Tests.

Monitor
- Dashboards
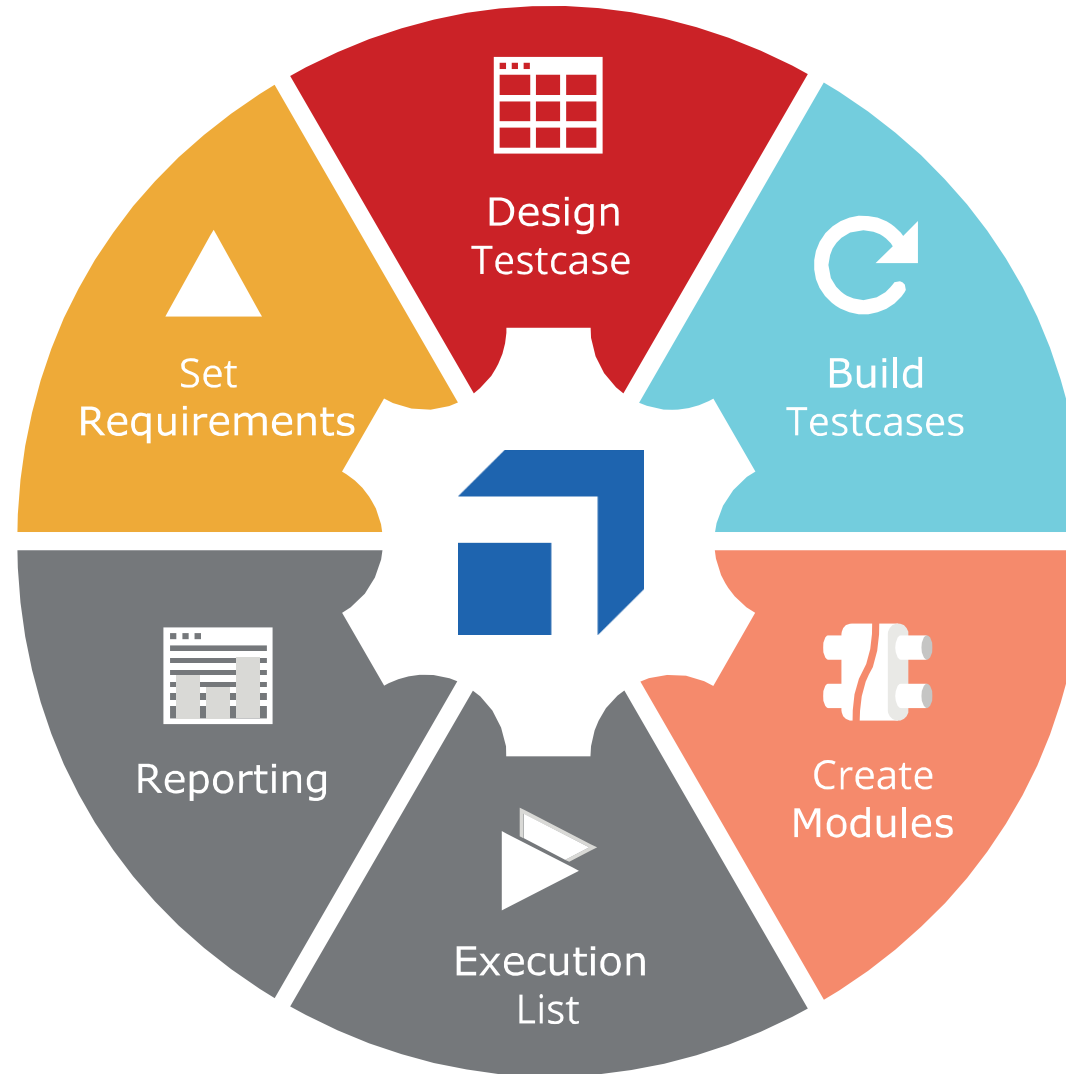- Risk Analysis
- Analytics
- Tosca Connect

- Test Data
- Optimize Number of TestCases for Maximum Effectiveness
- Reusable for TestData Management (TDM), API-Tests, UI-Tests, Mobile etc

- Requirements
- Risk coverage
- Test scope

Design Testcase

Build Testcases

Set Requirements

Create Modules

Reporting

Execution List

- Over 35 Supported Technologies
- Lego Blocks that help steer our TestCases

KEY FEATURES

- Module based testing

- Test Data Design

- Test data management

- Risk based test coverage

- The Exploratory Testing

- E2E testing cross different technologies
- No programming or scripting skill needed
- Full test life cycle in one tool
- Converting manual tests to automated
- Collaboration
- Parallel test case execution

MODULARITY

1

Flexibility in changes
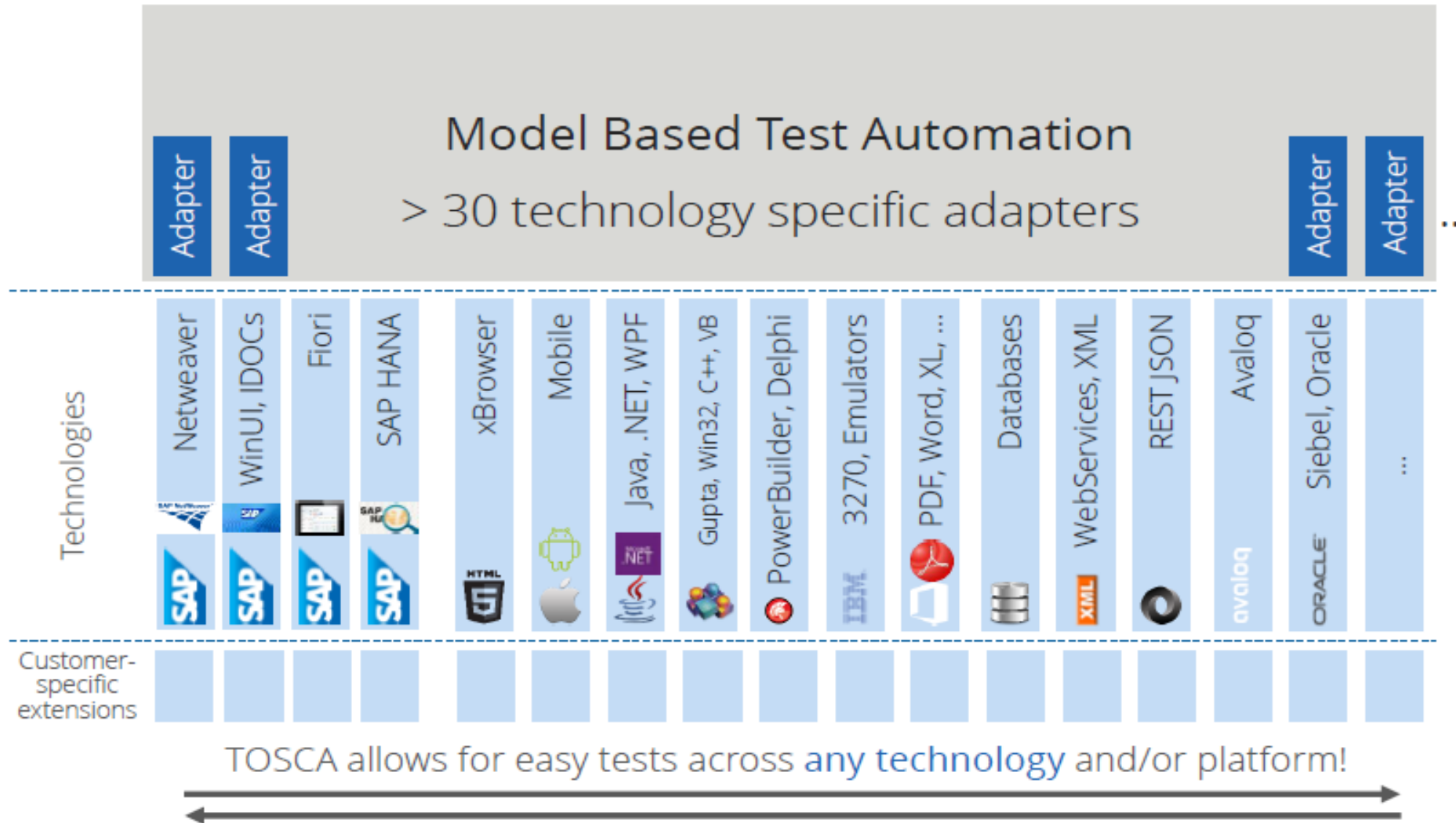
2

Composite design …

3

Scanning real applications

4

> 30 technology specific adapters …

TECHNOLOGIES

Model Based Test Automation
> 30 technology specific adapters

Adapter Adapter Adapter Adapter

Technologies: Netweaver | WinUI, IDOCs | Fiori | SAP HANA | xBrowser | Mobile | Java, .NET, WPF | Gupta, Win32, C++, VB | PowerBuilder, Delphi | 3270, Emulators | PDF, Word, XL, … | Databases | WebServices, XML | REST JSON | Avaloq | Siebel, Oracle | …

Customer-specific extensions

TOSCA allows for easy tests across **any technology** and/or platform!

API

- SOAP, REST, CUSTOM
- IMPORT DEFINITIONS
  - WSDL
  - WADL
  - XSD
  - Swagger
  - Odata
  - Json schema
- QUICK TEST FUNCTION
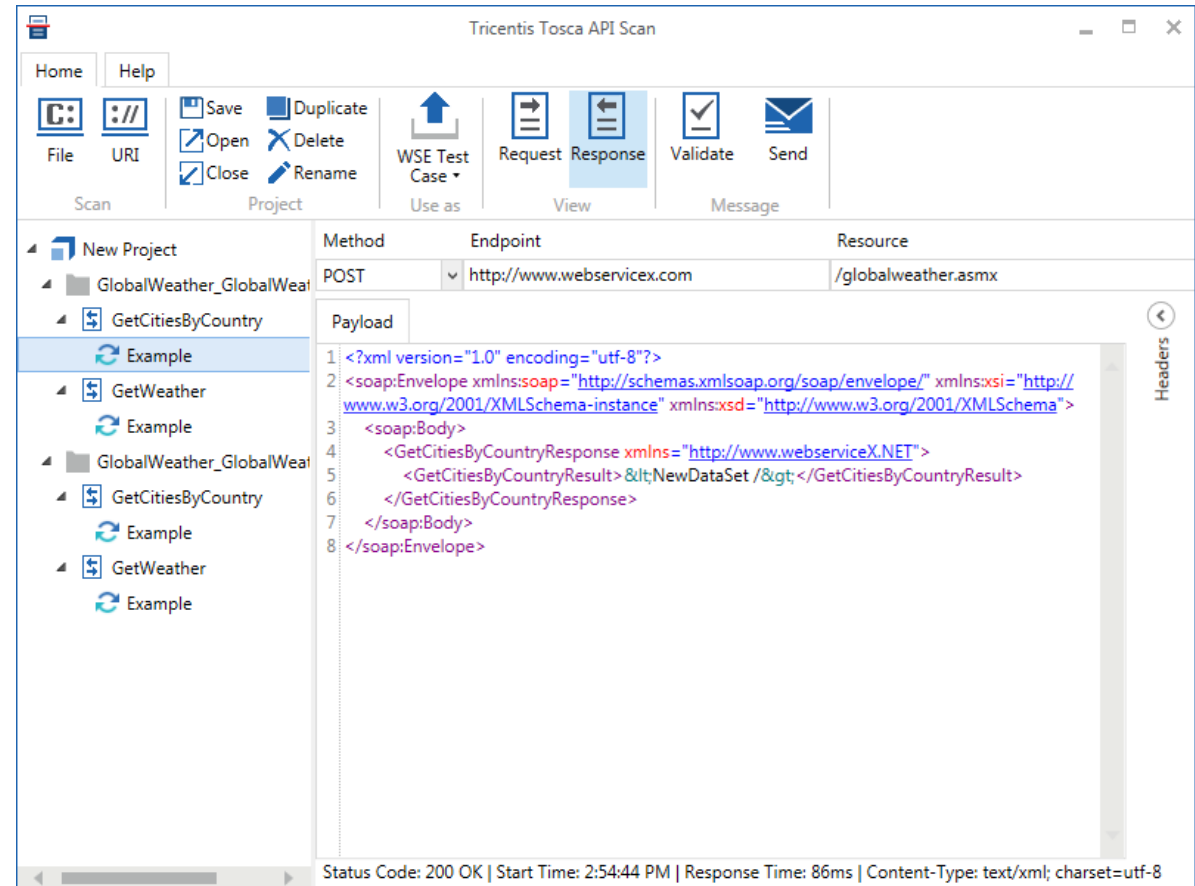
SERVICE TESTING
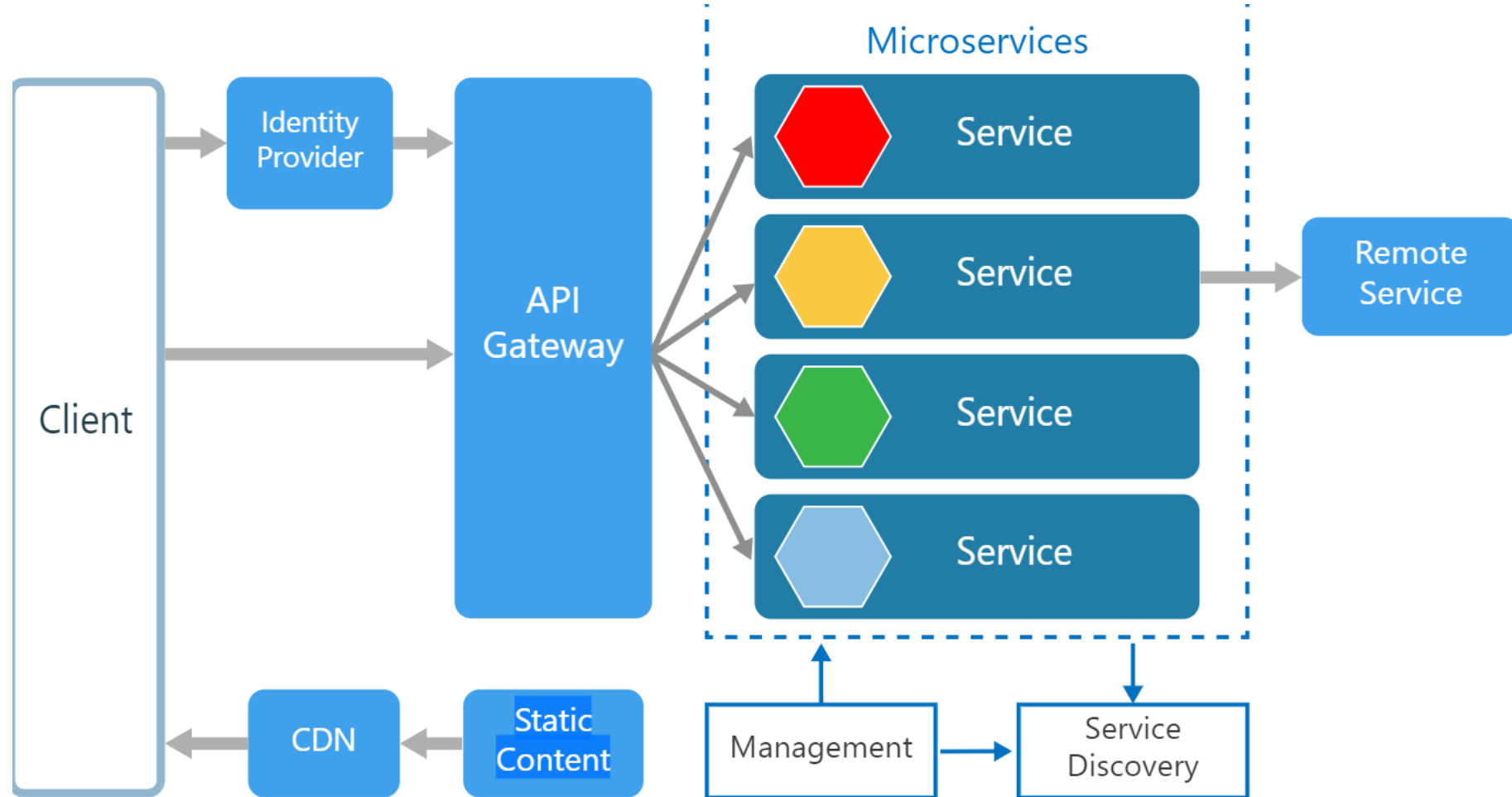
ORCHESTRATED SERVICE VIRTUALIZATION
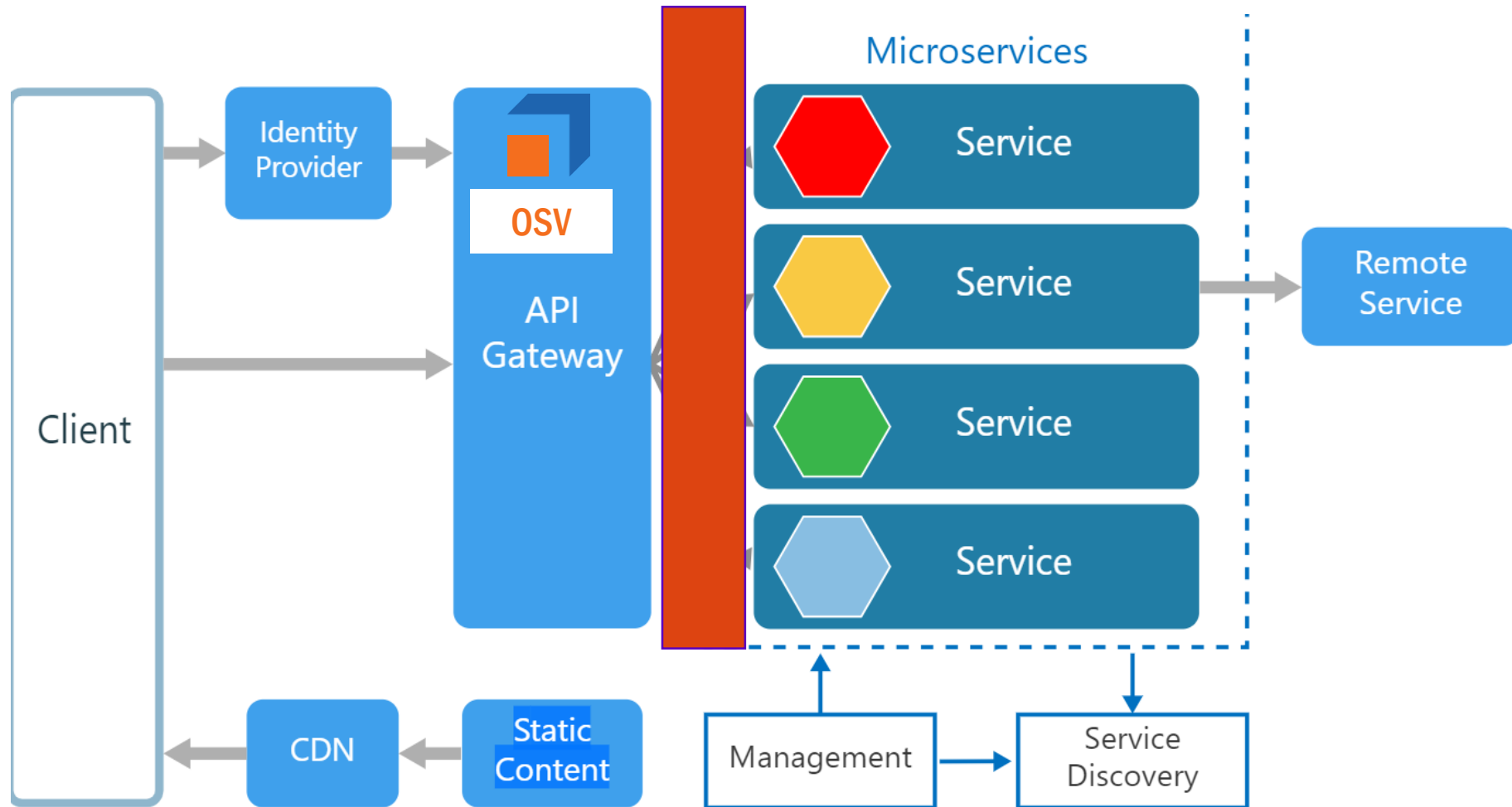
LIVE DEMO

MAIN BENEFITS

- TIME REDUCTION ON COMPLEX TEST CASES
- TEST SCENARIO MAINTENANCE
- FLEXIBILITY ON REQUIREMENTS CHANGES
- SAP TESTING
- MICRO SERVICE TESTING
- CROSS TECHNOLOGY TESTING
- TEST DATA MANAGEMENT

Real World Example *Australian Bank*	Test Cases	Risk Coverage	Run Time
Start	2200	30%	8 WEEKS
☂ **Optimize** *value-based* **Test Cases**	**600**	**85%**	**2 WEEKS** INCL. TDM
⚙ **Automate** *model-based test* **Automation**	**87%** *automation level*	**1 HOURS** *smoke testing*	**2 DAYS** *regression testing*
◎ **Integrate** *Continuous* **Integration**		**12 MINS** *smoke testing*	**< 3 HOURS** *Continuous regression*

Executing 102 test cases and 337 business components (3 weeks)

Manual	👤👤👤	3 people
Automated	👤👤	2 people

Duration

Manual	■■■■■■■■■■■■■■	**2 weeks**
Automated	■■■□□□□□□□□□□□	**3 days**

We are able to run the scripts in 6 hours but we consider a 3 days window due to the time to bug fix and retest

Compared to traditional manual testing, Automation provides a 500% efficiency in test execution.

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QUIZ...