Driving Competitive Advantage through Innovation and Optimization

Implementing SOA Based Business Innovation and Optimization
The Opportunity

- **CEOs recognize the need to sense and respond to continuously changing market conditions**
  - Yet only 13% of CEOs surveyed rated their organizations’ abilities to react to changing conditions and external forces as very good
  - Rapid, optimized response in a dynamic environment is key to becoming an On Demand Business
    ~ More responsive business processes
    ~ And a more responsive business model

  -- Source: IBM BCS, The Global 2004 CEO Study

- **CFOs rank performance management as the #1 challenge in meeting today’s business needs**
  - CFOs recognize that managing information is critical to success, with 70% indicating that information is a major asset that requires significant investment
  - While CFOs believe that the information they receive is timely, reliable and consistent, only one-third believe that the information is easy to use, tailored, cost-effective or integrated

Bottom line: BPM is significant and growing

Addressing the BPTS opportunity increases a company’s business effectiveness and strengthens its core competencies by transforming processes and, where it makes sense, having a partner manage and operate them.

“Business Performance Transformation Services is a $500 billion market”
Ginni Rometty, Managing Partner, IBM Business Consulting Services

AMR Research, Dec, 2004

“60% of companies intend to increase their overall EPM budgets in 2005.”

AMR Research, Dec, 2004

“Using an IT performance dashboard, you can measure critical processes and improve performance.”

Gartner, Dec, 2004

“Enterprise performance management will see increased spending through 2005 from new adoption and incremental investments to scale deployments for larger numbers of users.”

AMR Research, Dec, 2004

“Organizations should focus on moving toward integrated BPM that leverages common data, metadata, and user interfaces to ensure consistency in reporting.”

John Van Decker, Forrester, June 2004
“Think of it as putting sensors in a company's business processes. So you can tell when volumes are up or down, when there are errors, when service calls are lasting too long . . .”

-- Ginni Rometty, IBM Global Services Sr. VP, Enterprise Business Services

BIO leverages:

- Business Intelligence
- Business Process Management
- Business Service Management
- Business Activity Monitoring
- Corporate Performance Management
- Enterprise Performance Management

Enabling management of company-wide performance through insightful decisions to help drive success.
Business Drivers for Innovation and Optimization

- **Responsiveness**
  - Improve business flexibility and reaction to change
  - Improve predictive activities
  - Improve agility to gain competitive advantage

- **Risk Management**
  - Compliance monitoring and reporting
  - Increased business oversight
  - Increased security and consistency

- **Asset Utilization and Management**
  - Improve ROI
  - Reduce costs
  - Eliminate excess assets

- **Regulatory compliance**
  - Address regulatory guidelines

- **Growth**
  - Mergers/acquisitions
  - New product introduction
  - Entry into new markets

- **Cost Reduction**
  - Remove costs from business activities
  - Automate processes

- **Customer Intimacy**
  - Better understand customer actions and needs
  - Manage customer satisfaction, loyalty and profitability

- **Dashboards**
- **Scorecards**
- **Balanced Scorecards**
Framing new and existing projects in the context of a vision
OPTIMIZE is about performance management

Definition
A holistic approach to transform and manage a business by aligning strategic and operational objectives with business activities and supporting IT services

Value
- Align process design and orientation with outcome and delivery
- Predictive decision-making supported by role-based visibility
- Provide real-time, contextual insight

How
Delivering continuous innovation and improvement
IBM Business Innovation and Optimization Methodology

The power of IBM’s methodology is derived from each activity performed individually …

- **Model**: Capture, simulate, analyze, and optimize business models to reduce risk and increase flexibility
- **Act**: Respond at the right time to insights through collaboration, optimization, and automation to excel
- **Deploy**: Direct deployment of models and policies to realize business intent
- **Analyze**: Gaining insight into business metrics and information for contextual based decision making
- **Monitor**: Correlate metrics and alerts in real-time from internal and external sources to gain visibility into the business performance

… and in combination to enable continuous improvement and innovation
With IBM Business Innovation and Optimization You Can . . .

- **Model**
  - business processes and applications
  - financial information, data bases, etc.,

- **Deploy**
  - processes and policies to realize business intent directly in IT

- **Monitor**
  - business processes and workflow
  - business systems that support the business processes and workflow

- **Analyze**
  - real-time and right-time events coming out of both the business processes and the business systems to gain an understanding of how seemingly unrelated events impact attainment of business objectives
  - correlation of historical events from the data warehouse with the real-time / right-time events to
    - perform historical trending and analysis
    - predict the ability to meet Key Performance Indicators, Service Level Agreements, regulatory compliance initiatives (e.g., SOX, BASEL II, HIPAA, etc.), risk management initiatives, competitive threats, etc.
  - issues identified through dashboards and scorecards - leveraging executive dashboards and scorecards as a single place to pull all of this information together

- **Act**
  - by responding at the right time to insights through collaboration, optimization, and automation
Performance management needs are becoming more complex: Business Perspective

- Measure performance of business against targets (scorecard)
- Understand risk profile
- Track business process flow
- Monitor process metrics
- Understand impact of IT outages on business operations
- Detect anomalous situations, understand causality, and take action to maintain alignment of processes with business goals
- Notify if important external events occur
- Track actions
Performance management needs are becoming more complex:

**IT Perspective**

- Manage business systems as core business processes
- Monitor health of the infrastructure supporting the business systems
- Resolve problems based on business priorities and service level agreements
- Align views and metrics throughout the IT organization (executives to operators)
- Analyze root cause vs. symptom
- Track and understand changes in the environment
- Determine impact of a system change
The core of business performance is cross-organizational optimization and innovation.

Alerts, KPIs, Metrics (role-based views and semantics)
Business Innovation and Optimization in Action!

WebSphere Business Monitor Demo
Demo Agenda

- Business Innovation and Optimization Demo
- WebSphere Business Monitor at a Glance
- Business Activity Monitoring Case Study
Demo Agenda

- Business Innovation and Optimization Demo
- WebSphere Business Monitor at a Glance
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WebSphere Business Monitor at a glance

*Understand, monitor, and explore the state of business operations*

**Scorecards**
Key Performance Indicators for business units

**Collaboration**
Work with teams to resolve situations

**Business Alerts**
Notification of situations that require response

**Reports & Analyses**
Understanding trends by combining real-time performance and historical information

**External Information**
Information affecting performance
Receive business activity information from multiple sources
Enhanced integration with IBM & non-IBM products

- Gain access to more events and data to make KPIs and dashboards reflect business performance more accurately

Workflow or process automation software
Third party or legacy applications
SAP & other ERP software
Software capturing data from partners and suppliers
Information for better business decisions at your fingertips
*Empowering business people with actionable insight in dashboards*

- Offers actionable, role-based, contextual visibility into Performance
- Take proactive and corrective actions directly from the dashboard
- Analyze activity with decision making assistance
- Dynamically create new views with Web 2.0 functionality
- Automated alerts provide warning to preempt bigger problems
Analyze historical trends for better business decisions

Improve current operations and fine-tune forecasts

- View historical trends to pinpoint problems before they occur
  - Drill down on data to conduct root cause analyses
  - Discover previously hidden patterns using dimensional analysis
  - Use analytics and business intelligence technologies
  - Populate a business performance warehouse
Monitor human workflow and tasks
Redirect workloads in response to real events; prevent backlogs

Enhanced Human Monitoring
- New set of configurable portlets that display metrics and KPIs to view and manage work and people
- New insight into task status, work queues and the people who participate in the process

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<th>Action</th>
<th>Task Name</th>
<th>Type</th>
<th>Owner</th>
<th>Queue Time</th>
<th>Status</th>
<th>Escalated</th>
<th>Work Duration</th>
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<td>Human Task</td>
<td>mjjohnson</td>
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<td>swalter</td>
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<td>false</td>
<td>20 m, 5 s</td>
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</table>
Feed actual process performance data back into process models

*Simulate the processes you monitor with actual, real-time data*

- WebSphere Business Monitor integrates with WebSphere Business Modeler
- Create more realistic simulations in Modeler with actual data from Monitor
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BAM leads to backlog reduction and reduced IT costs

*Large state governmental organization*

**Challenge**

- Processing of tax returns was too slow and needed to reduce risk of losing paper files
- Needed systems and tools that were flexible, permitting faster change and reducing overall costs

**Solution**

- Shifted batch to transactional processing with BPM & SOA
- Automated business processes
- Real-time BAM replaced printed reports

**Business Benefits**

- Reduced backlogs by more than 85% using BAM
- Reduced costs with increased component reuse
- Faster reaction time with real-time information
How does Monitor accomplish this?

- Monitor DB
- Monitor Server
- WebSphere Process Server
- MQ Workflow
- MQ Application
- Legacy Application
- Database
- SAP
- Gathers data from
- Sends events
- Stores data
- Sends events via MQ
- Sends events via JMS
- Display business information
- Sends events

Send Events

Send Events
Role-based business workplaces are a critical requirement for managing a business

- Scorecards: Key Performance Indicators for line of business units
- Monitored Processes: Operational metrics aligned with critical business processes
- Reports and Analyses: Understand real time performance against historical trends
- Market News: External information and events affecting performance
- Risk Factors: Manage risk factors associated with initiative
- Business Situation Alerts: Notification of situations that require business response
- Collaboration Services: Work with teams to resolve situations
- Prompted Actions: Select an operation to adapt performance
- Monitored Actions: Track status of actions
Realize business intent
- Drive process predictability
- Connect business modeling with operational deployment

Take action based on contextual insight
- Measure the state of business performance against targets (scorecard/dashboard)
- Detect and receive alerts of anomalous situations
- Utilize role-based visibility

Enable continuous improvement and innovation:
- Improve predictability and team productivity
- Align objectives and priorities
- Innovate through continuous, closed-loop feedback
Architecture
Innovation and Optimization is made real through IBM’s integrated software infrastructure

- **Modular** product portfolio built on open standards
- **Functionally rich**, adopted incrementally
- **Simple** to develop, deploy and manage
- **Integrated** role-based tools
Foundation: Service Oriented Architecture

- Componentized: Standardized services interfaces for applications and resources
- Interoperable: Easy information exchange between applications and/or resources
- Modular: Mix and match, add or remove, business processes and infrastructure
- Scaleable: Start with what you have and add additional resources as needed

An SOA allows the IT department to literally keep pace with business imperatives as it automates business processes by abstracting the process from the underlying application and IT infrastructure.
What is SOA, BPM, EDA ...............

Service Oriented Architecture
An IT architectural style that supports integrating business as linked services; Loose coupled integration of applications where consumers invoke services from providers.

Business Process Management Enabled by SOA
To invoke web services using business process management tools and languages. With SOA using BPM tools, workflows are automatically generated as XML-based BPM languages for immediate execution.

Event
Signals/triggers received from an external system or process.

Purpose of Events
In-flight change of a process flow; change in state; synchronization between multiple processes; signals expiration or exception.

Event Driven Architecture
This is an approach for designing and building applications where business events trigger messages to be sent between independent services that are completely unaware of each other.
Event Standards: CBE and CEI

What is a Common Base Event (CBE)?

An “Event” is anything interesting that occurs from either a business or an IT perspective. CBE is the event data format IBM has proposed as a standard to the Organization for the Advancement of Structured Information Standards (OASIS).

What is the Common Event Infrastructure (CEI)?

CEI is IBM's implementation of a consistent, unified format for the creation, transmission, persistence and distribution of a wide range of business, system and network events, based on common base events.
Modelling and Monitoring Business Systems and Process Events

Process Model

Monitoring Context

Model

Refine

Integrated Development Environment

Deploy

Infrastructure

Correlation

Observation Manager

Action Manager

Thresholds / limits Metric relationships

alerts

actions

Events

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Business Innovation and Optimization Logical Architecture

Business Innovation and Optimization Suite of Tools
- Business Modeler
- Analysis Tools
- IT Service Management Tools

Enterprise Integrated Development Environment (Studio Tools)

Event Sources / Operational Systems
- People Interaction
- Process Integration
- Information Integration
- Packaged / Custom Apps
- Other non-IBM

Common Event Infrastructure

Workplace For Business & IT
- Dashboards
- Reports
- Virtual Teams

Information Manager (Analysis, Investigation, & Reporting)

Observation Manager
- Data Store (Metrics & KPIs)

Adaptive Action Manager
- Adaptive Actions Implemented in Runtime Components

ODS
- Warehouse
- Mart

Business Performance Monitor
IBM Business Performance Management - Delivering Real Business Value

- **A US financial institution implemented P&L statements for 1,800 Banking Centers in 60 Days**
  - Banking Center Managers were made accountable for their P&L results and rewarded for performance
  - Result: Year-to-year enterprise revenue increase from minus $500M to plus $3.3B

- **A global financial institution re-engineered trust services processes and integrated a wide array of systems and applications in support of the processes**
  - $6M initial savings in Account Opening Process
    - Account Opening Process reduced from over 6 months to 6 weeks
    - Process activities reduced from 300 to 120, 31 of which were automated
    - Fee Income collection increased 10X – what was once sporadic, now enforced based on business rules
  - $1.2M initial savings in Annuity Quality Control Process
    - Automated 80% of their activities
    - Added visibility to the process management where there was originally none
    - 70% reduction in personnel costs
‘On Ramps’ to Business Innovation and Optimization

Customers enter from one ‘on ramp’ …

- Access real-time critical business performance indicators (Business Activity Monitoring)
- Optimize processes (Business Process Management)
- Gain valuable insight from all business performance data (Business Intelligence)
- Align and manage IT operations with business priorities (IT/Business Service Management)

… or customers enter from multiple ‘on ramps’
Current business challenges... *addressed with business innovation and optimization.*

**Reality of Today’s Business**
- Complex, siloed organizations, processes, applications, and infrastructure
- Misaligned objectives, priorities, and measurements across the business and IT
- Lack of real-time contextual insight
- Hesitation in response to market opportunities, competitor’s moves, and regulatory changes
- Inability to manage business operational disruptions effectively, proactively to improve results

**BIO in Action**
- Process, tasks and activities are part of an intended design
- Alignment across the business including IT infrastructure
- Data driven objectivity for decision making and action
- Execution flexibility
- Deep process and operational insight for risk management and change
IBM is uniquely positioned to deliver on the promise of business performance management

**IBM, with partners, provides solutions to realize the promise through**

- Aligned top to bottom business objectives and metrics
- Visibility into business activities and IT resources that can be customized to meet the needs of the user
- Access to and analysis of real-time and historical information from multiple sources (structured and unstructured)
- Modeling and monitoring of business processes to improve effectiveness
- IT management systems that enable controlled environments
- Role-based views and collaboration to initiate actions based on insights

**All built on a comprehensive, integrated infrastructure that leverages customers’ current investments**
Call To Action

1. **Learn** –
   Web Site: ibm.com/software/bpm

2. **Engage** –

3. **Attend** –

4. **Participate** – Workshops
   - Process Improvement Workshop
   - Integration Architecture Solution Workshop
   - Proof of Technology Workshops and more