

How to Avoid Flying Blind – Effective SOA Problem Determination and Monitoring

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Abstract

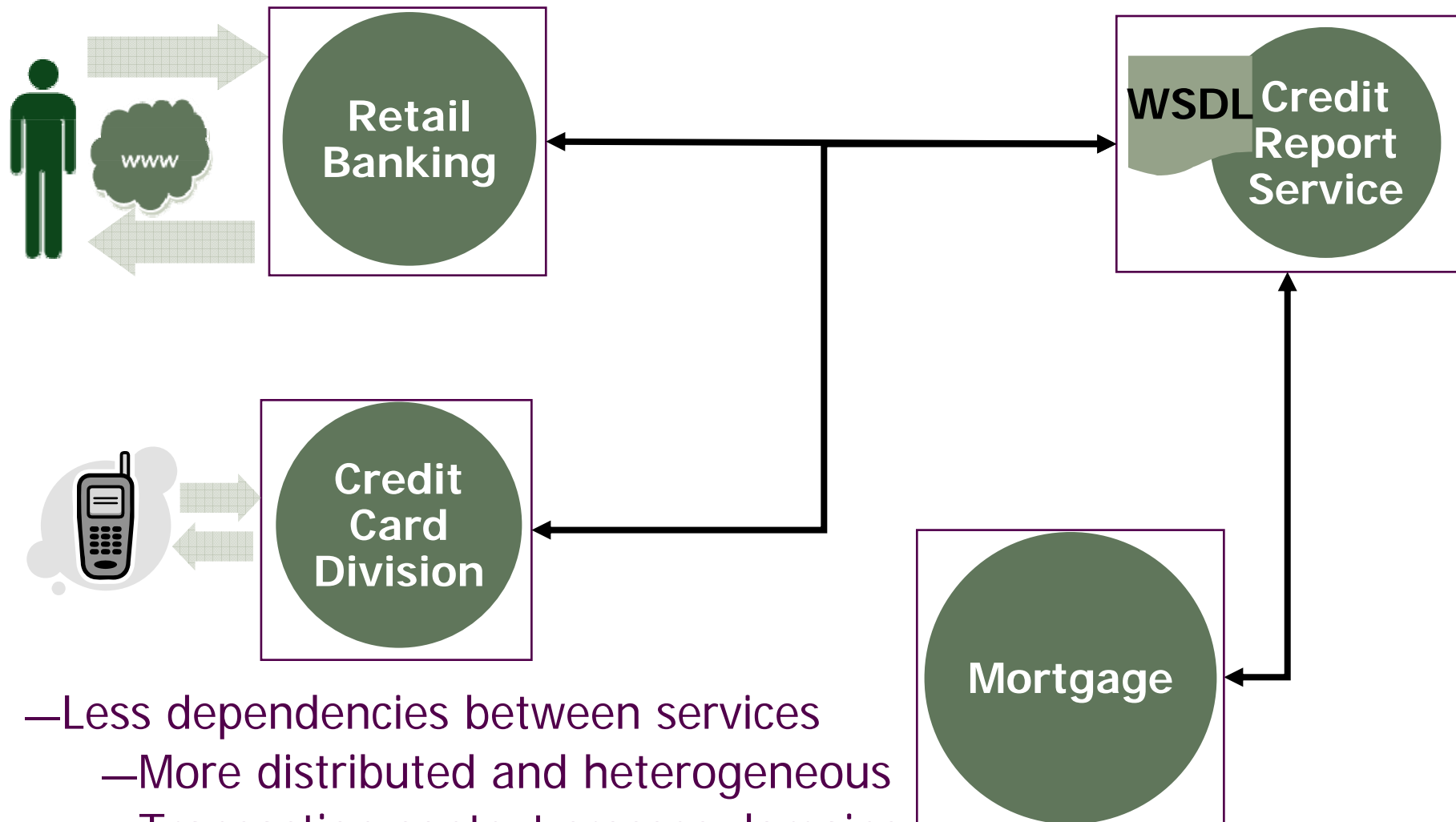
- Panel topic: Web services based applications are far more demanding from a management and security perspective than the typical n-tier application. This session will identify the management and security challenges associated with Web services based applications, discuss the status of the key enabling standards, and describe the existing management and security solutions. The panelists will also describe what enhancements you can expect to see in this area over the next year.

Speaker

- Paul Lipton is a Senior Architect in CA's Office of the CTO where he specializes in SOA, Web services, and emerging technologies. He has also participated in many standards organizations such as OASIS and W3C, is a founding member of the CA Council for Technical Excellence, a Microsoft MVP, and a Sun Java Champion. Paul has also been an architect and developer of enterprise systems for over 20 years. He is a highly sought-after author and speaker, and has shared his knowledge with appreciative audiences around the world covering such topics as Enterprise Architecture, SOA, Web services, management/security, governance, Java, .NET, EAI, and emerging technologies.

- What are the characteristics of SOA?
- Do these innate characteristics of SOA change the game? Do they put the business at greater risk?

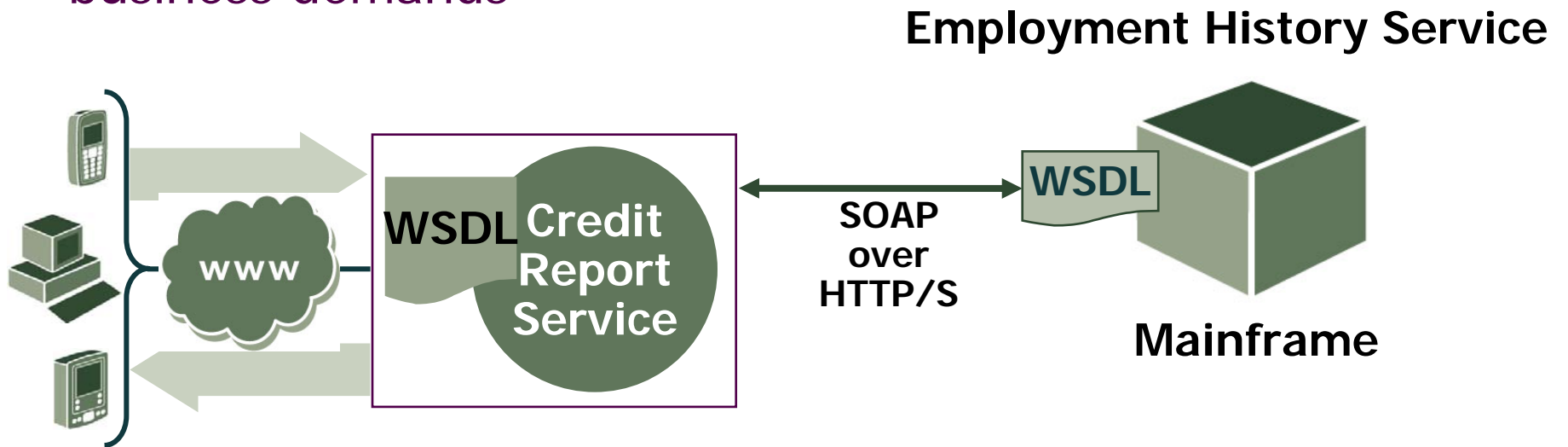
SOA Is Predicated Upon Loosely Coupled Services



- Less dependencies between services
- More distributed and heterogeneous
- Transaction context crosses domains

Loose-Coupling

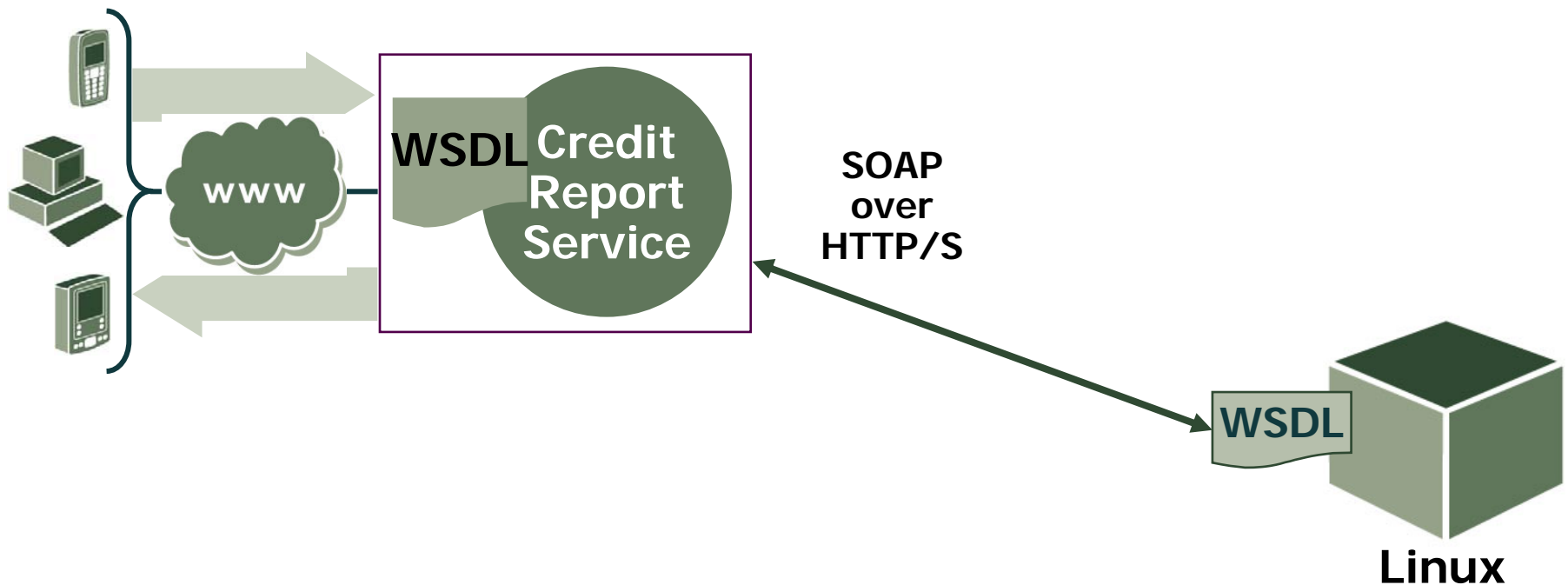
- Helps IT respond with flexibility and agility to changing business demands



Loose-Coupling

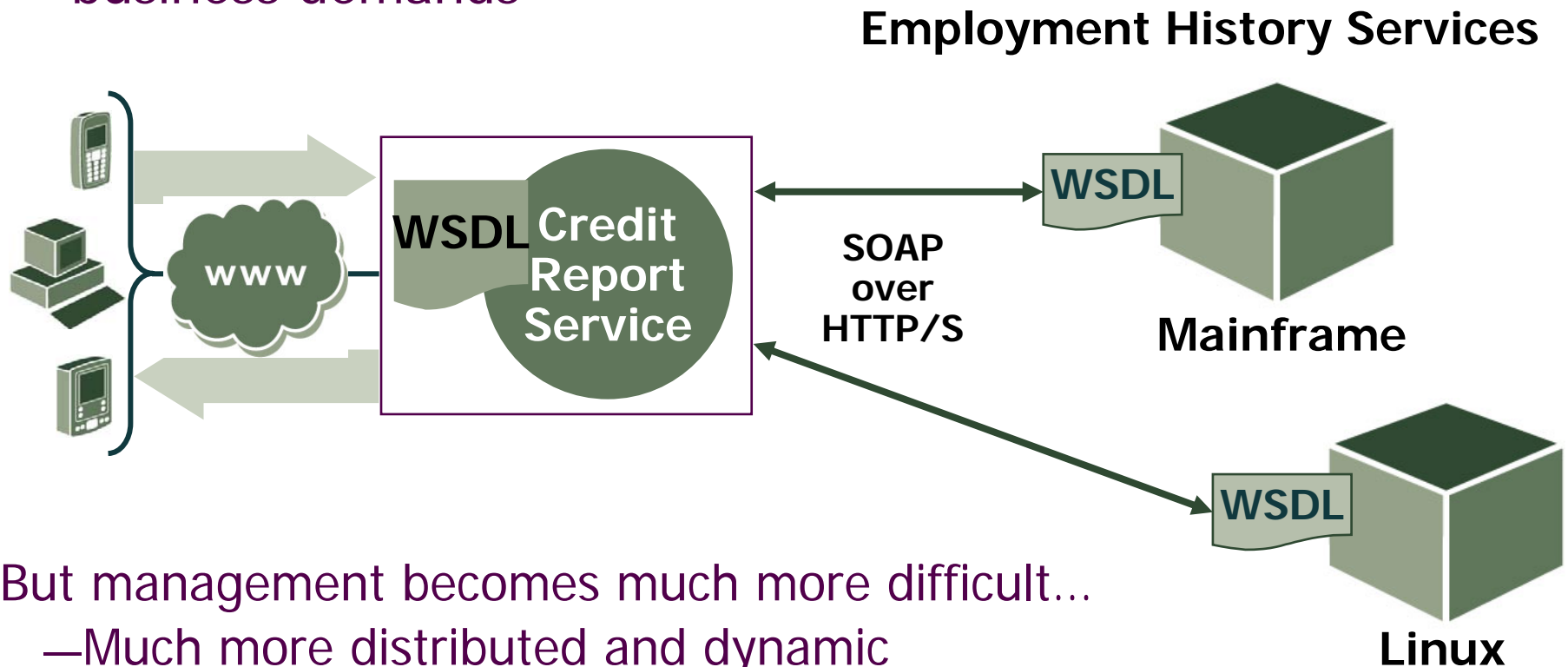
- Helps IT respond with flexibility and agility to changing business demands

Employment History Service



Loose-Coupling

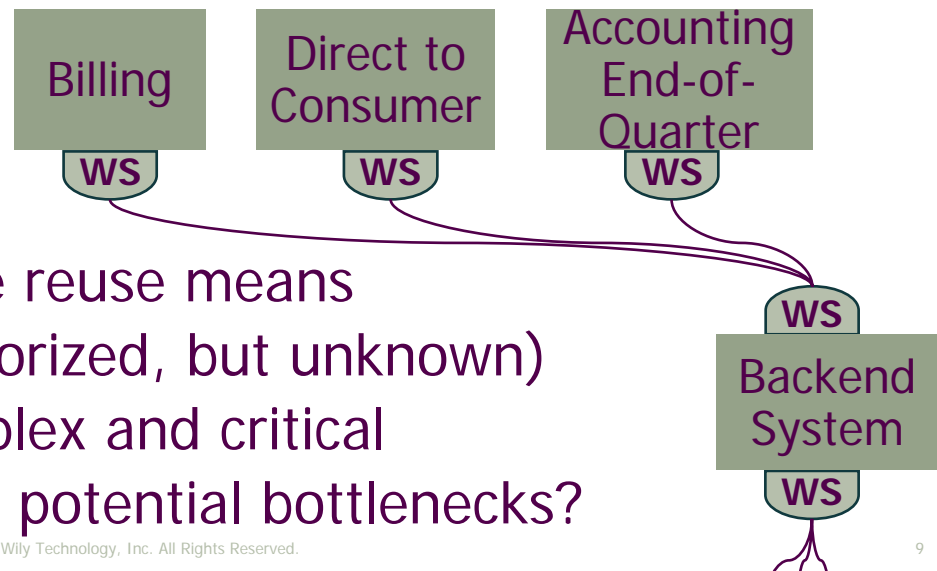
- Helps IT respond with flexibility and agility to changing business demands



- But management becomes much more difficult...
 - Much more distributed and dynamic
 - Greater (and even unpredictable) heterogeneity
 - Greater complexity and more rapid change

SOA Encourages Reuse of Services

- Service reuse
 - Primary ROI factor
 - Reduces development and maintenance cost
 - Principle architectural goal: maximization of reuse



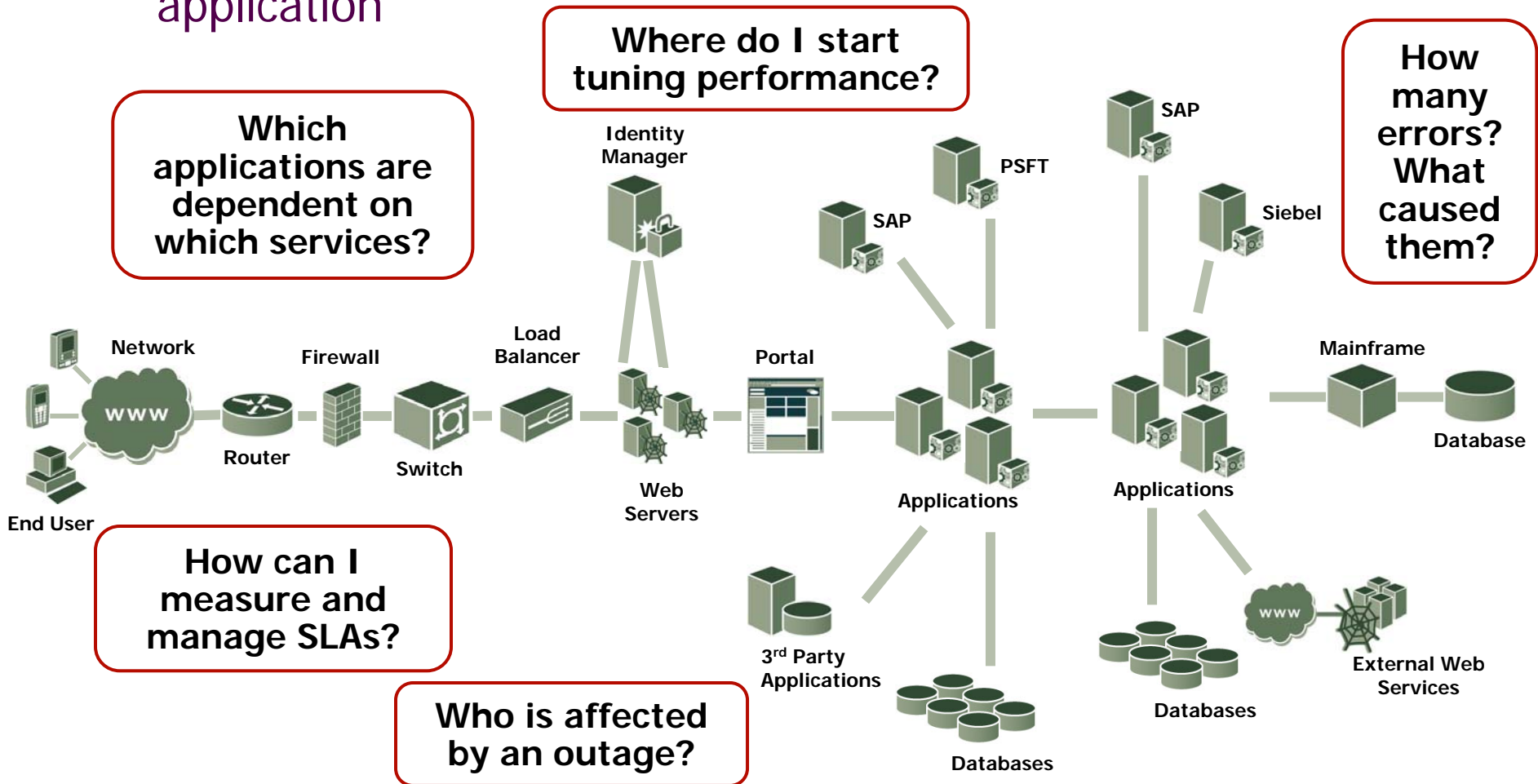
- SOA business agility and service reuse means
 - New consumers (some authorized, but unknown)
 - Services become more complex and critical
 - Can you predict and identify potential bottlenecks?

Top Management Challenges CA/Wily Has Seen

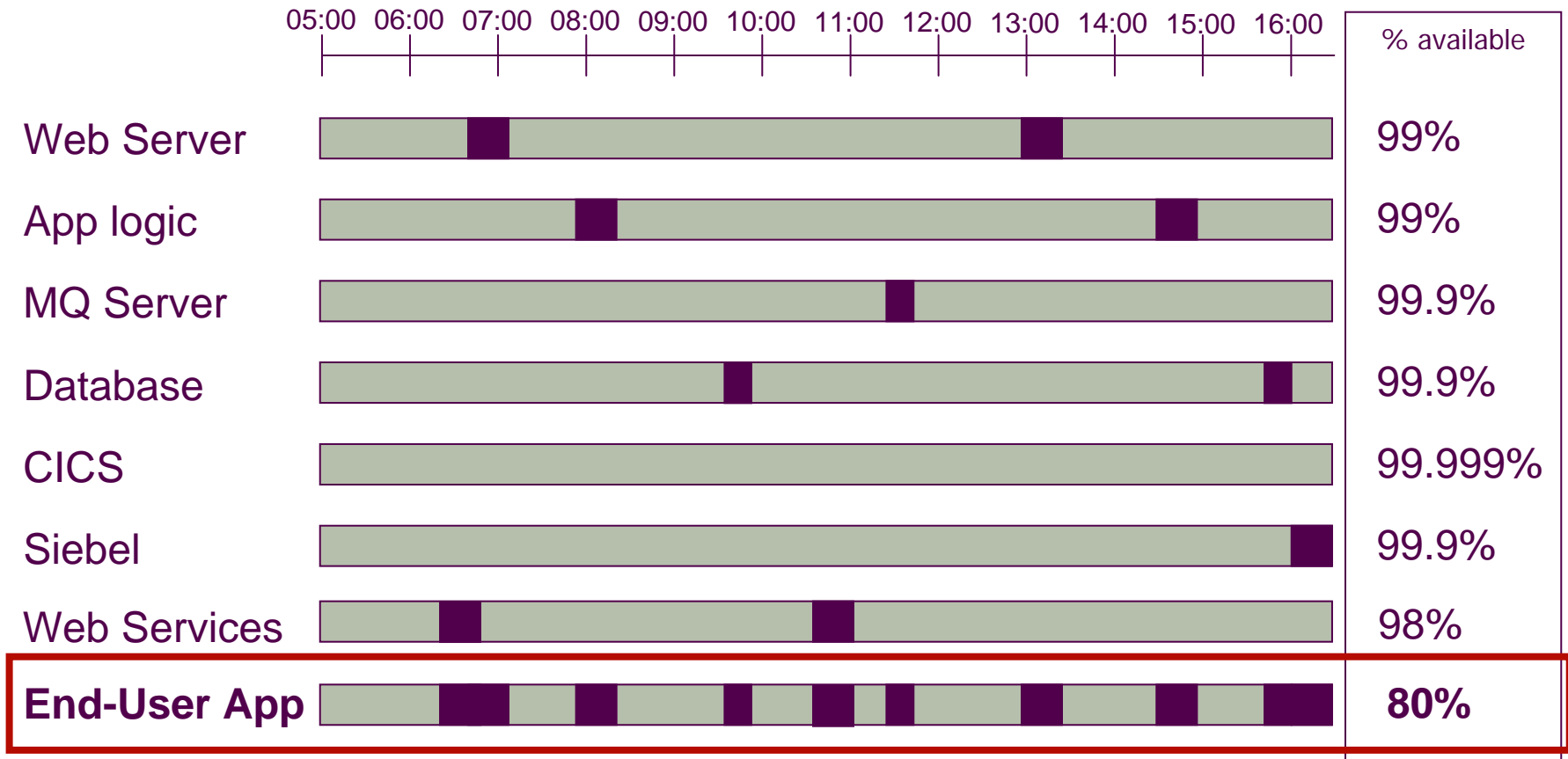
1. Problem isolation in full context
2. Transaction integrity & verification
3. Transaction mapping

Problem Isolation in Full Context

- Need to monitor services within the context of the full application



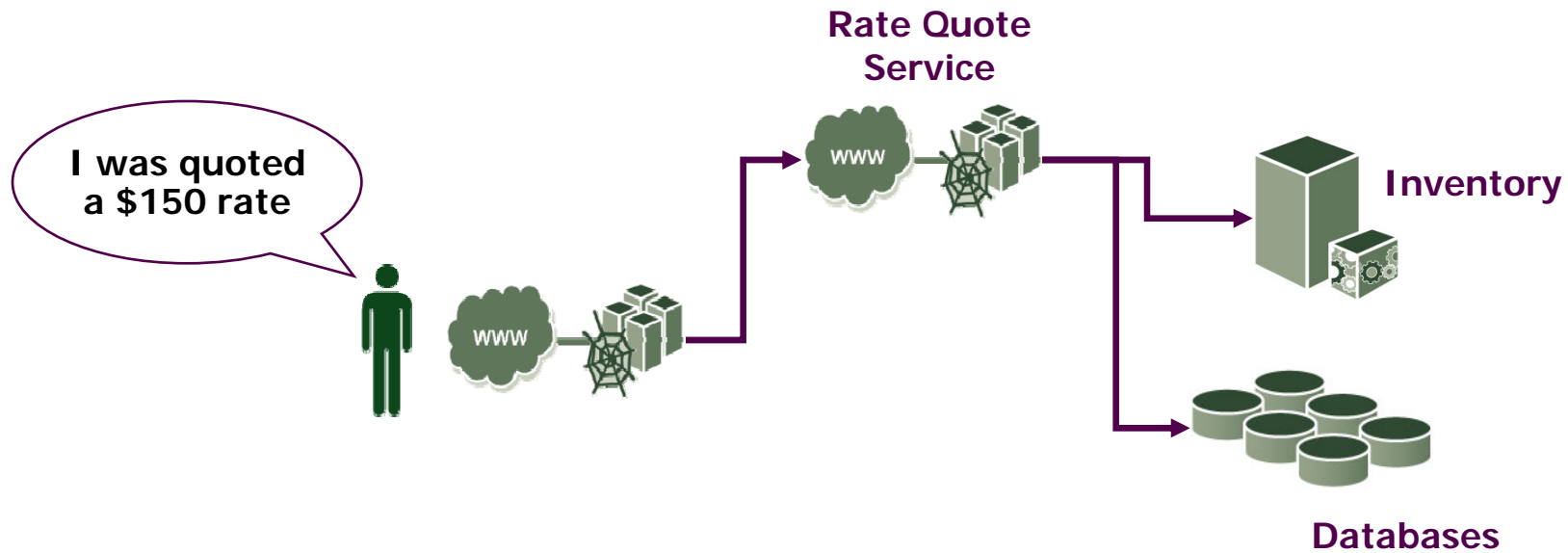
In Complex, Heterogeneous Environments 99% Availability Isn't Enough...



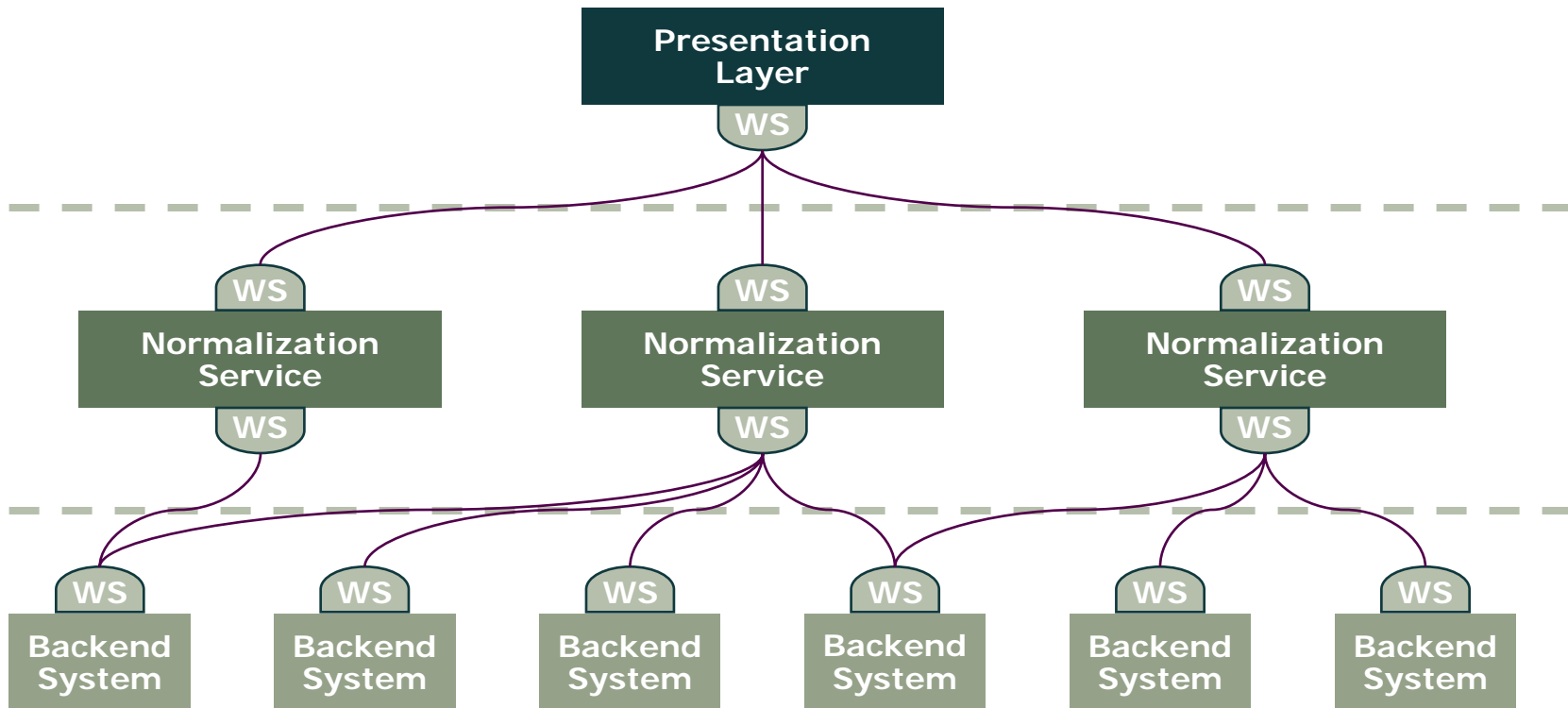
■ Unavailable or Slow
■ Available, Performant

Transaction Integrity & Verification

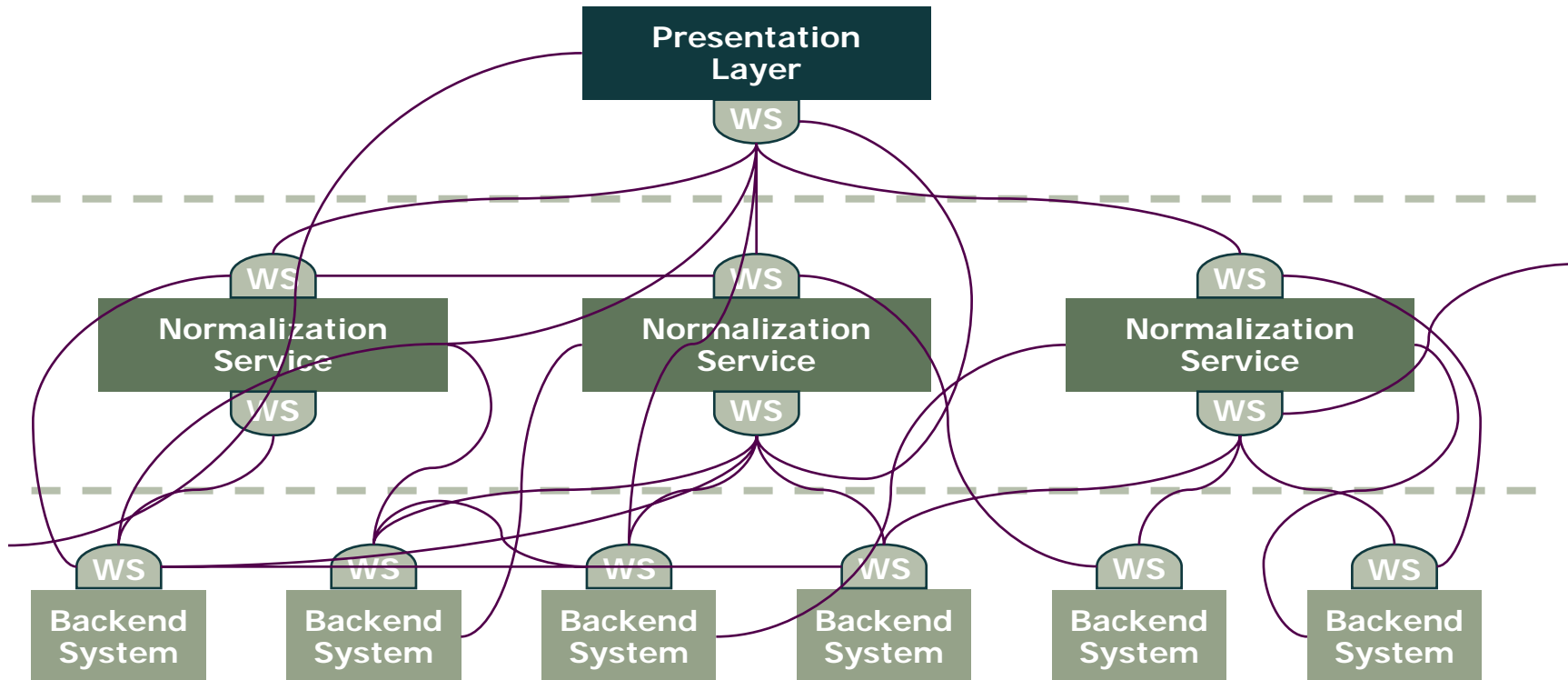
- Validate transaction contents
- Alert to out-of-bounds conditions
- Report upon transaction volume
- Verify service request and response



Service Transaction Flow: The Fantasy



Service Transaction Flow: The Reality!



- It's impossible to deploy a new architecture all at once
- Can you trace where your customer transactions go?
 - They won't always go to the same places (loose-coupling)!
 - Developers conforming to standards? What about outside services?
- What is the impact when something breaks or slows down?

SOA Makes Development Easier But Management Challenges Harder

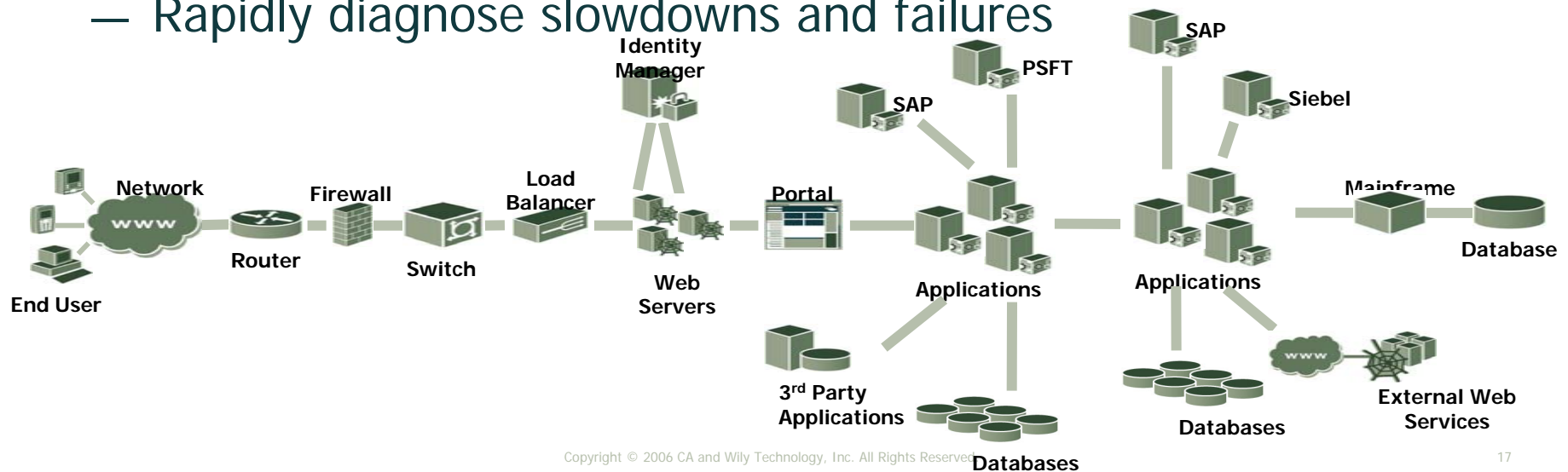
- **Innate characteristics of SOA result in...**
 - Much more heterogeneous and volatile (loosely-coupled)
 - More “critical” points-of-failure (reuse)
 - Difficult to isolate and understand problems

 - Hard to trace and understand business transactions
 - New and changing components and services all the time
 - More outside services to depend upon

About the Wily Technology Division of CA

- **Customer Success Management**

- Adds transactional awareness to CA's comprehensive security, management, and IT governance solutions
- Comprehensive coverage of both customer experience and infrastructure
- Share critical knowledge of application with stakeholders
- Eliminate finger-pointing and endless bridge calls
- Rapidly diagnose slowdowns and failures



Some Resources

CA SOA and Application Management Solutions

www.ca.com/webservices

CA SOA Security Solutions

www3.ca.com/solutions/Product.aspx?ID=5263

SOA World Cover Story – SOA Web Services Journal, January, 2007

“Are You Being Served?”

webservices.sys-con.com/read/329791.htm

Latest column in SearchWebServices.com (TechTarget)

searchwebservices.techtarget.com/expert/KnowledgebaseAnswer/0,289625,sid26_gci1208609,00.html

My blog on webservices.org

www.webservices.org/weblog/paul_lipton

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