Java for CXOs and the Common Man – The Business of J2EE

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Solutions and Technology Conference & Expo

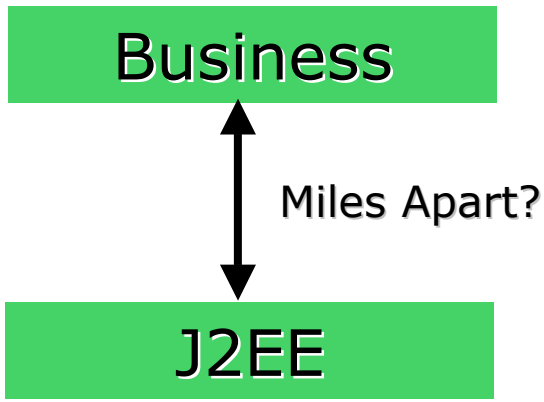
Objectives

- Lay out the Business Context for Technology Applications
- Understand and Appreciate the impact of J2EE
- Build the case for J2EE
- Use the knowledge on a daily basis, in various projects.
- Increase demand for Java based technologies by capitalizing on the business impact
- Take it further – Web Services

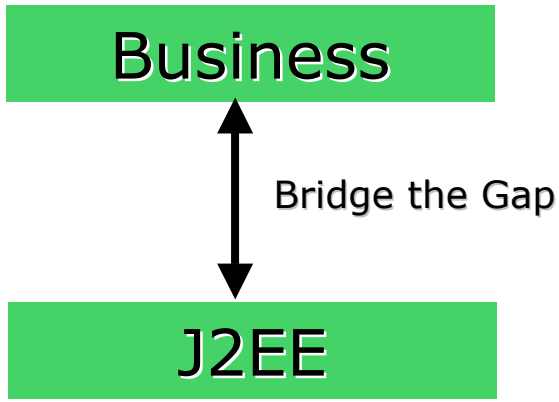
Approach

- Input from Management, Organization Theory
- Environment – Strategy – Implementation
- The Bottom-line – Value
- Value provided by J2EE
- J2EE Features
- Sample Cases

Purpose



Purpose

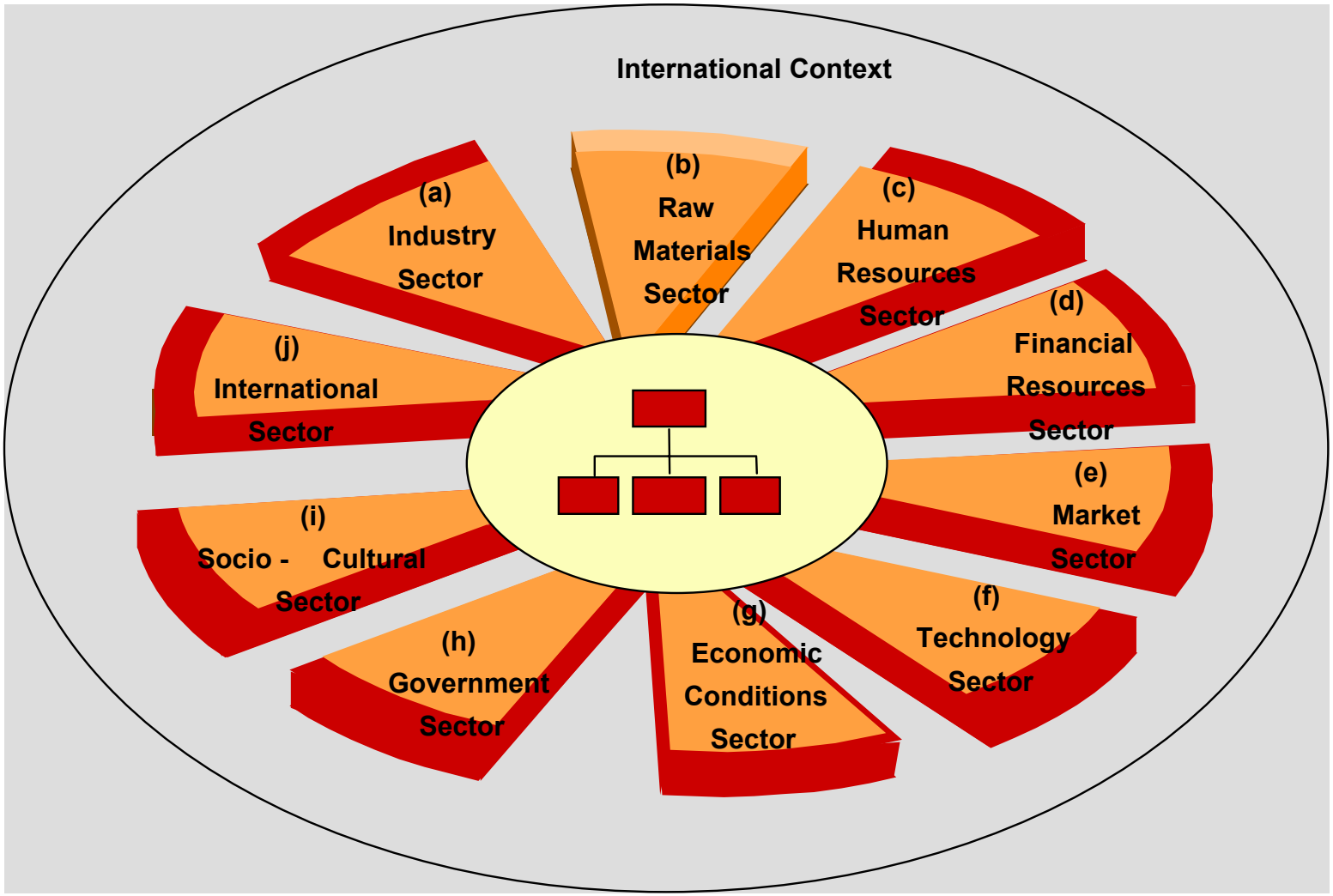


Better Understand J2EE

Better Understand Business

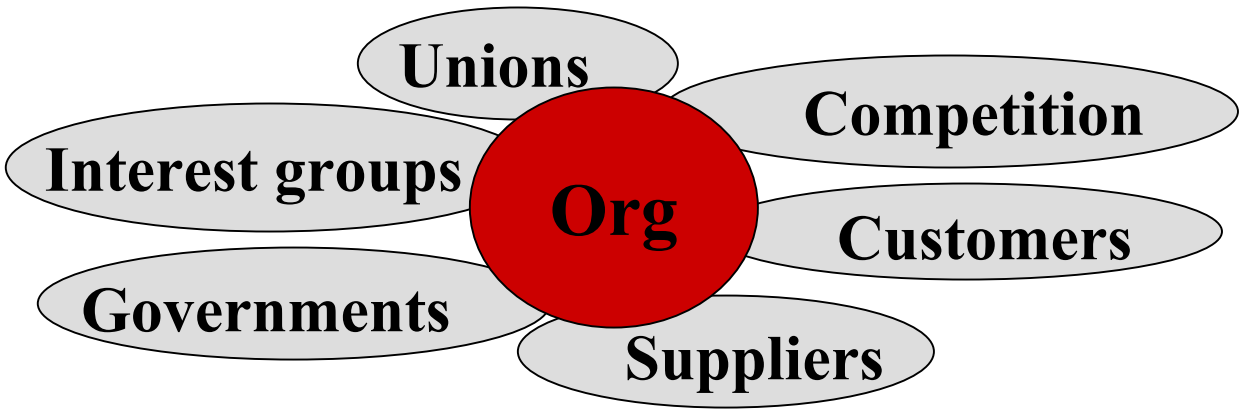
Business & Strategy

Organization's Environment



Assessing Organization's Environment

Ask: How many **different** stakeholder groups?

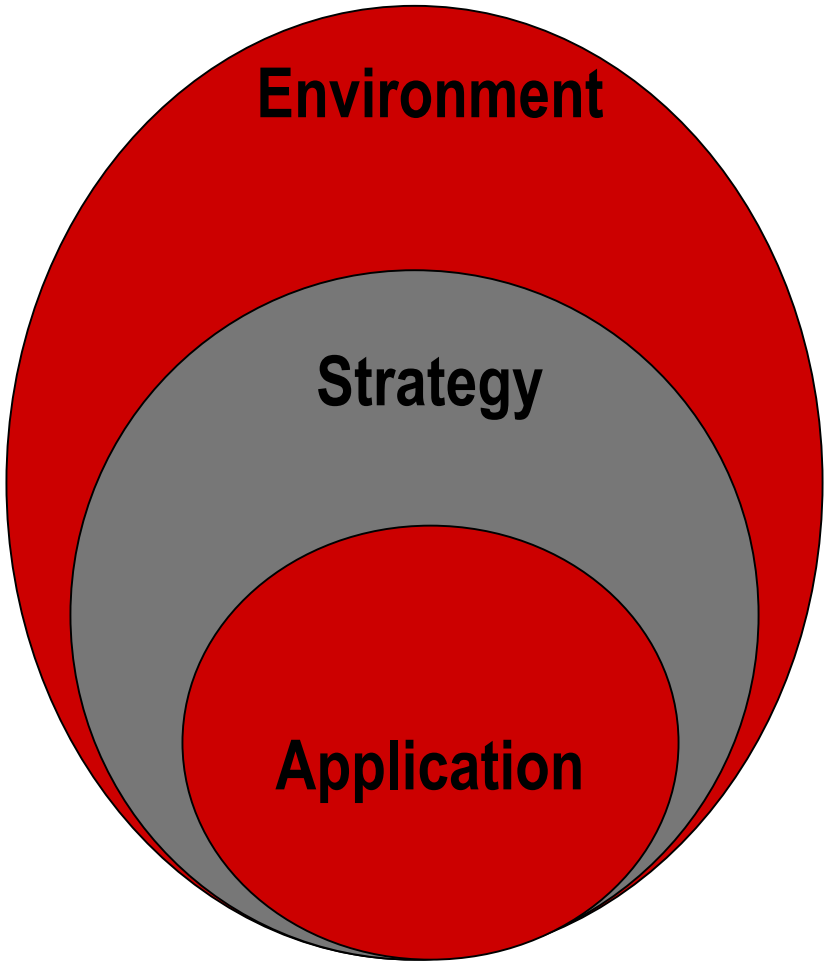


How often do these stakeholder groups **change** [their behavior, preferences, ways of doing business etc]?

How do these stakeholder groups affect/determine Technology?

Environment to Application Fit

Tech Application Aligned with Strategy



What Business Wants - Value

- Technology Applications and Services should provide Business Value
- Technology applications should be directly or indirectly mapped to the Business Process
- Sources of Value are diverse and vary with organizations
  - with respect to an organization's strategy and environment

Value?

- Value in
  - Business Processes and Operations
  - Increased Productivity
  - Increased Efficiency
  - Differentiated Products and Services
  - Effective Competition

Qualify and/or Quantify

- IT is a maturing industry and lacks the application of standard finance frameworks in this industry.
- Other Industries have similar problems, but are making good progress.
  - For e.g. Calculating Social ROI(SROI) in the Non-Profit industry.
- Return On Investment
  - Quantify financial returns using traditional metrics – NPV, IRR etc.
  - Quantify non-financial but important “soft”, “intangible” values
- The bottom line is to understand the Value Created

Case Study 1

- Leading gas pipeline company: Application to provide a common upstream to downstream business process flow following the merger of 5 companies.
- Stakeholders
  - Suppliers, Consumers, Internal Business Depts. – Marketing, Production, Finance etc.
- Value
  - Tangible value: Elimination of redundant capital, labor, knowledge and other resources.
  - Intangible value: “Better” experience, time savings, business intelligence.

Case Study 2

- Offline Vs Online Bank
- Value
  - Tangible: Cost Savings
  - Intangible Value: User Experience and Comfort
- Value Lost by Offline Bank
  - New customers lost due to the absence of online presence
  - Customers defected due to the absence of online presence

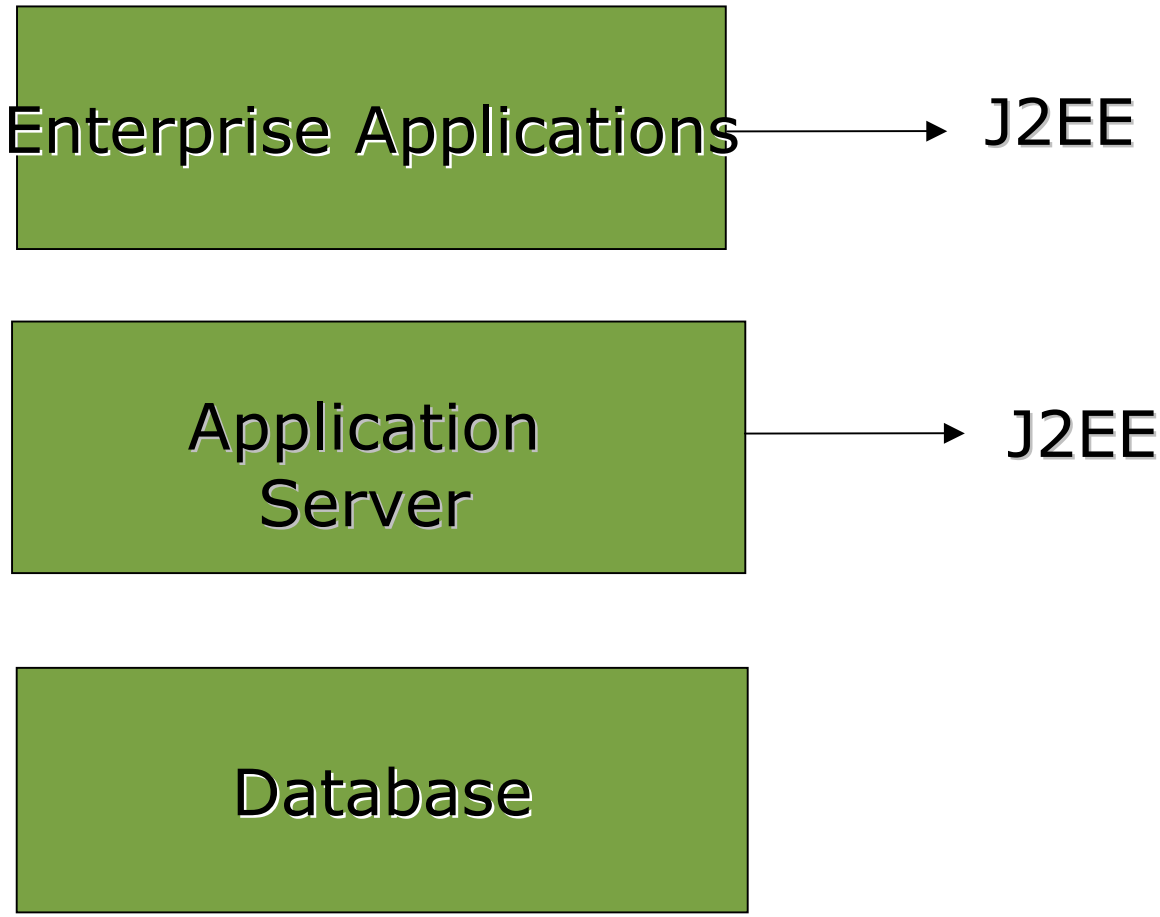
Enterprise Software Stack & J2EE

Enterprise Applications

SAP, CRM, Custom Applications

Mainframe, Mid-Range Databases

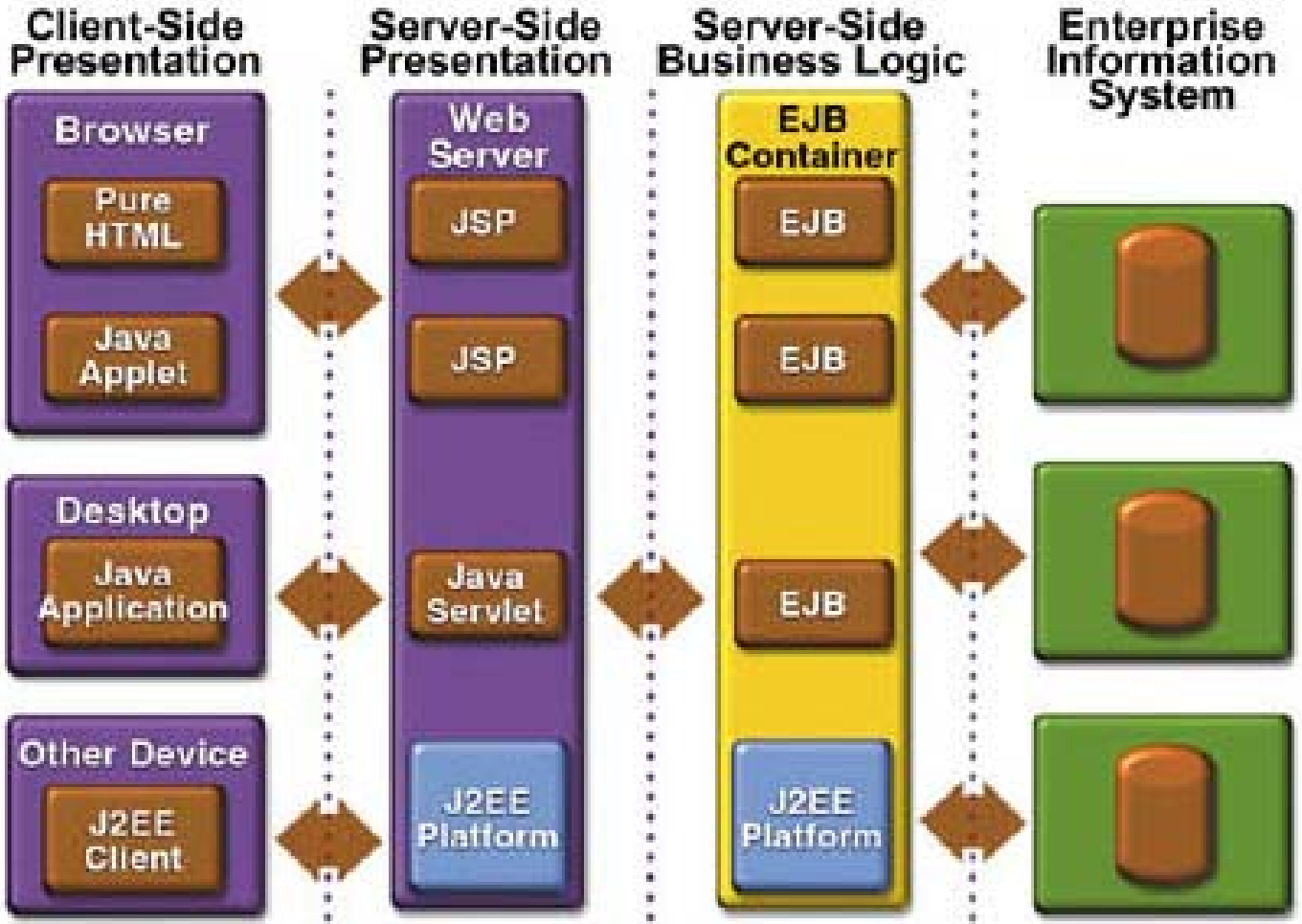
Where J2EE fits?



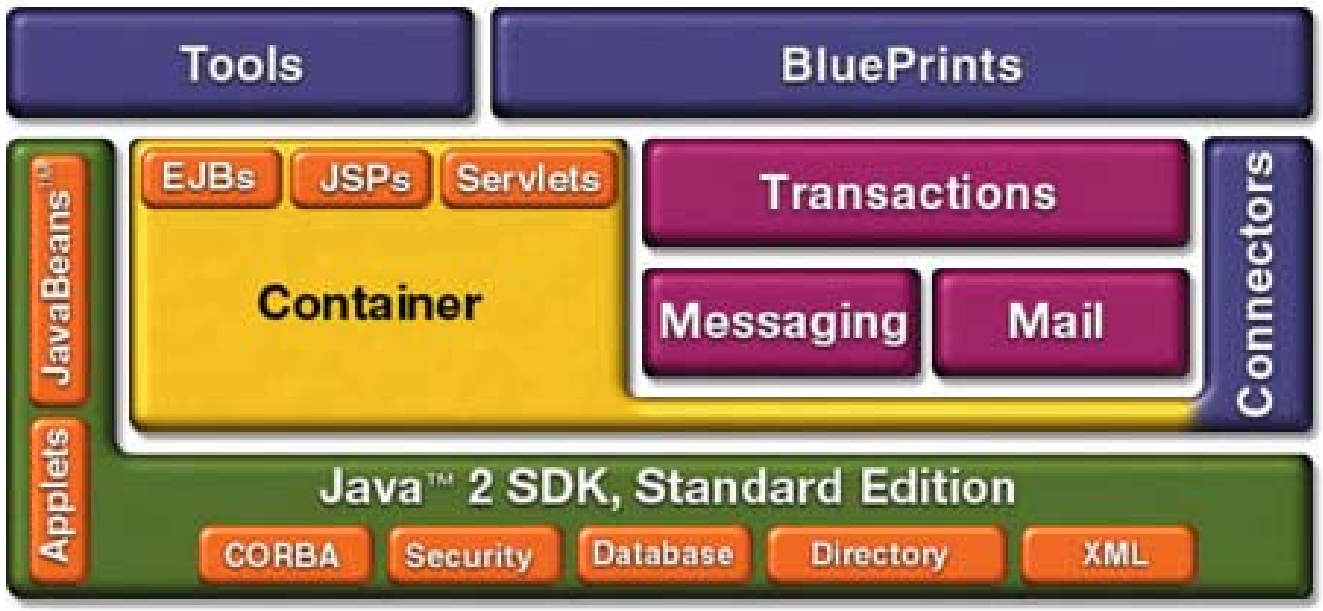
What is J2EE?

- Standard for developing multi-tier enterprise applications
- More than a language. It is an umbrella under which different technologies coexist
  - Distributed Technology
  - Transaction Processing
  - Web Based
  - Real-Time Technology through Message Oriented Middleware
- J2EE is a Development and Integration Platform
  - Developing, deploying, and managing custom business applications
  - Integration of new and existing applications

J2EE


Client-Side Presentation
Server-Side Presentation
Server-Side Business Logic
Enterprise Information System
Browser
Pure HTML
Java Applet
Desktop
Java Application
Other Device
J2EE Client
Web Server
JSP
JSP
Java Servlet
J2EE Platform
EJB Container
EJB
EJB
EJB
J2EE Platform

J2EE


Tools
BluePrints
JavaBeans™
Applets
EJBs
JSPs
Servlets
Container
Transactions
Messaging
Mail
Connectors
Java™ 2 SDK, Standard Edition
CORBA
Security
Database
Directory
XML

The Case for J2EE

J2EE Features

- Portable and platform independent
- Choice- Vendor Neutral Framework
- Protection of past and future IT Investments
- Standard Framework
- Faster Time to Market
- Covers some of the best technologies
  - Messaging
  - Web based, XML
  - Web Services

Development Features

- Performance
- Availability
- Scalability
- Security
- High Performance
- Reliability
- Extensibility
- Maintainability
- Manageability

Industry Support

- One of the main reasons for the growth of J2EE has been the backing of top companies. To name a few,
  - Sun
  - Oracle
  - IBM
  - HP
- A standard is only as good as the no. of followers
- Previous standards provided
  - a part of the solution
  - didn’t have much industry support
  - or both

$$$

- $Software > $Hardware
- Why?
  - Enterprises are diverse in their goals and approaches to operations
  - A standard business process template cannot be applied
  - Total Cost of Ownership rises exponentially as a function of system interdependencies
- J2EE lowers system interdependencies – It provides a standard view and shields the internals.
  - Under the hood, it may be the “same old” thing I.e legacy data, application, hardware or services

Business Benefits

- Profit Growth
- Customer Retention, Satisfaction & Loyalty
- Competitive & Strategic Advantage
- Knowledge, Intellectual Capital
- Time to Market
- Business Intelligence
- Specific Benefits
  - compliance to govt. regulations

Costs

- Infrastructure
  - Hardware
  - Software
- People-Related
  - Knowledge and Skills
- Process-Related
  - Business Impact

J2EE Usage

- Cases
  - A retail chain uses its inventory management system to consolidate purchasing power from all its stores in near real time and use that information as leverage to demand lower prices from its suppliers.
  - A benefit management company moves from a multiple applications-multiple data repository architecture to a multiple applications-single repository architecture.
  - A Reinsurance company standardizes business processes across different geographic locations into a company-wide unified standard.

Is there an alternative?

- .NET is widely considered as the competing standard
- .NET is the single vendor, single platform(Windows) development and integration platform
- .NET doesn’t buy anything for integrating different platforms – mainframes, midranges etc.
- .NET may be good if there is already a good investment in Windows based back-end solutions.

Is there any drawback?

- J2EE is not the one-stop shop for solving ALL problems
- In some cases, J2EE is
  - over-engineered
  - hyped
  - used for the sake of using it

When NOT to use J2EE

- If there is no value in using a particular J2EE technology. For e.g. at additional costs,
  - Enterprise Java Beans(EJBs) are sometimes a technology excess.
  - Using Java Messaging Service(JMS) when asynchronous messaging is not needed.

- But, it is very likely that you'll be using some J2EE technology for new development. J2EE provides one of the best and easy development and integration solution (JSP, JDBC etc.)

Taking it further - Web Services

- *Web services* describes a standardized way of integrating Web-based applications using open standards over an Internet protocol backbone
  - XML is used to tag the data
  - SOAP is used to transfer the data
  - WSDL is used for describing the services available
  - UDDI is used for listing what services are available
- Used primarily as a means for businesses to communicate with each other and with clients

Taking it further - Web Services

- Web services allow different applications from different sources to communicate with each other
  - not tied to any one operating system or programming language
- J2EE is an enabling technology for Web Services
- Web services sets the stage for getting .NET and J2EE applications to work together.

Future of J2EE

- J2EE as a standard will keep growing, assimilating new technologies
- The vendors may consolidate their offerings
  - The software stack shown could become one

Future of J2EE

- For e.g. Oracle EBusiness Suite, Oracle Application Server and Oracle Database

- Web Services will create a business impact in *inter-business* services and communication.

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