

INTEROP[®]

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Services Oriented Architecture (SOA) and Web Services: A Reality Check

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“Reality Check”

- 4 Important Trends
- 4 Challenges
- 8 Key Standards
- 7 Best Practices
- 1 Emerging Area

... and a partridge in a pear tree





4 Important SOA Trends

1. Increasing Adoption
 - Increase in available skills, innovative technology
2. Maturing Standards
 - WS-*, Interoperability, BPEL, BPEL4People
3. Enterprise Service Bus
 - Platform for SOA
4. Governance
 - Managing policies and procedures for SOA



Key SOA Challenges

CHALLENGE

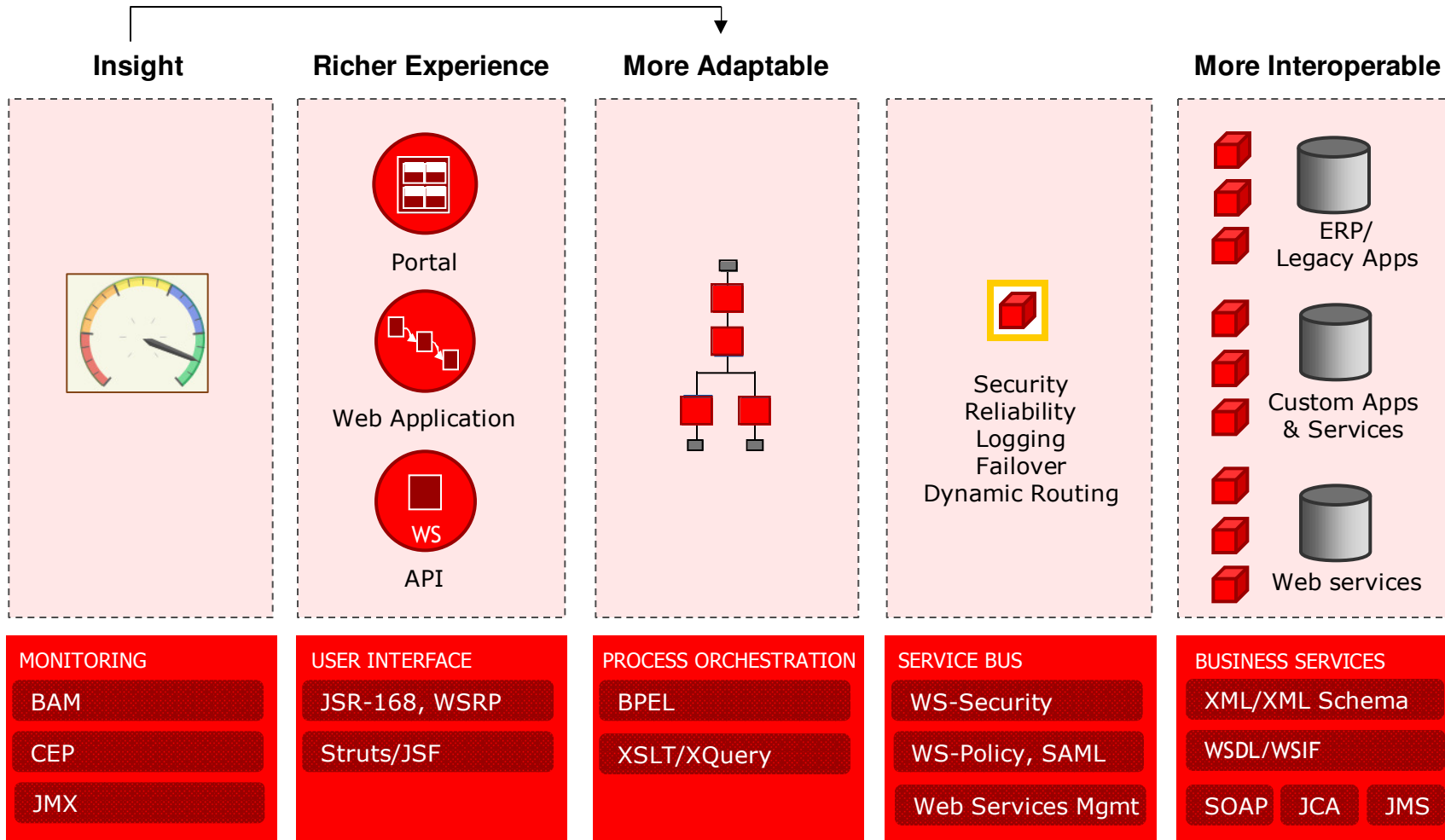
1. Complexity, new technology
2. Performance and security
3. Heterogeneous infrastructure
4. Organization, budget



Key SOA Challenges

CHALLENGE	SOLUTION APPROACH
1. Complexity, new technology	Education (especially XML), integrated tooling, technology
2. Performance and security	Grid approach, policy-oriented, standards-based security
3. Heterogeneous infrastructure	Hot-pluggable SOA technology components
4. Organization, budget	Training / Methodology workshops, SOA maturity models

Key SOA Standards

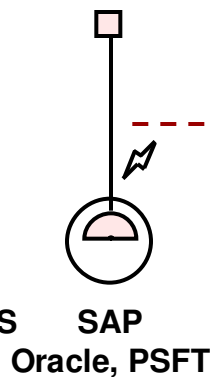
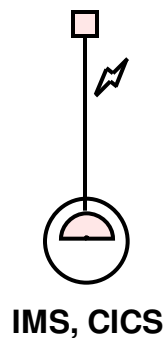
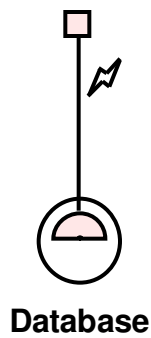
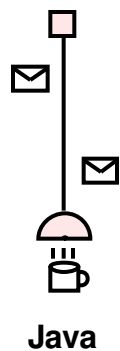




Best Practices for SOA



Step 1 | Build a Portfolio of Services

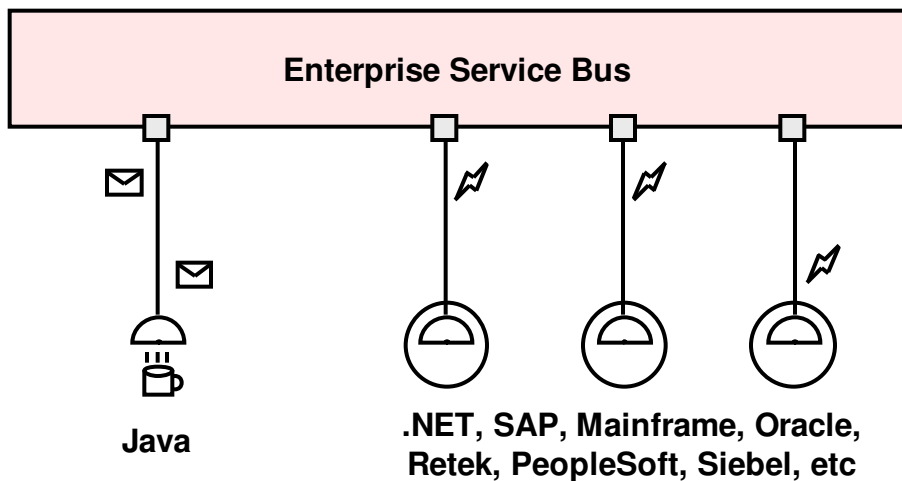


- BEST PRACTICES

- Contract/Interface First
- Coarse Grain Documents
- Asynchronous Interactions
- Undo/Cancel Operations
- Versioning
- WS-I, Wrapped Document Style
- WSIF Binding to Java, JCA

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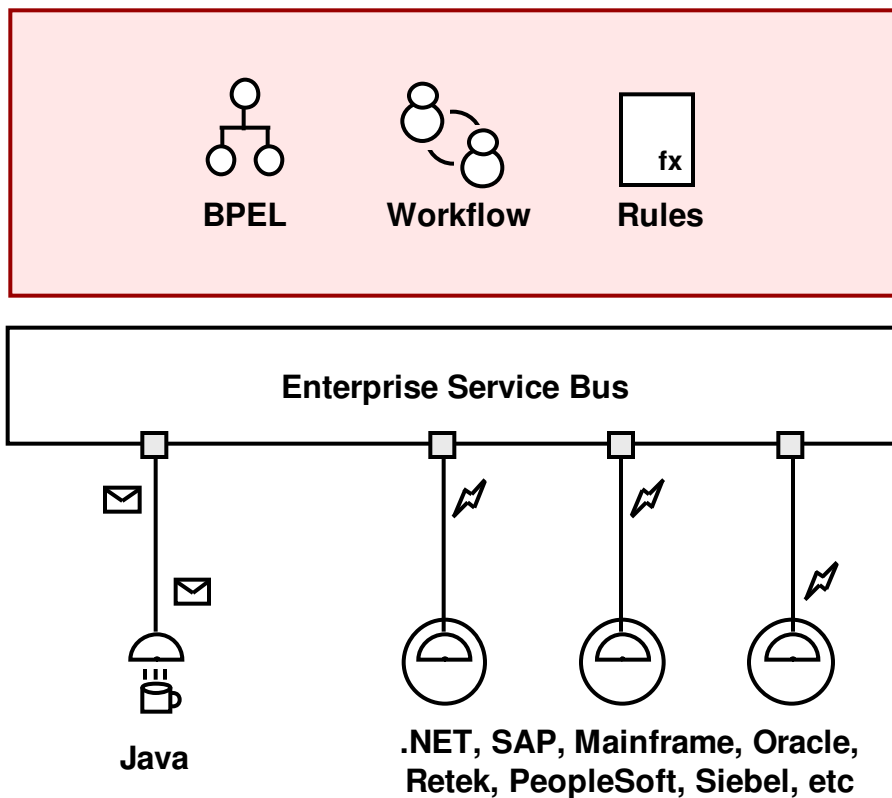
Step 2 | Wire Through an ESB



BEST PRACTICES

- UDDI Registry
- JCA Adapters
- Service Virtualization
Logical Naming
- Consider Requirements for:
 - Performance
 - Transactionality
 - Quality of Service
 - Interoperability

Step 3 | Orchestrate into End-to-End Processes

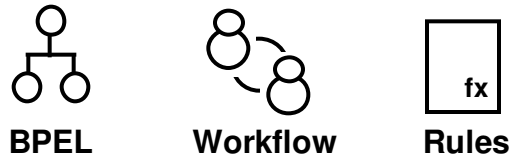


BEST PRACTICES

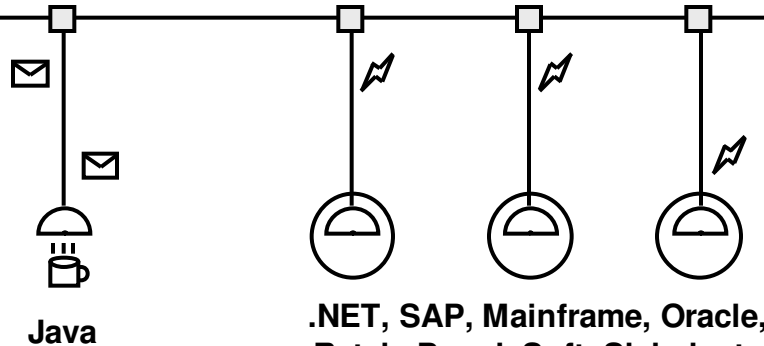
- BPEL
- XSLT Transformation
- Human Workflow Service
- Rules Service
- Notification Service
- Error Hospital Service
- ESB Binding and Wiring
- Tracing and Debugging
- Iterative Development
- Unit Testing

Step 4 | Expose Through Rich User Interfaces

Portal, JSF Applications, .NET, Microsoft Office



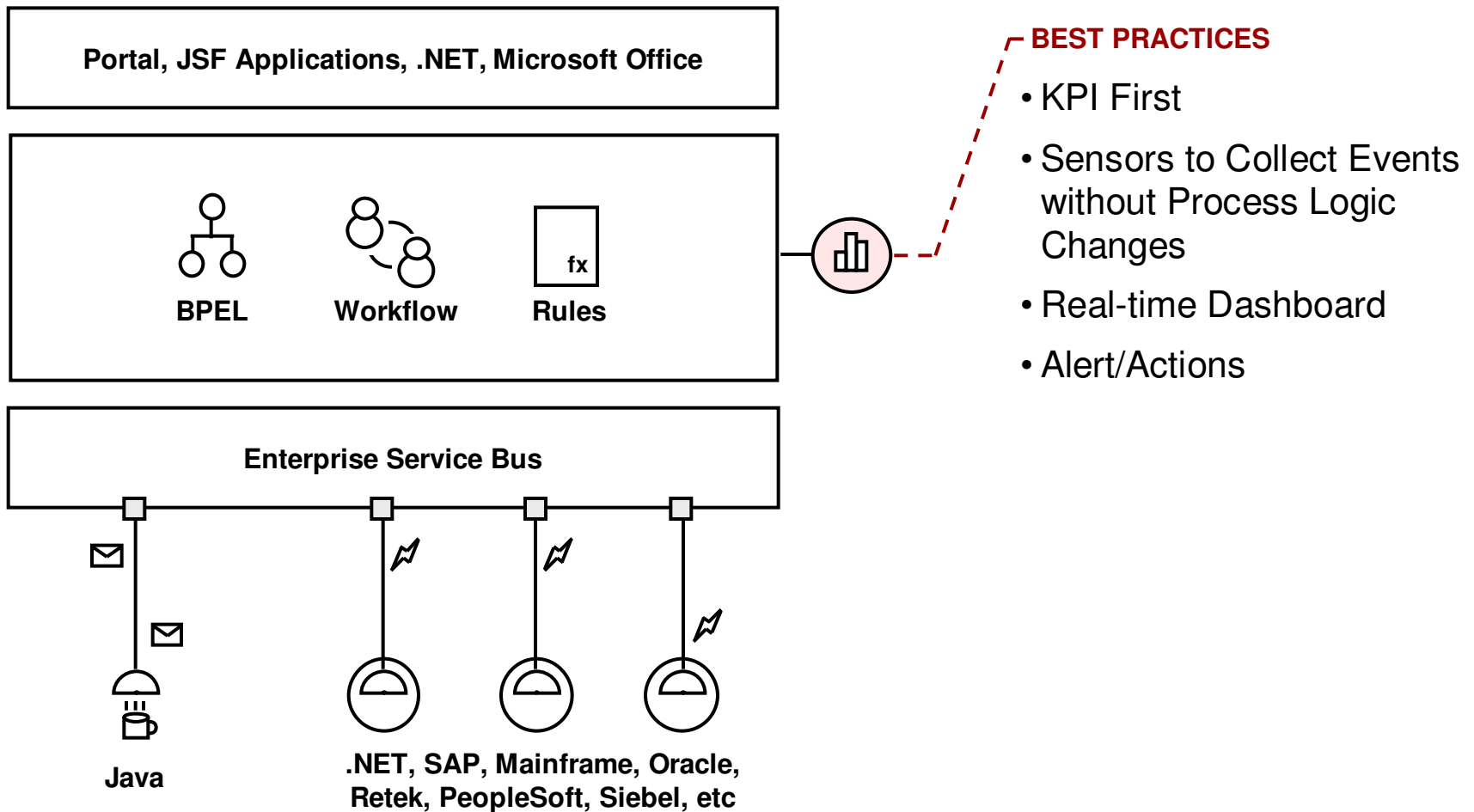
Enterprise Service Bus



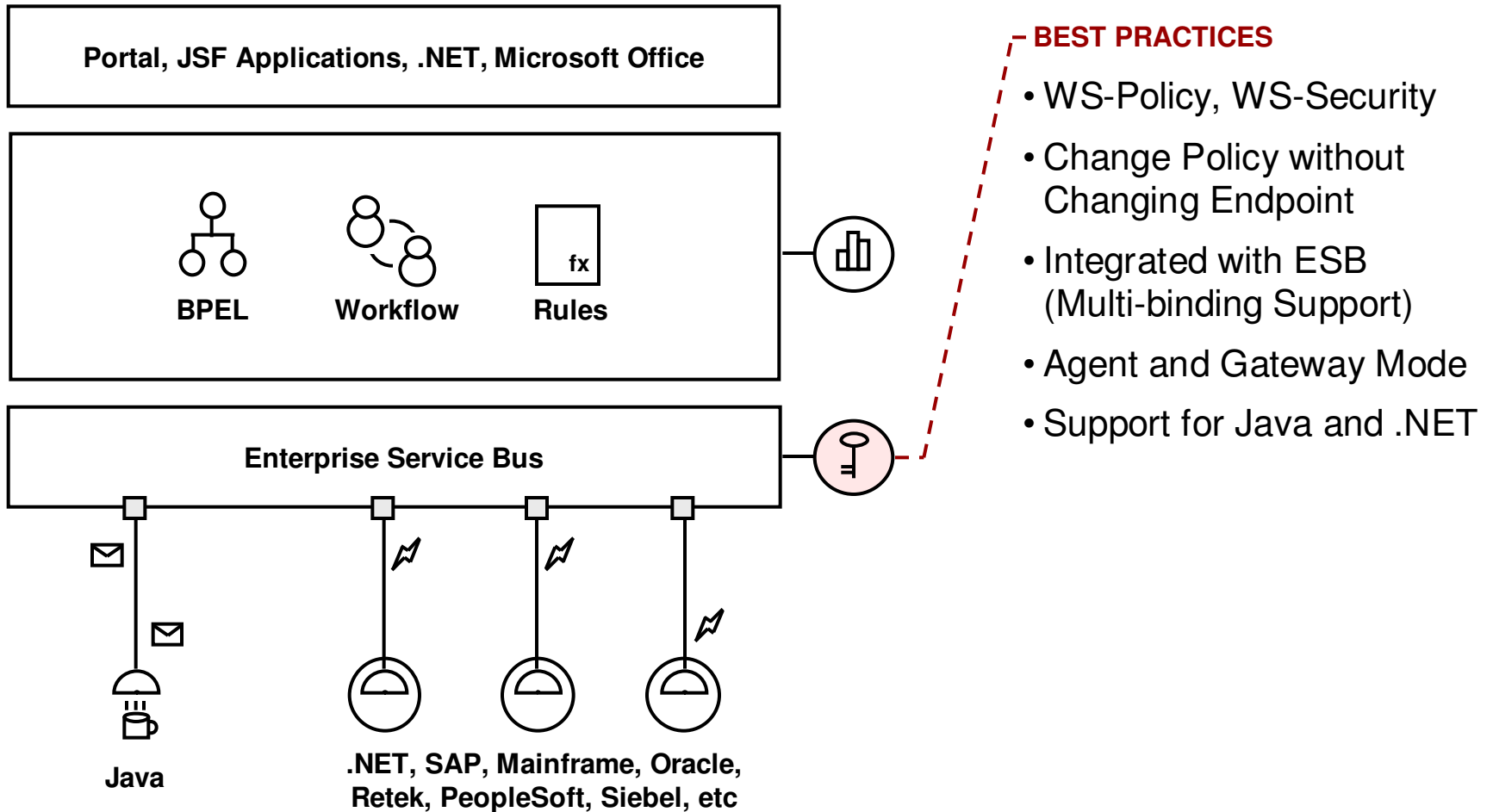
BEST PRACTICES

- JSF or Struts
- WSRP, JSR-168
- AJAX

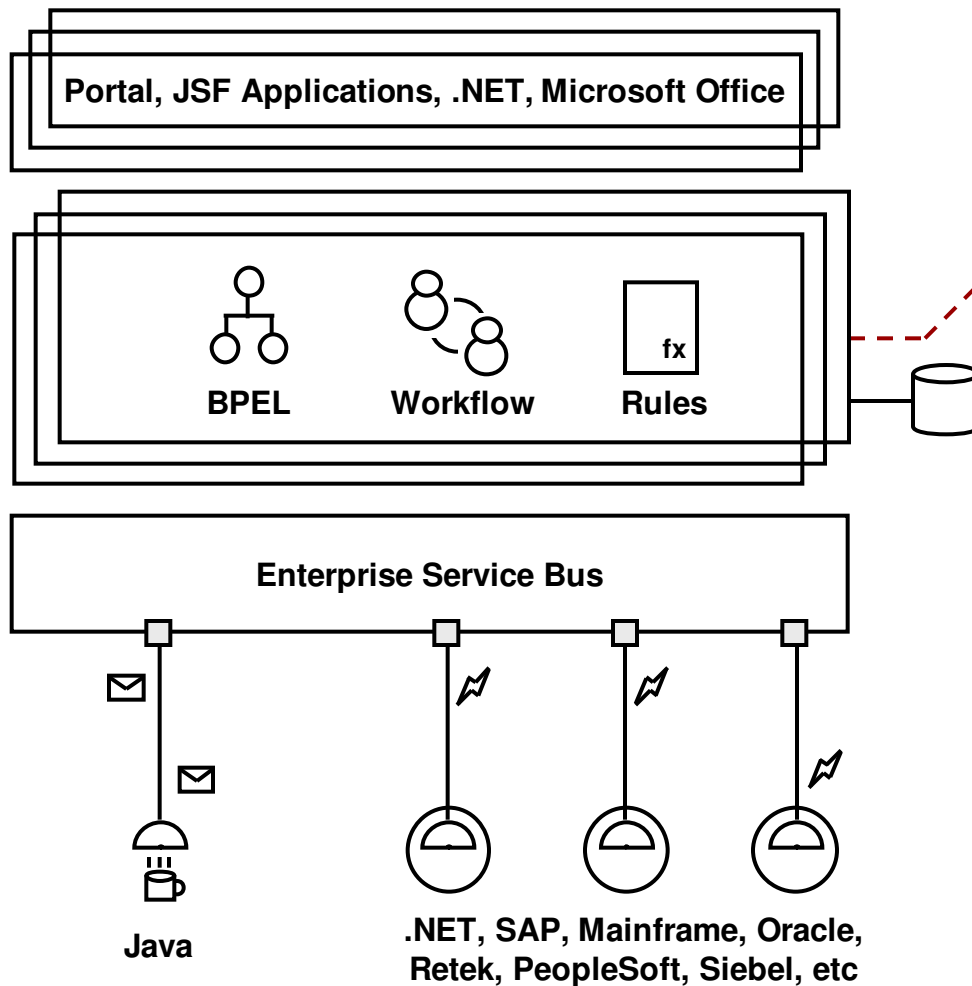
Step 5 | Deliver Real-Time Dashboards



Step 6 | Policy-Oriented Security



Step 7 | Scale on Demand

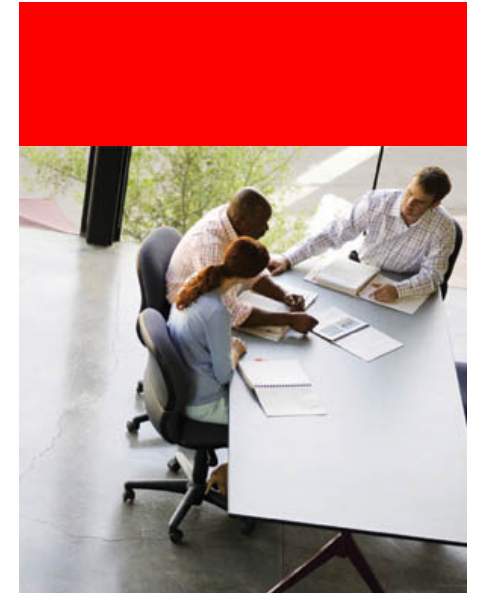


BEST PRACTICES

- Asynchronous Interactions
- WS-Addressing Correlation
- Handle Large XML Documents Appropriately
- “Stateless Architecture” (Grid)
- JCA and Java Binding



Emerging Area: Event-Driven SOA

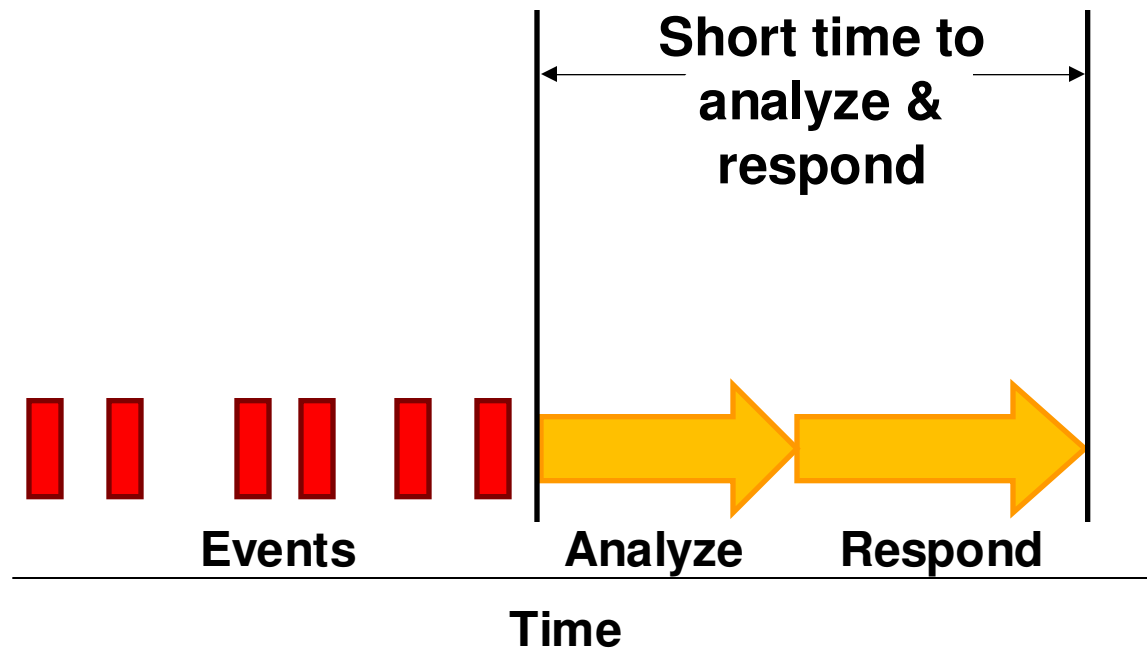


Events Are Everywhere

- Imagine your life without events
 - No phone calls
 - No alarms
 - No messages



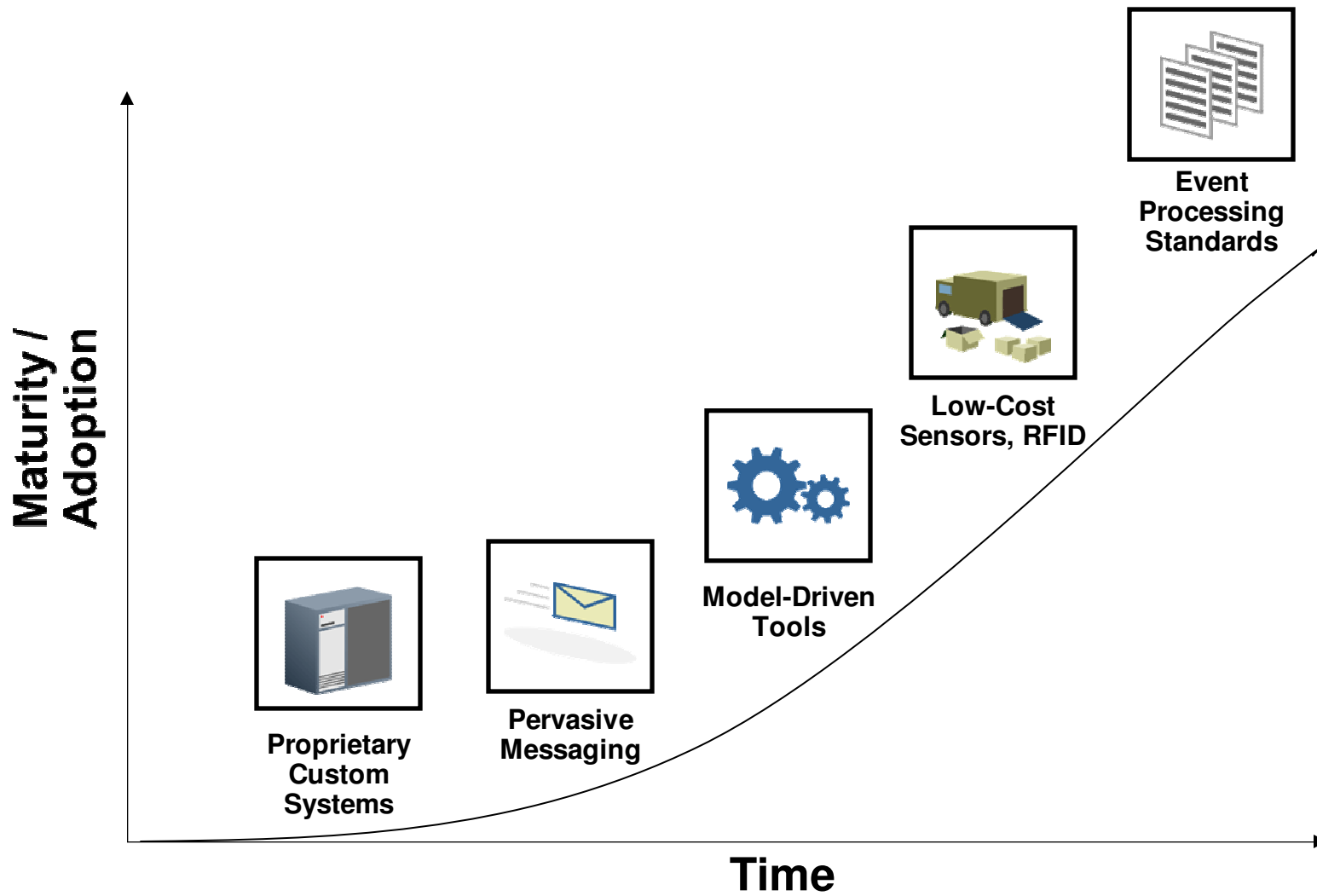
Why is Event-Driven SOA Important?



- Required – for new business models
- Desired – for competitive advantage



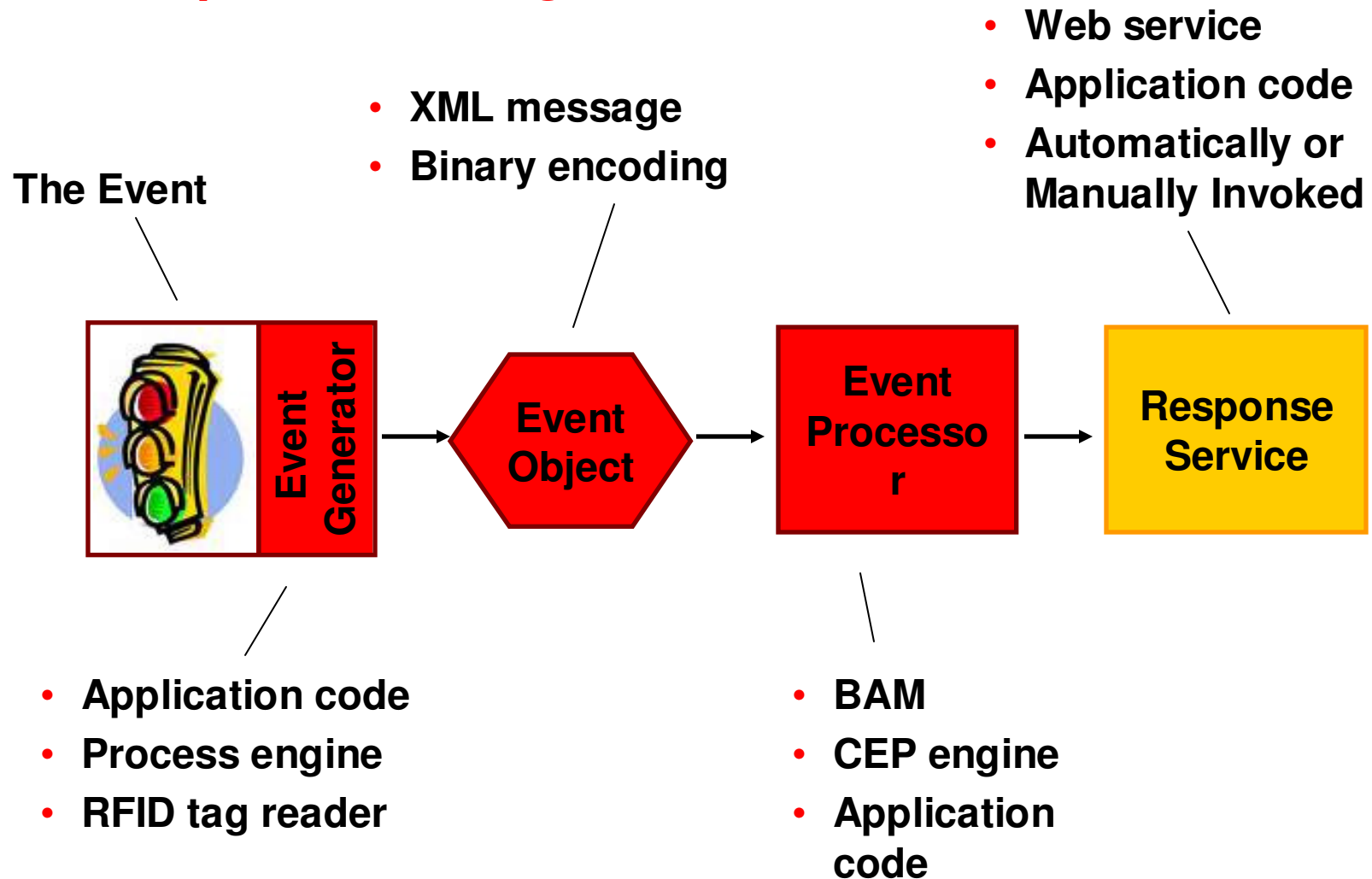
Why Now?



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How Events Work





Example Technologies

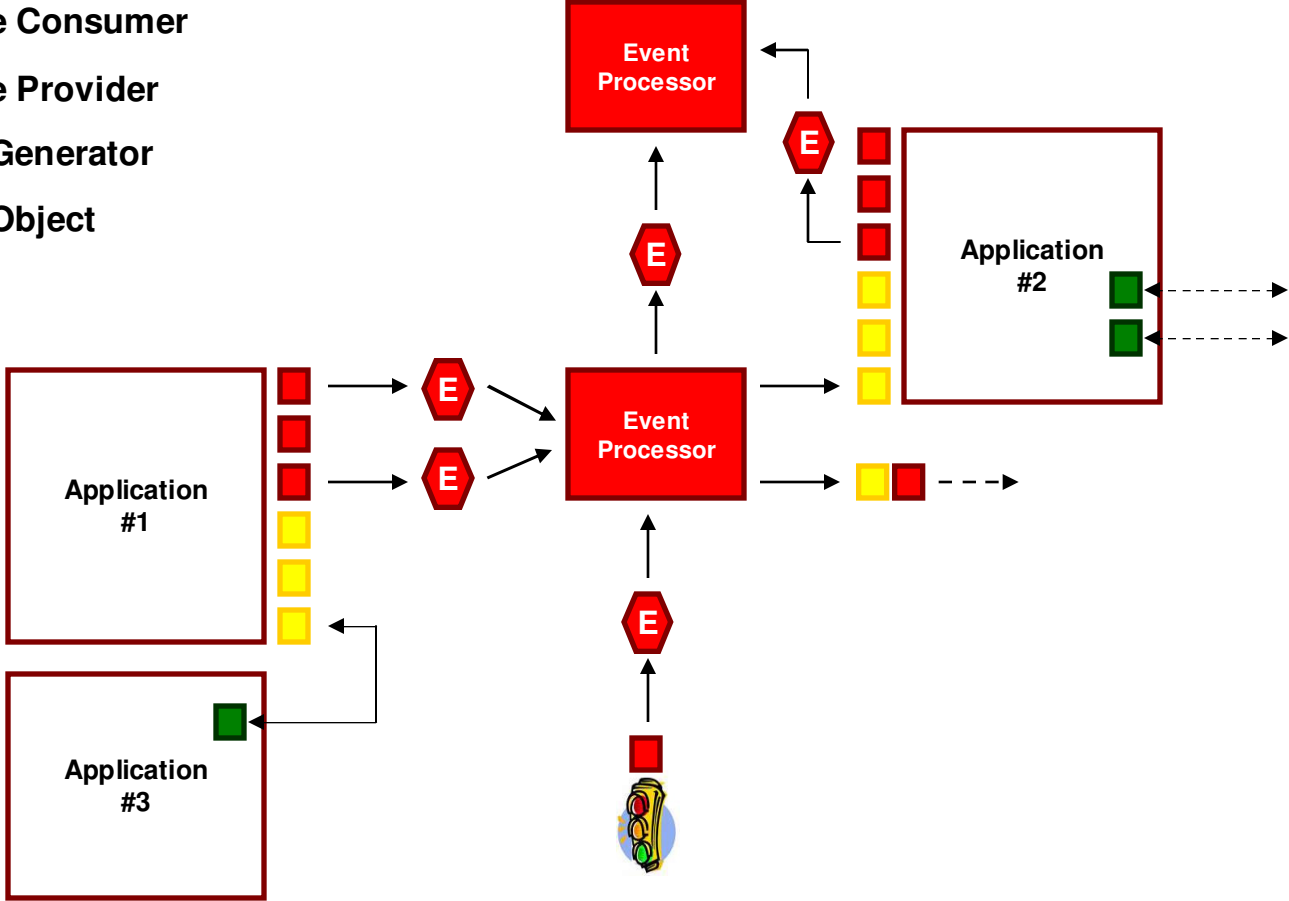




Event-Driven SOA

Service and Event Network

-  — Service Consumer
-  — Service Provider
-  — Event Generator
-  — Event Object





Thank You



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