

Testing SOA Applications and Services

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Agenda

- ▶ Testing challenges with SOA
- ▶ SOA testing solution
- ▶ Products functionality walkthrough

The business is driving SOA

Service Oriented Architecture is promising but risky

SOA promise

Business agility

- Business process flexibility
- Faster time to market
- Lower implementation and maintenance cost

SOA risk

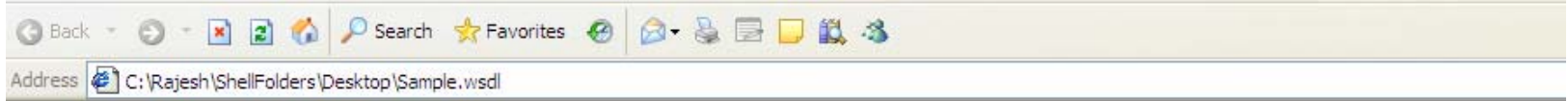
Business disruption

- Inability to change the implementation
- No reusable services
- Duplication of implementation effort

“SOA necessitates new processes, ranging from governance, through development, to operations.”

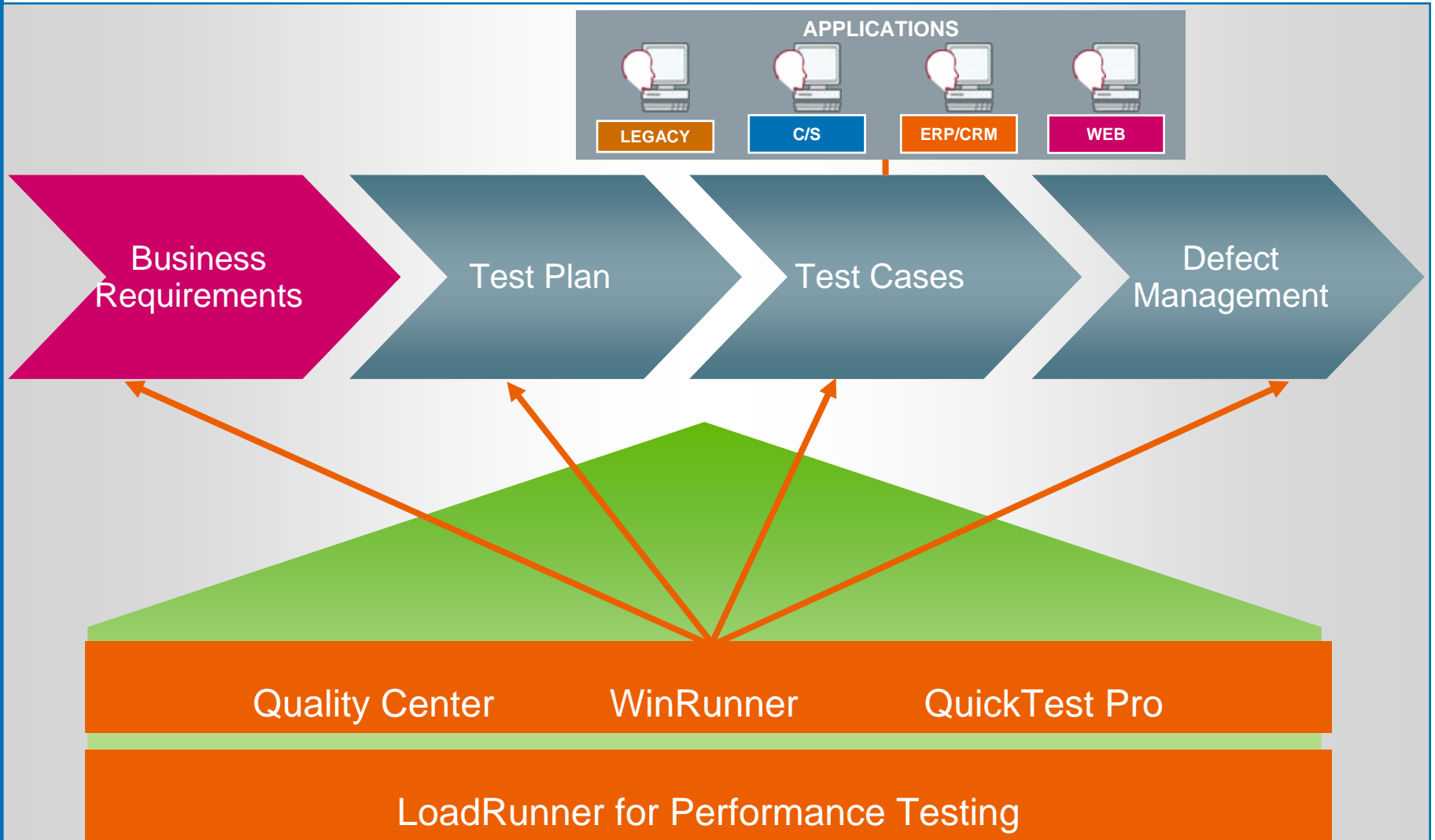
Gartner, Positions 2005: Service-Oriented Architecture Adds Flexibility to Business Processes

SOA Language

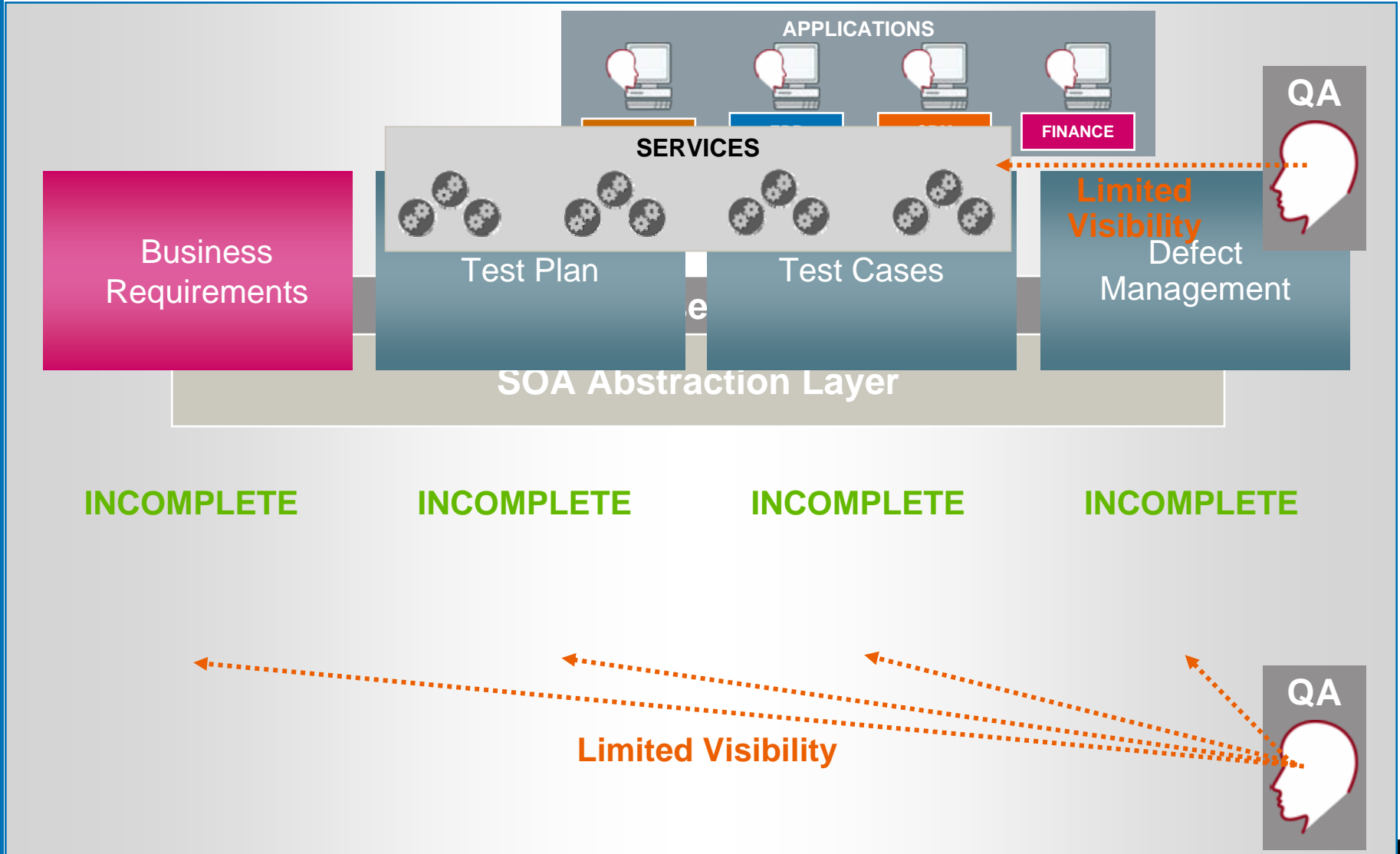


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W&S <?xml version="1.0" encoding="utf-8"?>
SC <wsdl:definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/" xmlns:tm="http://microsoft.com/wsdl/mime/t
UC <wsdl:types>
  <s:schema elementFormDefault="qualified" targetNamespace="http://tempuri.org/">
    <s:element name="HelloWorld">
      <s:complexType />
    </s:element>
    <s:element name="HelloWorldResponse">
      <s:complexType>
        <s:sequence>
          <s:element minOccurs="0" maxOccurs="1" name="HelloWorldResult" type="s:string" />
        </s:sequence>
      </s:complexType>
    </s:element>
    <s:element name="MakeReservations">
      <s:complexType>
        <s:sequence>
          <s:element minOccurs="1" maxOccurs="1" name="ID" type="s:int" />
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          <s:element minOccurs="0" maxOccurs="1" name="DateTo" type="s:string" />
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        <s:sequence>
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      </s:complexType>
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    <s:element name="AddNumbers">
```

Traditional QA

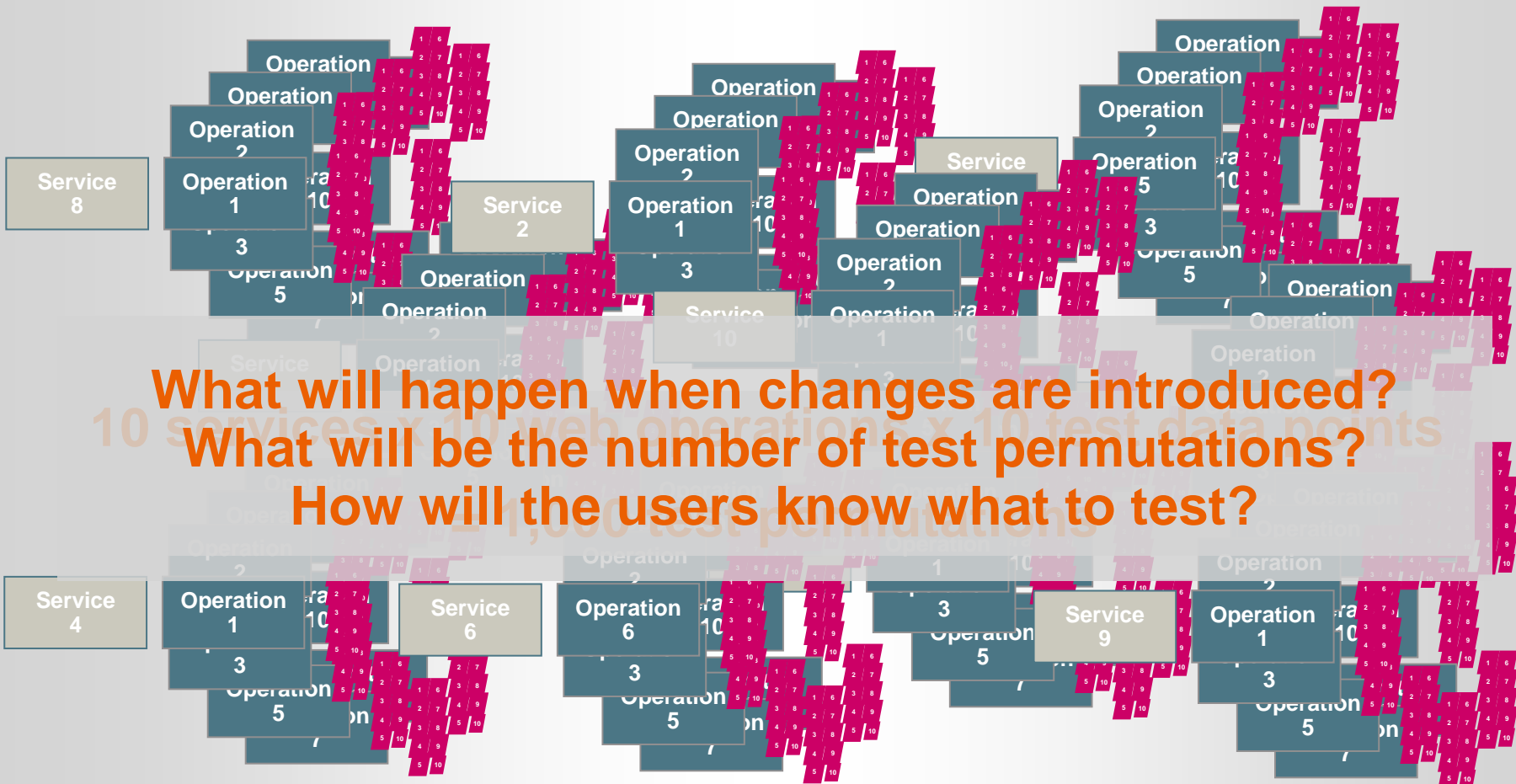


SOA QA



SOA Testing Management

Small Number of Services Increases the SOA Testing Complexity



SOA Quality Challenges

SOA Quality Management

Huge amount of services and systems
Test services stand-alone and as shared entities
Variety of testing aspects
Initial and regression testing
Structure of quality process
Visibility into progress and quality status

SOA Ecosystem Integration

SOA governance systems

- Service assets
- Change
- Policy management

SOA runtime and execution engines

- Toolkits
- Application servers and ESBs

Diagnostics and monitors

SOA Testing

Holistic coverage of all service aspects
GUI-less testing
Complex service orchestrations
Multiple transports and protocols support
Testing incomplete environments
Constantly emerging technologies

SOA Testing Products

Control the Risk of Delivering Services

Quality Center with Service Test management

Manage the quality for individual and composite services

Service Test

Automated functional and regression testing via WSDL introspection

LoadRunner SOA

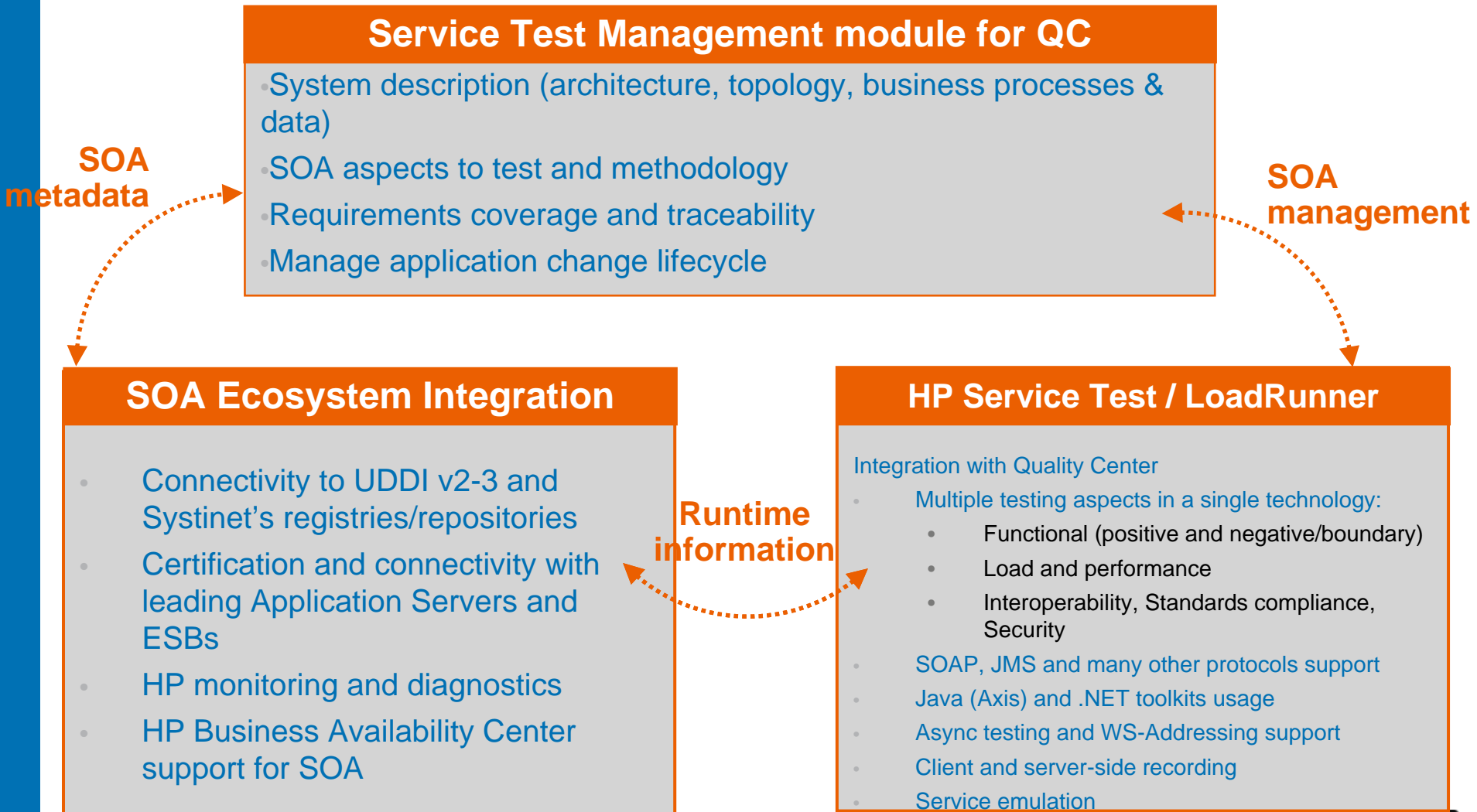
Performance assurance of individual services and full composite apps

LoadRunner SOA Diagnostics

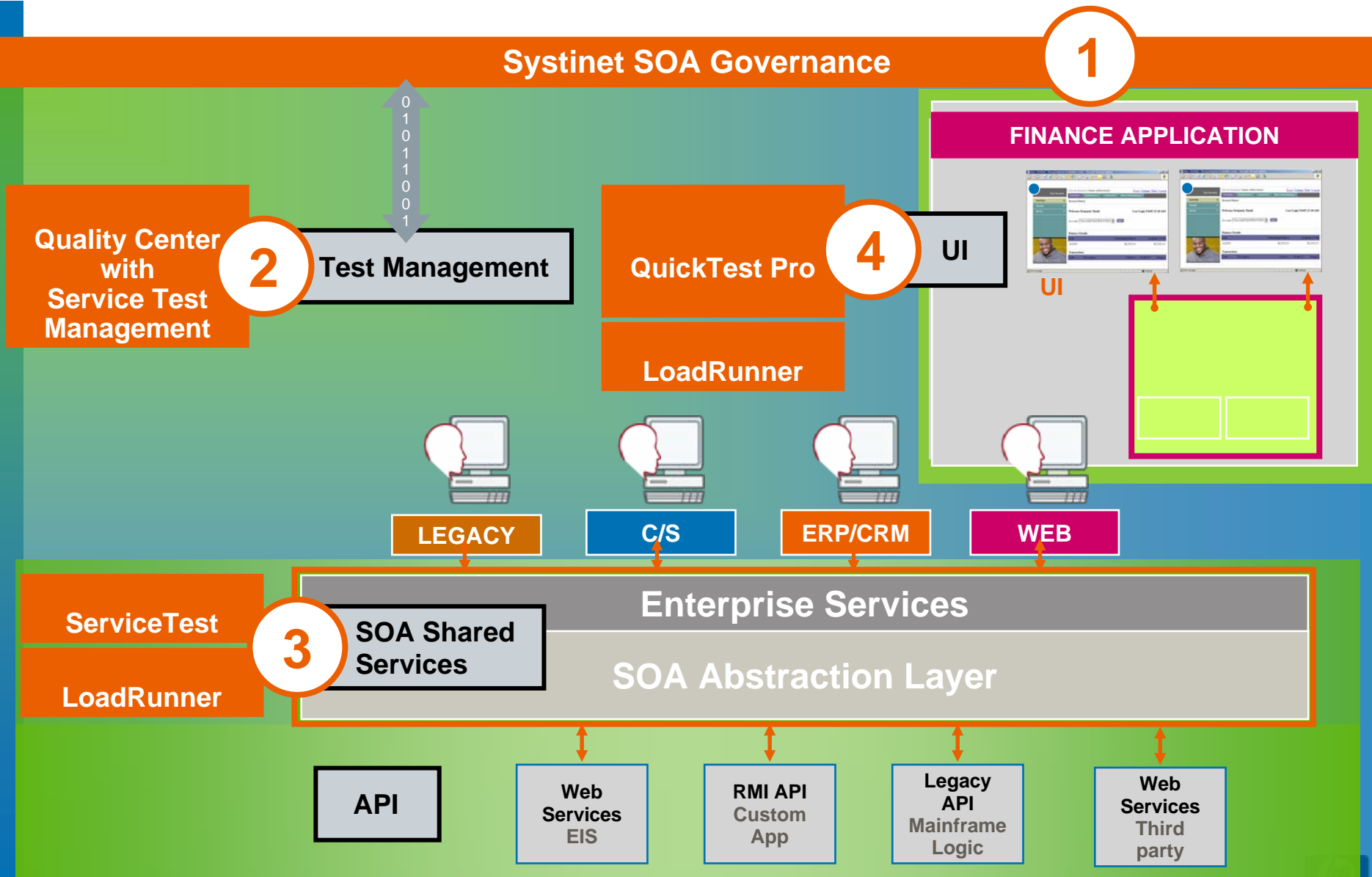
SOA Application monitoring, problem isolation with tracing, and root cause analysis



HP's SOA Testing Solution



HP's Integrated SOA Testing



Summary

SOA quality is more than just testing the service !

HP has the only comprehensive solution in the market that will:

- **Test the service with HP Service Test and LoadRunner**
- **Manage SOA testing quality with HP Service Test Management**
- **Integrate with the SOA ecosystem with HP SOA lifecycle**

SOA testing solutions are based on the Mercury products leveraging existing assets and knowledge

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