Empowering the Business to Sense and Respond
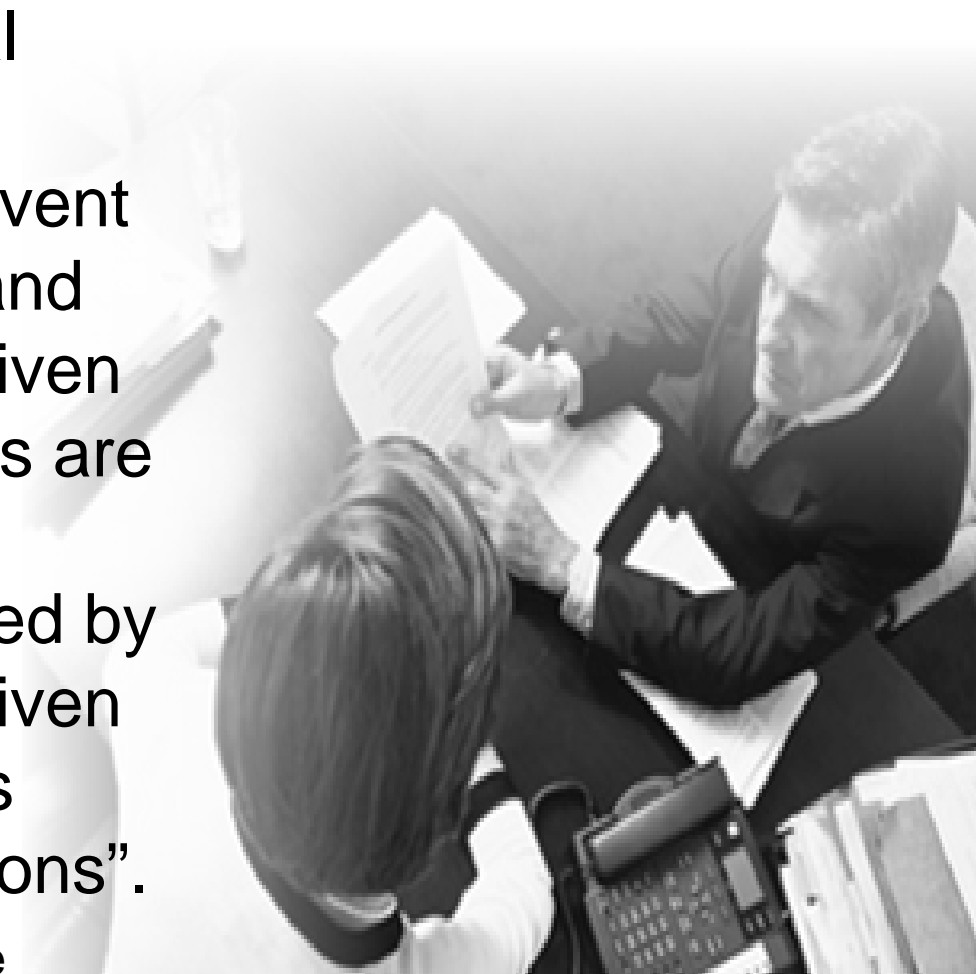
WebSphere software

The Speed of Busines Demands a New Approach

"The real world is mostly event driven, and event-driven situations are best addressed by event-driven business applications".

Roy Schulte
VP Gartner Research

"Business events - such as purchase orders, address changes, payments, credit card transactions or Web clicks - are being used as a focus in application design."

Gartner Research

Business Agility – What is it?

Getting the right information in the right granularity to the right person at the right time

Information Dissemination

Quick observation into exceptional business behavior and notification to the appropriate people.

BAM

Detect Decide Respond

Diagnose problems based on symptoms and resolve them

Active Diagnostics

Mitigate or eliminate predicted events

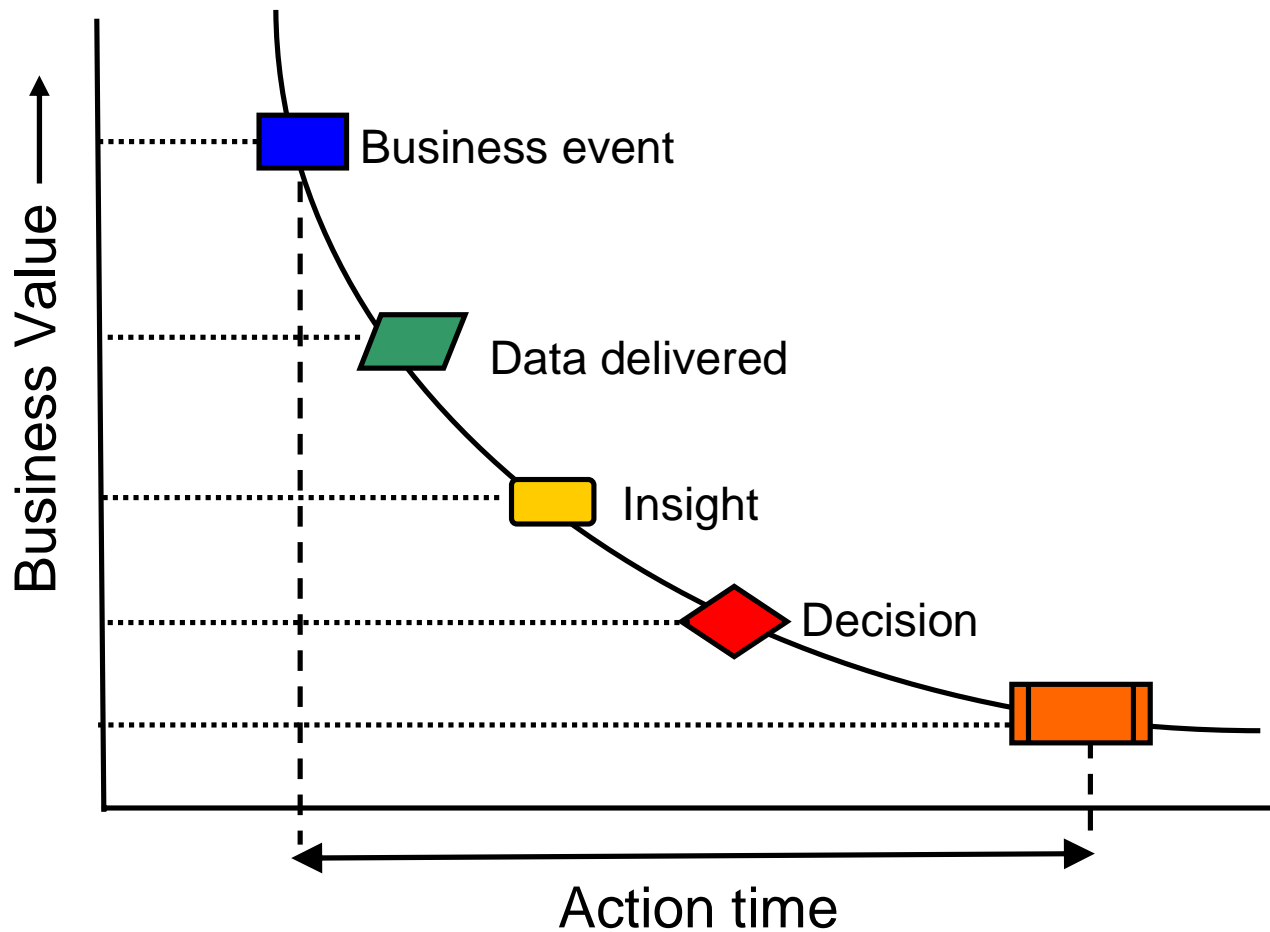**Predictive Processing**

RTE

Reactions to events are done as part of business transactions – achieving low latency decisions, and quick reaction to threats and opportunities

IBM

Business Agility Demands Low Latency

➢ Reduce data latency, insight latency and decision latency to improve time to action

Sense and Respond to Opportunities and Risk

Fraud Detection: Financial institutions require constant monitoring for suspicious patterns of diverse activities and the ability to continually and quickly adjust for interesting patterns.

Certain fraud patterns involve diverse systems and seemingly unrelated activities (e.g. multiple login attempts, followed by a combination of changes in PIN and contact information followed by an unusually large withdraw or transfer).

Dealing with Fraud

Business Event Processing

Provides the ability to sense when an actionable business situation (event or pattern of events) has occurred and, coordinates the right response or responses at the right time.
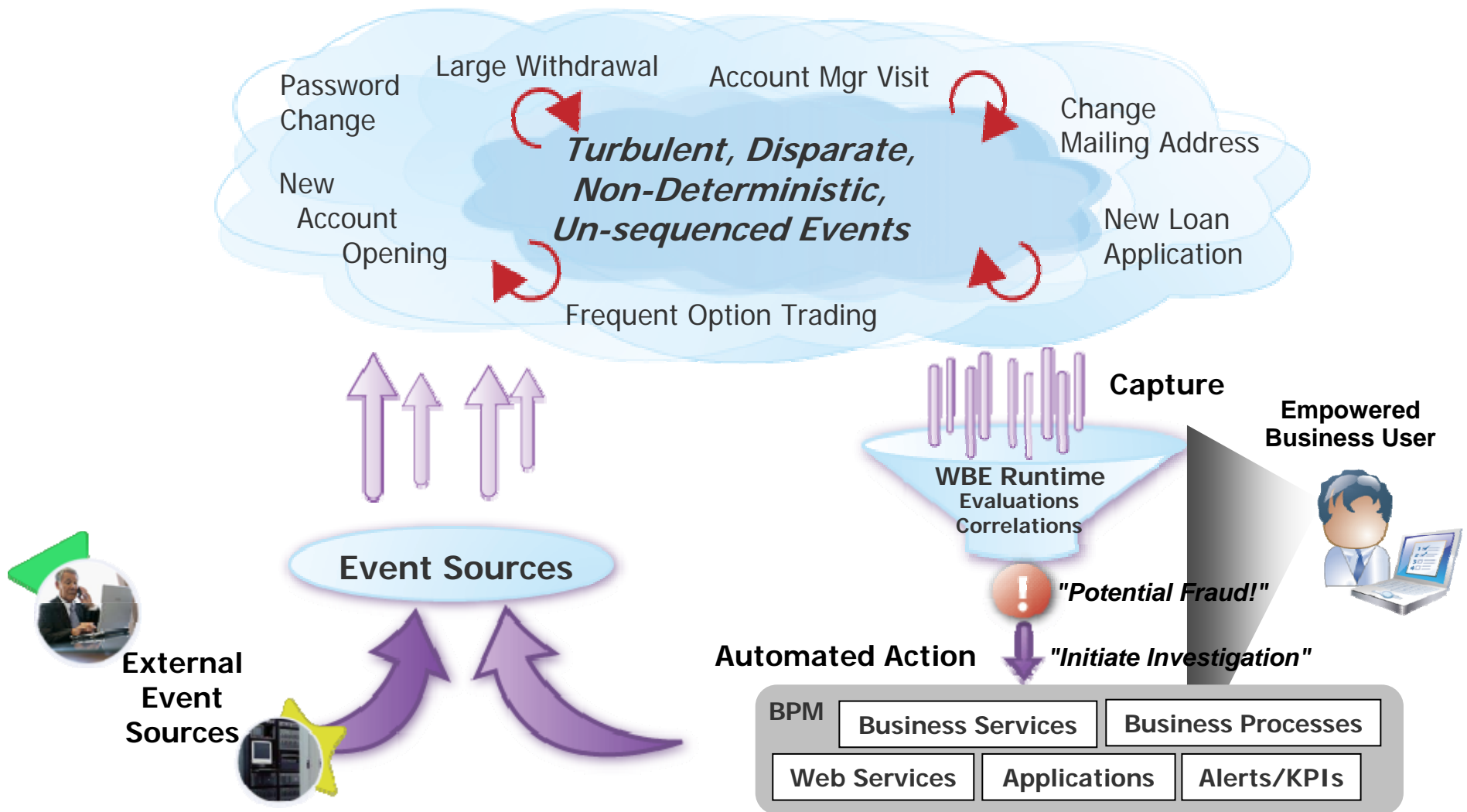
– Detects patterns of events as they happen…

– Between different types of events across disparate systems…

– Where events may or may not be be ordered…

– Where the presence or absence of an event may be significant…

– Where the true business event may have to be "derived" from real events…

– Where the business process is composed of multiple, asynchronous steps…

– Involving systems, humans or both.

Business Event Processing
Correlation of business events from any source, over any time frame

Password Change

Large Withdrawal

Account Mgr Visit

Change Mailing Address

New Account Opening

Turbulent, Disparate, Non-Deterministic, Un-sequenced Events

New Loan Application

Frequent Option Trading

Event Sources

External Event Sources

Capture

WBE Runtime Evaluations Correlations

"Potential Fraud!"

Empowered Business User

Automated Action

"Initiate Investigation"

BPM

Business Services	Business Processes
Web Services	Applications	Alerts/KPIs

Summary

Business Event Processing Enables Business to…

- Sense and respond to actionable activity

- Increase agility

- Improve corporate performance

- Align IT and business

- Increase responsiveness

- Empower the business user

- Generate rapid time to value

- Incrementally deploy solutions
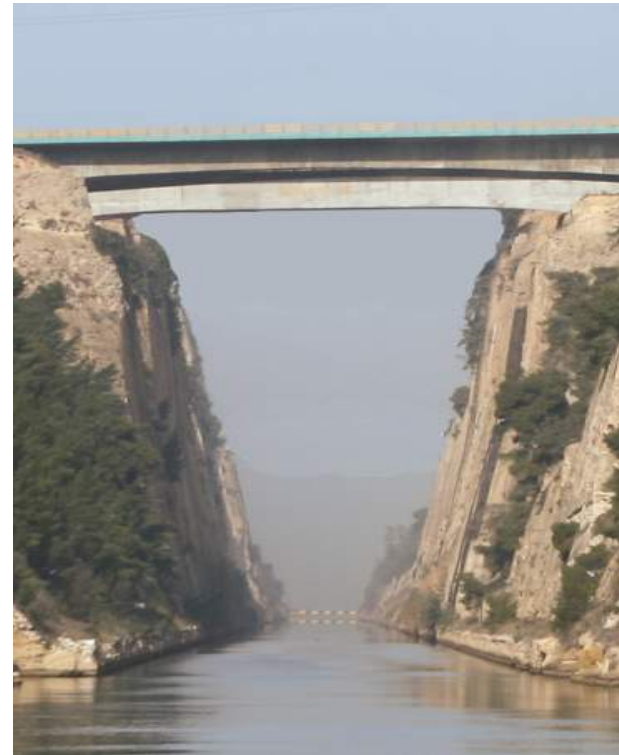
Business Event Processing
Pilot Project

Two Degrees of Separation Logging and Monitoring System Goals/Objectives

- Create a Logging/Monitoring infrastructure with instant visibility into distributed, orchestrated business processes

- Provide business users situational awareness via "real-time state of a business process"

- Provide correlation of Logged Events to provide administrations with greater "insight"

- Detect and Report on "known situations" as they are unfolding/occur

- Create a **standard log message format and content/semantics** for use by all applications (IRC/ITC EAS BAM Status Message)
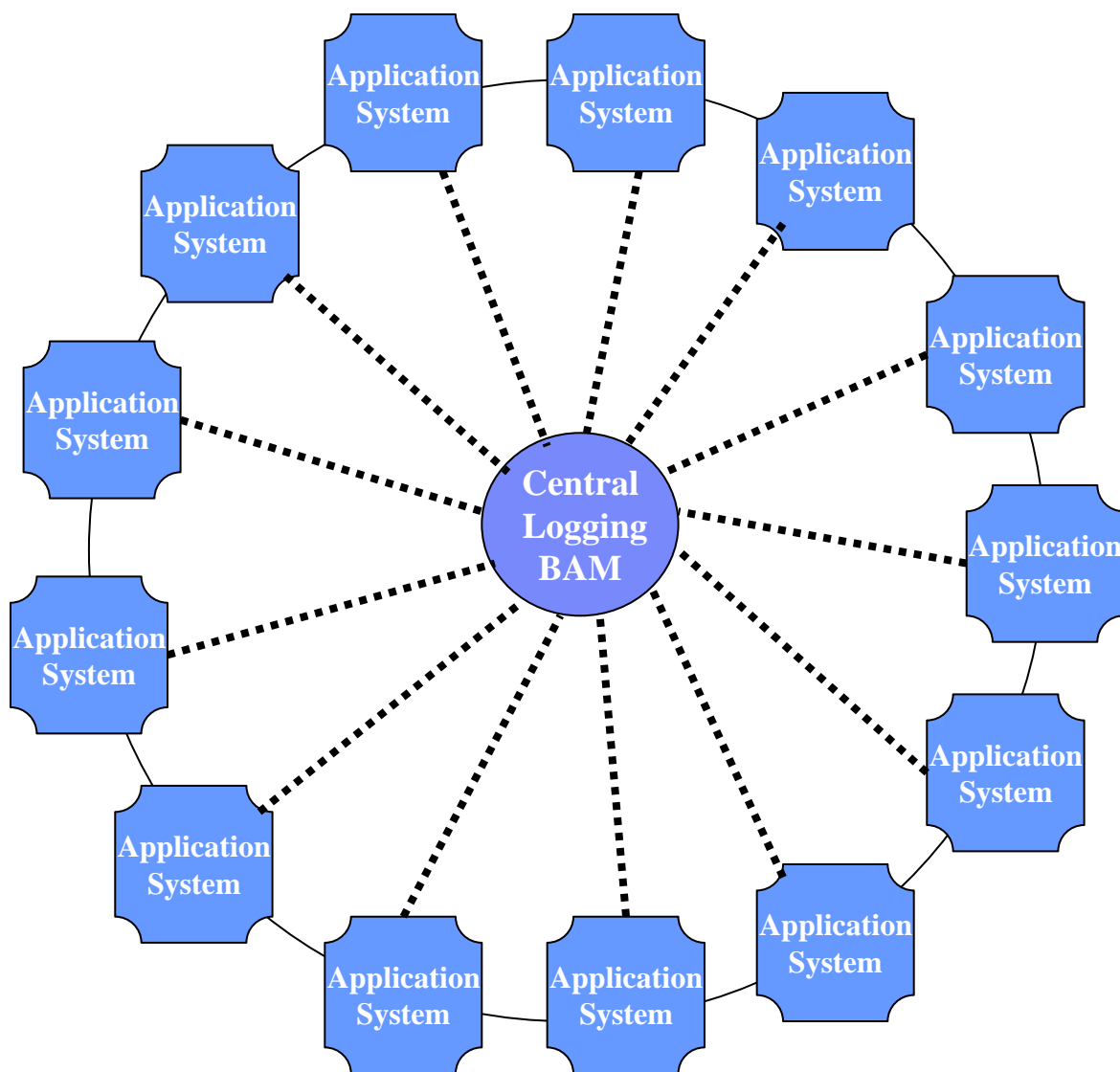
## Business Event Processing Pilot Project Goals/Objectives

- Fill the "Monitoring/Automated Response gaps" in ISONE's existing Logging and Monitoring System

- Evaluate COTS software for policy management and business event processing (IBM/AptSoft Director)

- Assess "plug and play" capabilities of IBM/AptSoft

- Implement IRC/ITC EAS Business Activity Monitoring standards to help promote adoption

- Promote the pilot to Industry Consortia, if successful

- Verify the feasibility of BEP for Business Activity Monitoring at ISONE

Central Logging Sink Architecture
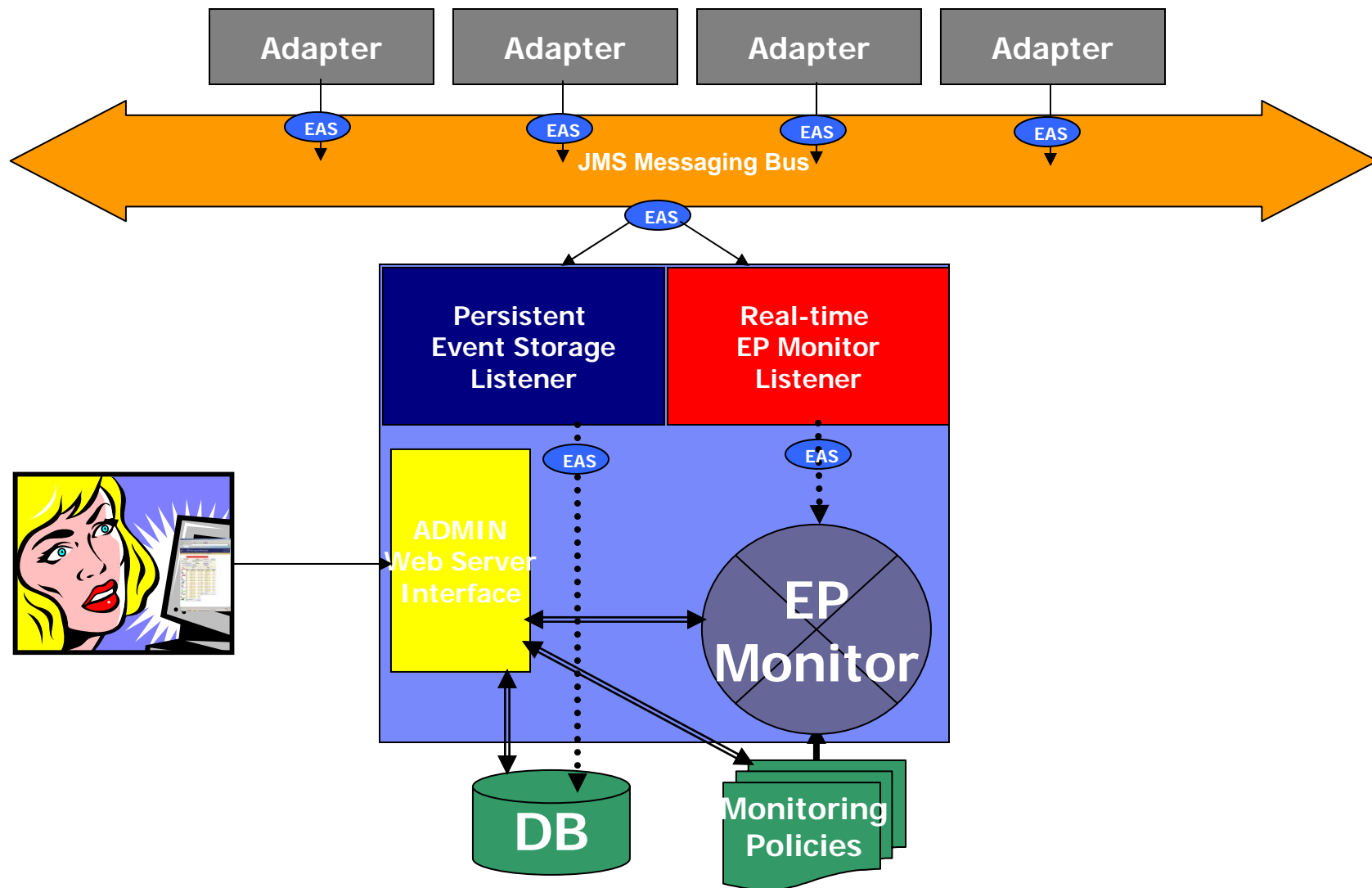
Central Logging Monitor Policies
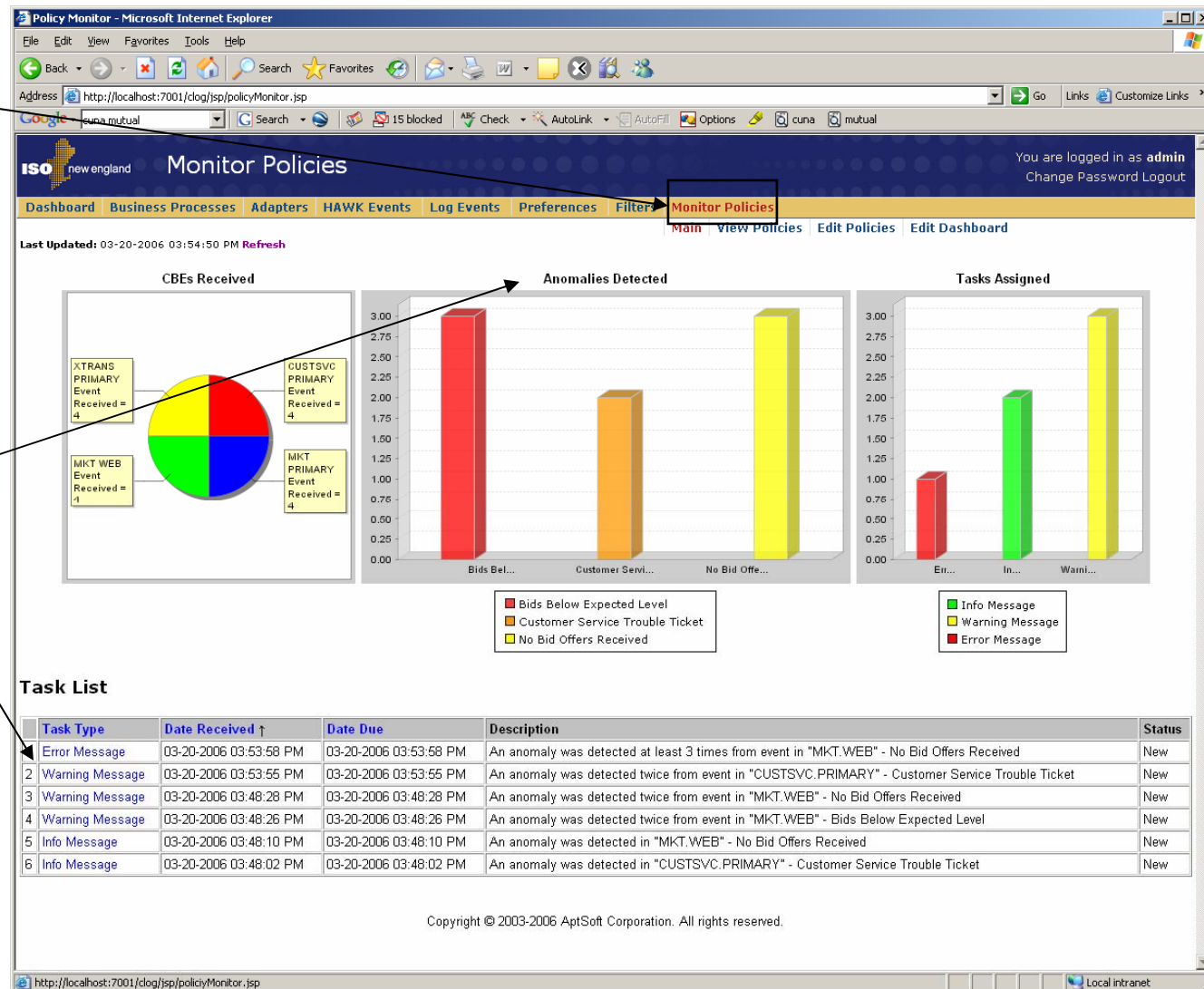
Monitoring Policy for DAM Closure/Extension

- Nominal Pattern of events supporting Market Closure at 12:00 noon

- Starting at 16:00 on day before closure:

  – Bid/Offer activity within normal range (per 15 minute interval)

  – Healthchecks reporting no anomalous conditions

  – External Transactions activity within normal range

  – Customer Service Activity within normal range

- Simulation covers period from 11:45-12:00
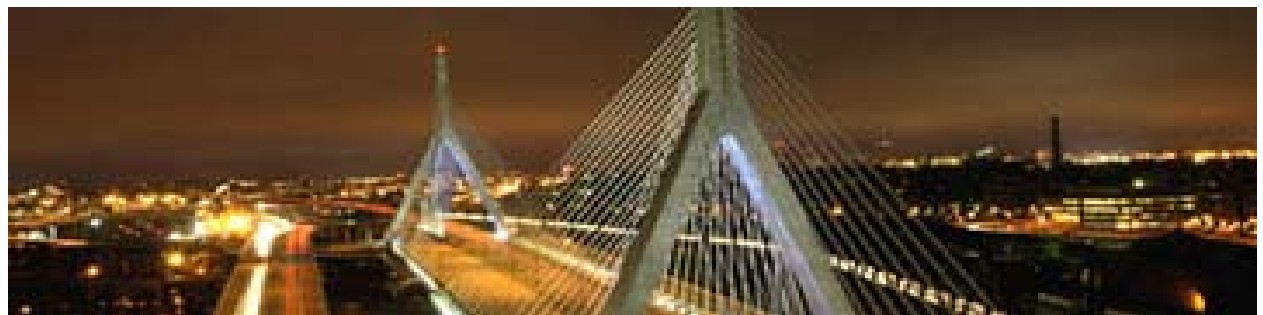
Benefits

- Consistent status reporting from across application domains

- Broad oversight of multi-step integration processes

- Ability to respond pro-actively to situations

- Central Logging and Monitoring improves SAS 70 auditability

- Ability to correlate events from across all enterprise applications and activities

- BEP engine enables ISONE to monitor very complex situations and enforce strict rules/guidelines with greater efficiency than existing solution

- Extremely flexible, dynamic, codeless design environment

- Reusability of objects

- Dynamic data retrieval as necessary

- Contextual (timing/sequence) evaluation functions built-in