Technology supporting business goals

**CEO focus**
- Revenue growth, cost containment
- Responsiveness to business conditions
- Improving company internal skills, capabilities, and leadership

**CIO challenges**

Sources: Your Turn: The Global CEO Study, IBM; Operating Environment Market Drivers Study, IBM.
Business processing supporting business goals

**Business process**: set of linked activities that create value by transforming input into more valuable output.

Performed by people, automation, or both.

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**Business Process Management**

Activities performed by organization to manage and improve business processes.
Describes activities/events performed to optimize a business process.
Uses a systematic approach to improve processes.
Goal: make processes more effective, efficient, and capable of adapting to changing environment.
Business process completeness

A complete business process includes all manual and automated activities.

Related processes improvement methods

**Business activity monitoring**: aggregation, analysis, and presentation of real-time information about activities within an organization and its customers/partners.

**Six Sigma**: process improvement methodology, originally developed by Motorola, focused on improving processes by eliminating defects.

**Lean Enterprise**: focuses on improving processes and overall customer value by reducing seven wastes: transportation, inventory, motion, waiting time, overproduction, processing, and defective products.

**Lean Six Sigma**: combines Lean Enterprise’s focus on speed with Six Sigma’s focus on quality. (better quality, faster)
Software tools and technologies for process improvement

Software tools used to:
- Define requirements
- Model processes
- Simulate processes
- Identify reusable business services
- Monitor processes
- Create workflow systems
- Develop integration applications

Service-oriented architecture (SOA) is a driving technology behind increased interest and capabilities in process improvement.

Services and service-oriented architecture

**Service**: repeatable business task (check customer credit, open new account)

**Service orientation**: way of achieving business integration by linking services to build outcomes.

**Service-oriented architecture** (SOA): an IT architecture based on service orientation.

**Composite application**: set of related and integrated services that support a business process built on SOA.
Business process driving technology

**Business process layer:** focuses on task sequence, business rules, and human effort.

**Service layer:** business service abstraction.

**Application layer:** software enabling services.

**Technology layer:** underpinning hardware and software.

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The need for modeling

Modeling focuses on managing complexity and mitigating risk.

- Not required for simple tasks, but increasingly needed as task complexity or importance grows.
- Complex systems may involve multiple processes with various levels of abstraction/decomposition.

**Modeling allows visualization.**

- See risks, bottlenecks before deployment. Tune the process.
- Communicate inherent risk to process parties.
Models as foundation for analysis

Basic directed diagram of a process—flow chart.
Basic diagrams miss key process attributes:
  How long does it take?
  How much does it cost?
  Who provides the service?
  What policies, procedures, and business rules apply?
  Is the process efficiency optimized?
Process models include the above and assist in creating, monitoring, and updating business processes.
Process models assist in corporate governance implementing controls to ensure legal compliance with Sarbanes-Oxley.

Purposes of business process modeling

Business process models serve many purposes:
  Documenting existing procedures
  Determining staff, systems, and facility required
  Planning changes to existing processes and systems (what if? analysis)
  Testing and analyzing existing and proposed processes
  Identifying defects in processes
  Supporting development of business applications
Business process modeling is a first step in the SOA life cycle.
IBM WebSphere Business Modeler

IBM’s Business Modeling tool that supports:

- **Modeling**: create a graphic diagram of a business process and related information.
- **Simulation**: determine cost and time factors under real-time conditions.
- **Analysis**: tools for extracting details from the model and simulation results.
- **Reporting**: create documents to communicate results of documentation and analysis.
- **Code Generation**: generates code to use as starting point for process automation.

Multidimensional Business Modeling

WebSphere Business Modeler allows representation of different facets of a business process to provide a holistic view.

- **Process model**: work being performed.
- **Data model**: information used in the work.
- **Resource model**: who performs the work.
- **Organizational model**: how process participants are organized.
Common Process Modeling Sequence

Business analysts create model of current process (“as is”).
Various analysis done to determine what works and what needs improvement.
Models are redesigned (“to be”).
Models are exported to other tools for code development.

IBM Tools, Process, and Deployment

[Diagram showing the process with roles and tasks for Business Modeler, Rational Software Architect, Rational Application Developer, WebSphere Integration Developer, and WebSphere Process Server Runtime.]
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