

CBD를 위한 전략

김정아

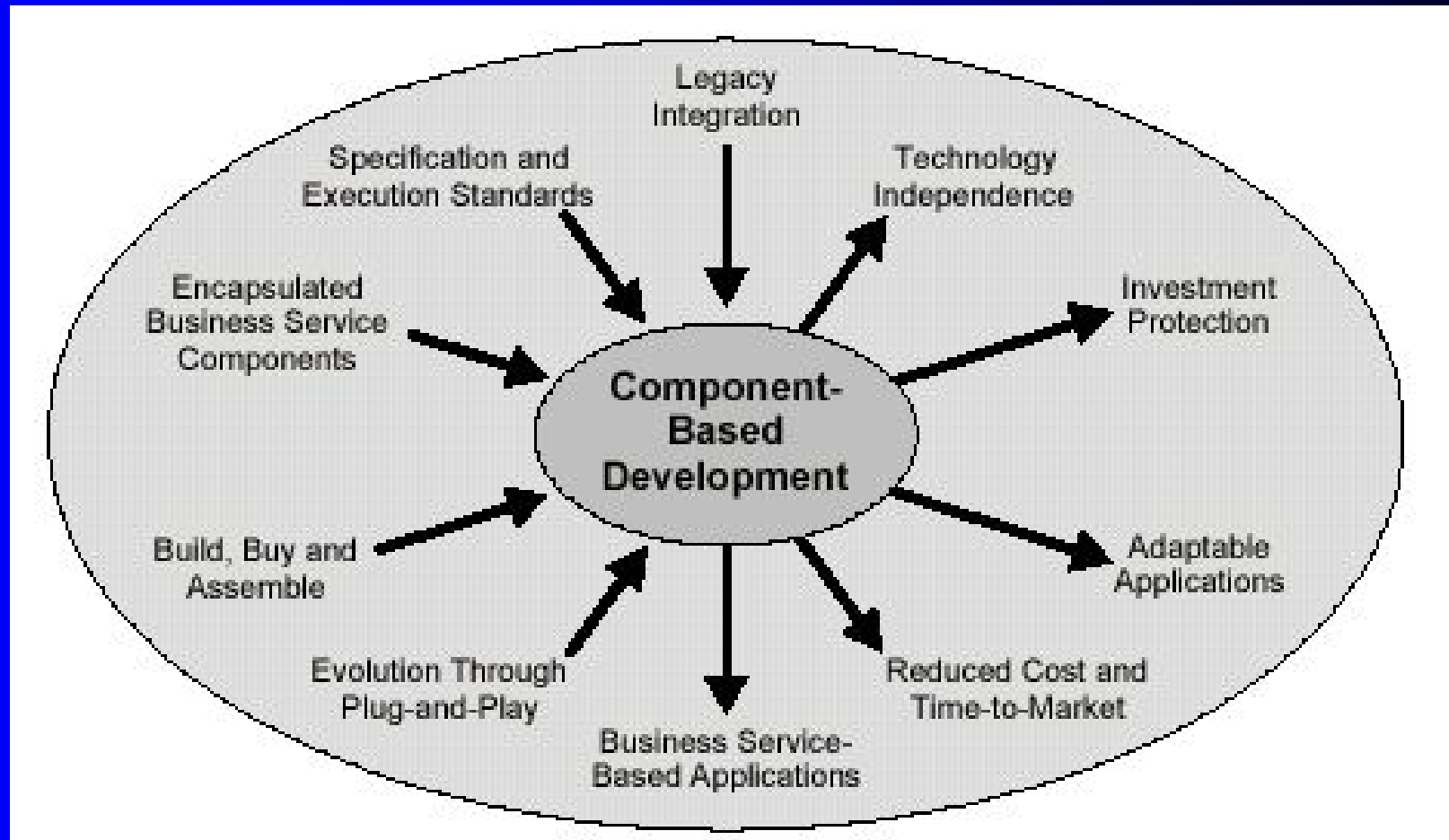
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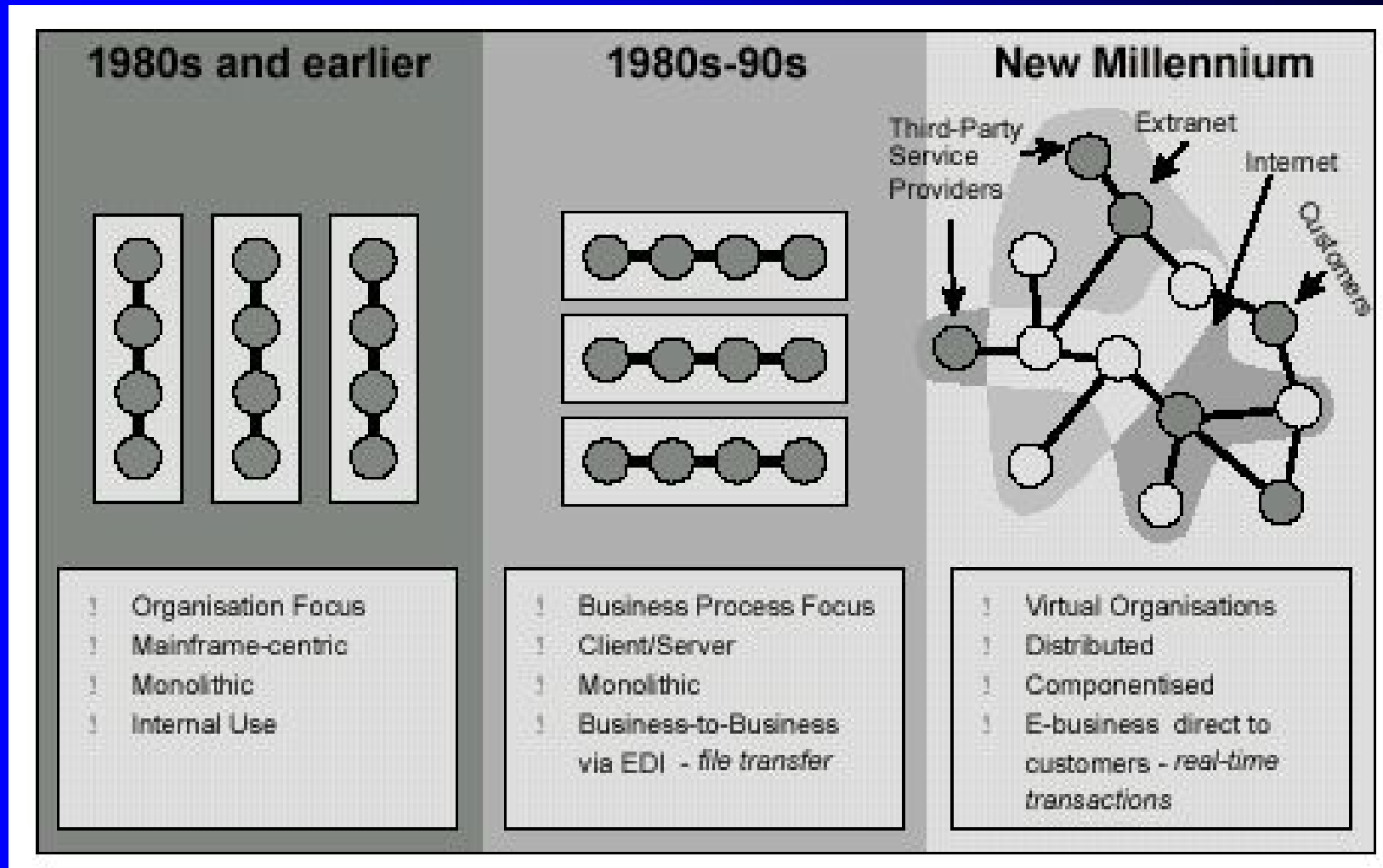
목차

- ❖ Impact of Component
- ❖ Why Software Component?
- ❖ What is Software Component?
- ❖ Component-based Delivery Process
- ❖ Component Technology
- ❖ Component Tools
- ❖ Component Market
- ❖ The Future of Software Component
- ❖ Success Factors for CBD

Impact of Components



Why Software Component



Why Software Component

❖ Prime Business Objectives for Applications

- Time-To-Market
- Adaptable
- Supporting Integration
- Applicable
- Upgradeable

❖ Componentization of business application software

- Reusable
- Replaceable
- Upgradeable

❖ Prime IS Objectives for Application

- Productivity
- Quality
- Reduce Costs
- Manageable Process
- Management of Skill

What is a Software Component

❖ Essential Characteristics of Component

- Identifiable
- Traceable through full development life cycle
- Replaceable by component offering same service
- Accessed only via interfaces
- Services offered through interfaces must not change
- Accurately documented service

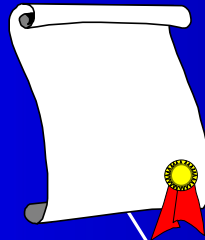
❖ Desirable Characteristics of Component

- Physical Implementation is hidden
- Independent of other components
- Encapsulated
- Reuse of services not constrained by physical implementation
- Can be reused dynamically
- Offer generic service that can be adapted to specific need
- Specialized via plug points

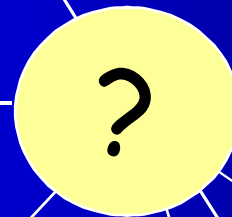
Characteristics of Component

It has an implementation

```
for (int i=0; i<limit; i++)  
{ list[i] = ...  
}; .....
```



It has a specification



It conforms to a standard



It can be packaged up

It can be deployed

Component Granularity

❖ Implementation Specific Components

- ❑ Lowest level of abstraction
- ❑ Class library

❖ Business component

- ❑ Meaningful services focused on a particular business concepts
- ❑ Accessible via the interface

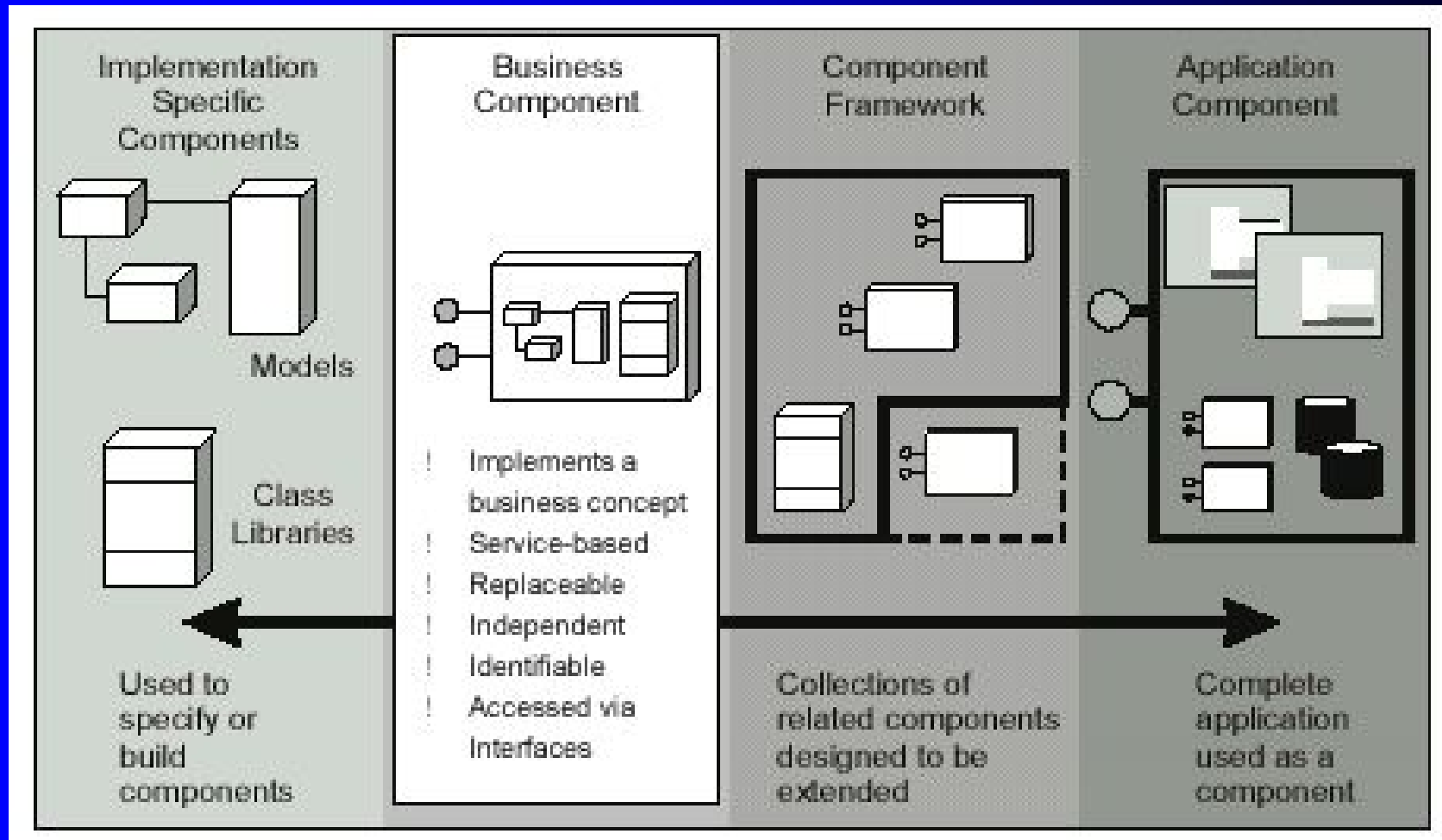
❖ Component frameworks

- ❑ Pre-build assembly of components
- ❑ Together with glue logic to bind the components
- ❑ Offer services through interface

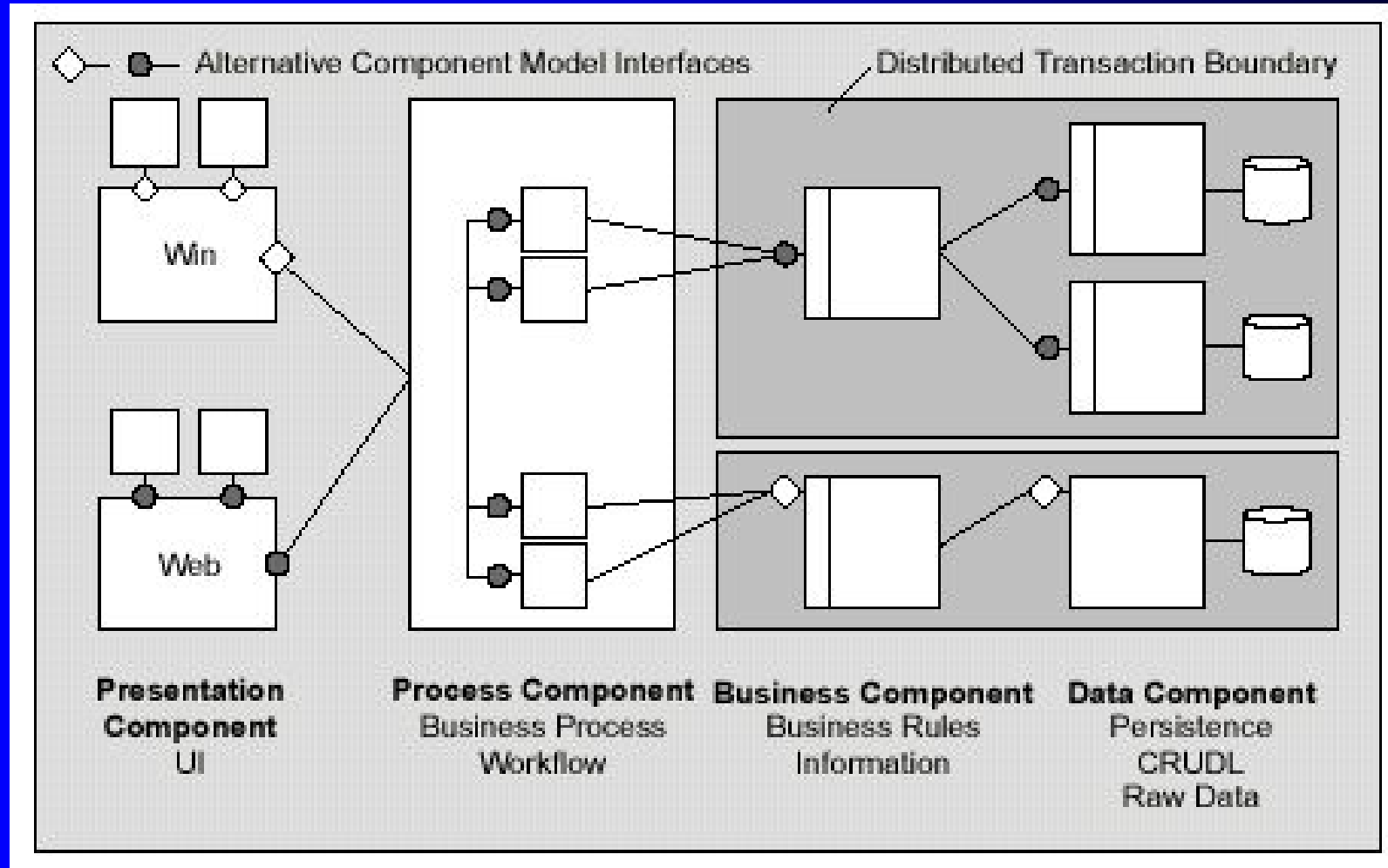
❖ Application Component

- ❑ Completed working application
- ❑ Offer services through interface

Component Granularity



4 Tier Architecture



Component Spectrum of J2EE blueprint

HTML pages

- HTML pages

Basic JSP pages & Servlets

- HTML pages
- JSP pages
- Servlets

JSP pages with Modular Components

- HTML pages
- JSP pages
- Servlets
- JavaBeans Components
- Custom tags

JSP pages with Modular Component & Enterprise Beans

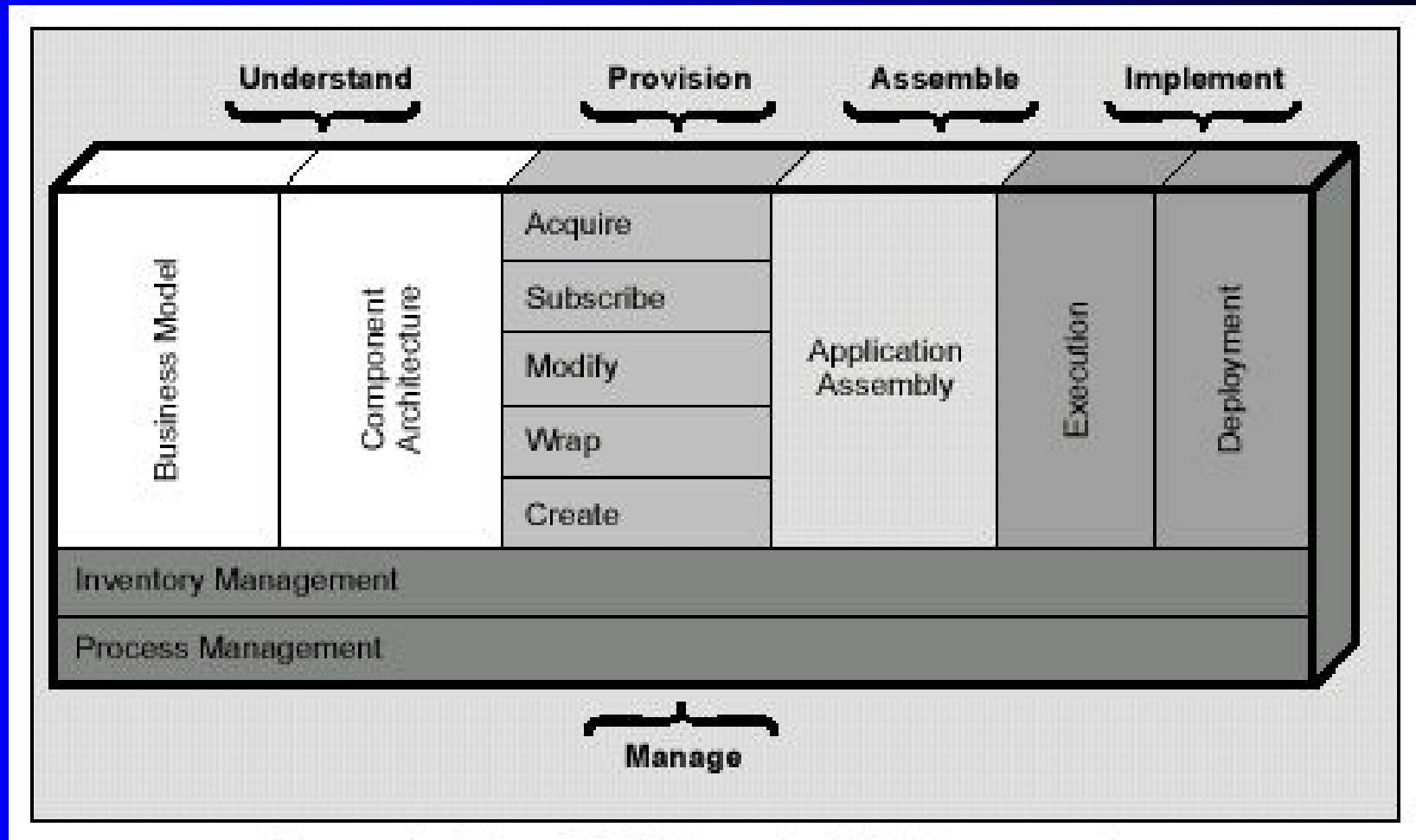
- HTML pages
- JSP pages
- Servlets
- JavaBeans Components
- Custom tags
- Templates
- Enterprise beans

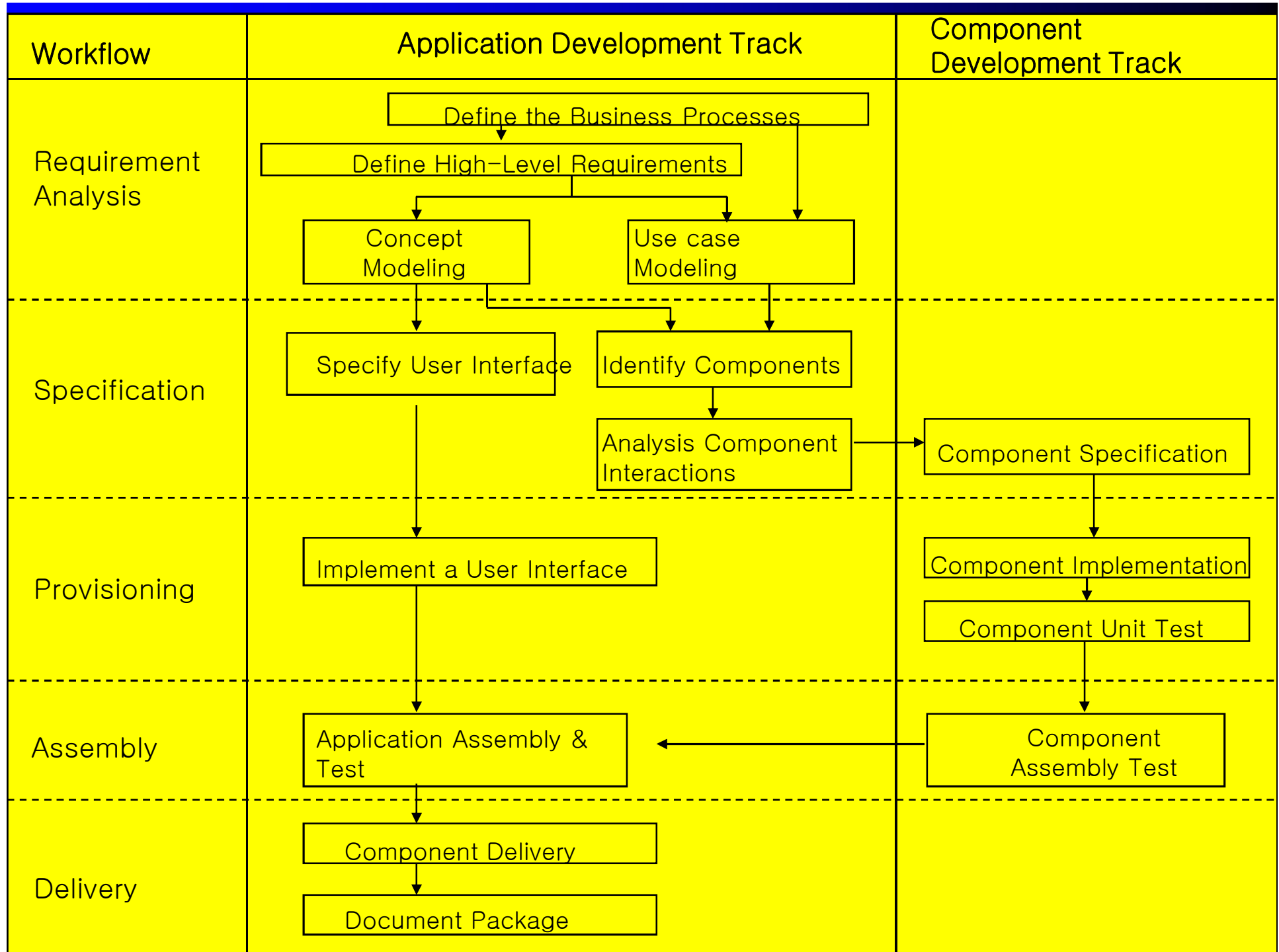
Component-based Delivery Process

❖ Essential Characteristics of the component-based process

- Architected
- Based on reuse of services
- Enables transition
- Integrated disparate source of components
- Incremental
- Distributed
- Impacts full life cycle of Application delivery

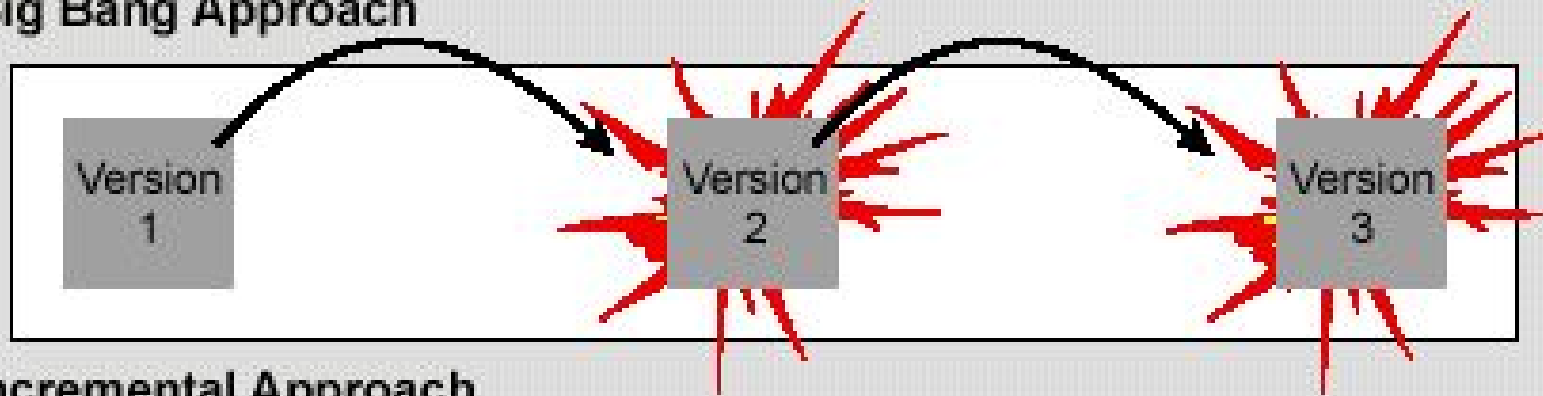
CBD Framework



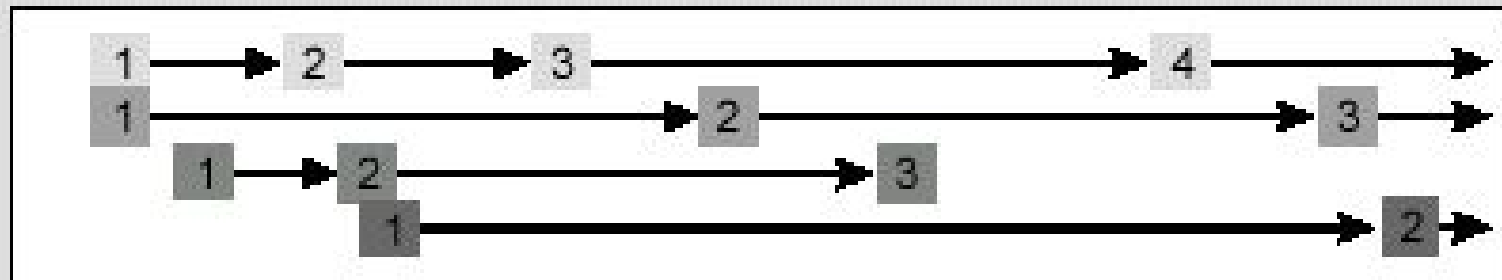


Incremental Delivery

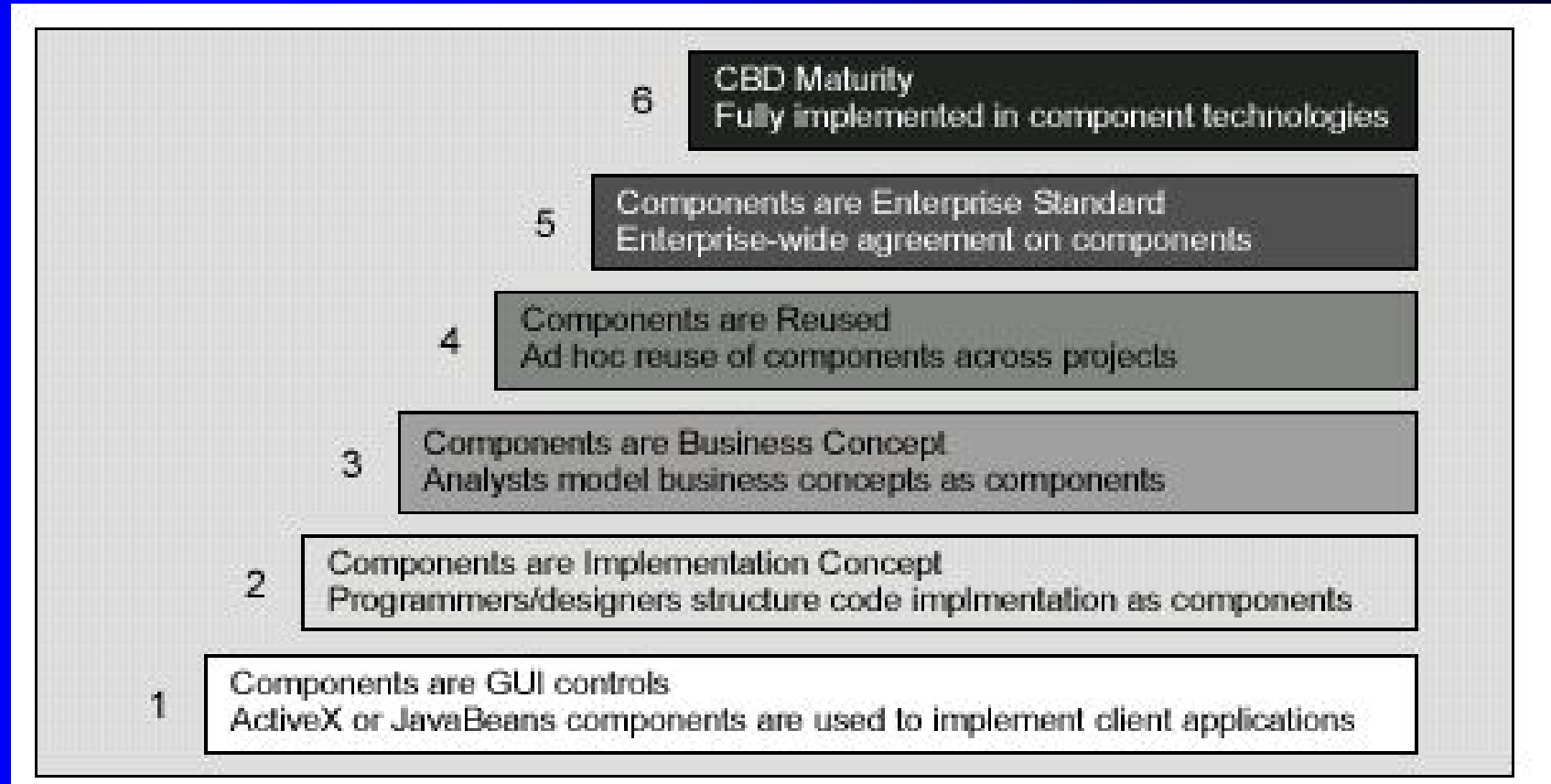
Big Bang Approach



Incremental Approach



CBD Maturity Levels



Component Requires Architecture

❖ Business Architecture

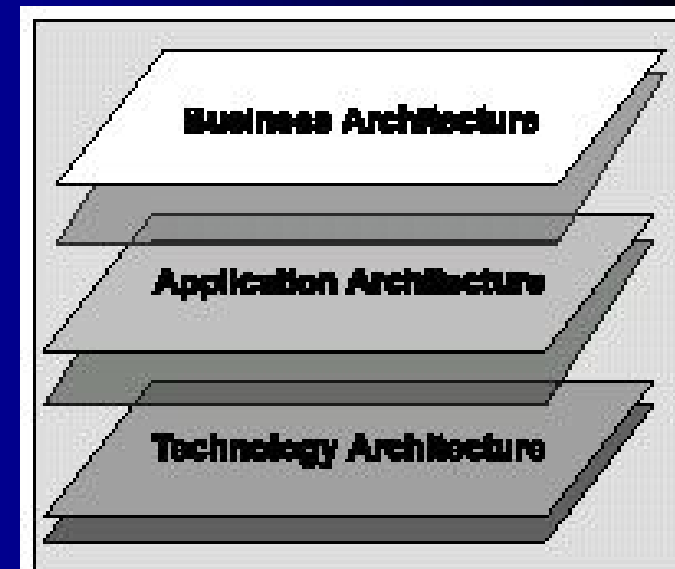
- ❑ determines the process component, business components, business interface

❖ Application Architecture

- ❑ actual implementation of the business concept

❖ Technology Architecture

- ❑ technical service by technical components & platform infrastructure



Component Technology

❖ Benefit

- ❑ Language and platform independent component reuse
- ❑ Runtime reuse of services
- ❑ Location Transparency
- ❑ Self Describing Components
- ❑ Dynamic Scalability

❖ Component Execution Environments

- ❑ Transaction Processing
- ❑ Object Request Brokers
- ❑ Message-Oriented Middleware and Message Queuing
- ❑ Message Broker

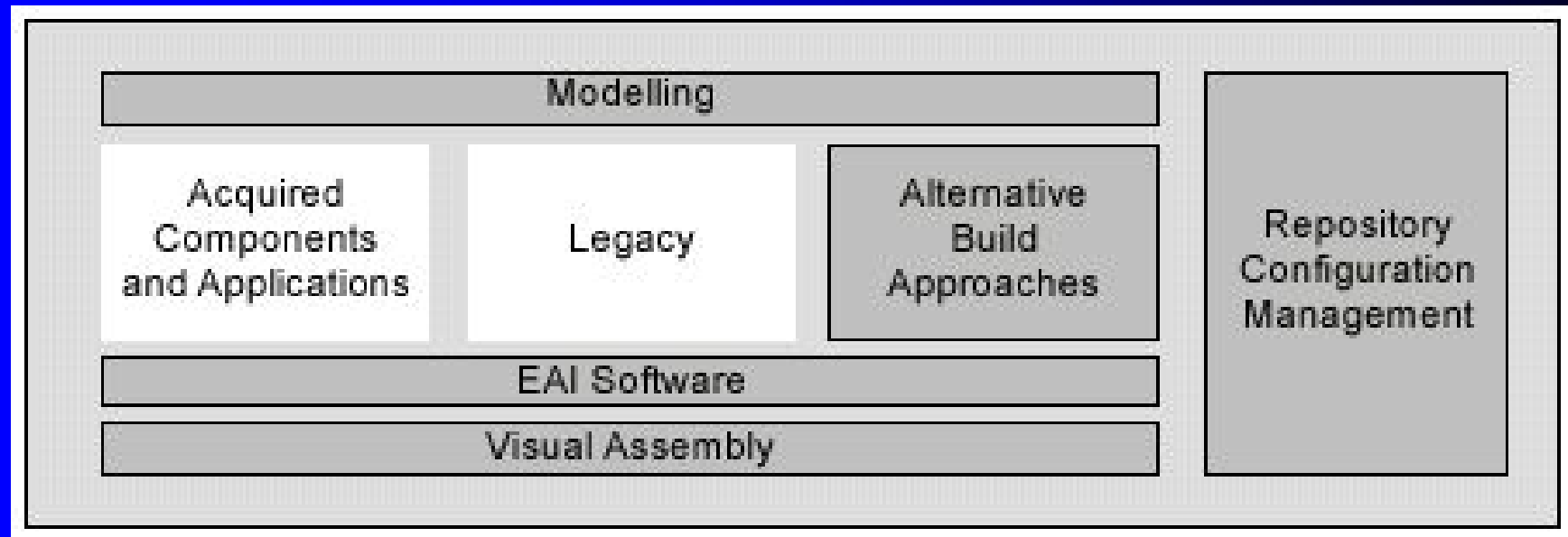
Component Technology

❖ Adoption of Component Technologies

- .NET
- CORBA
- EJB

Net

Component Tools



Component Tools

❖ Modeling Tools

- support for component and interface modeling
- improve communication between component supplier and consumer
- facilitate reuse
- component catalogues can use single notation (UML)
- Enable tool data exchange

❖ Build Tools

- developing implementation of Components
- generation of native components from model-based specification
- generation of interfaces for multiple component models
- increasing use of patterns and framework
- generation of test harness
- wrapping for legacy environments

Component Tools

❖ Repositories and Configuration/Deployment Management

- ❑ Inventory management for components
- ❑ Microsoft repository
 - Open Information model to share information

❖ Assembly Tools

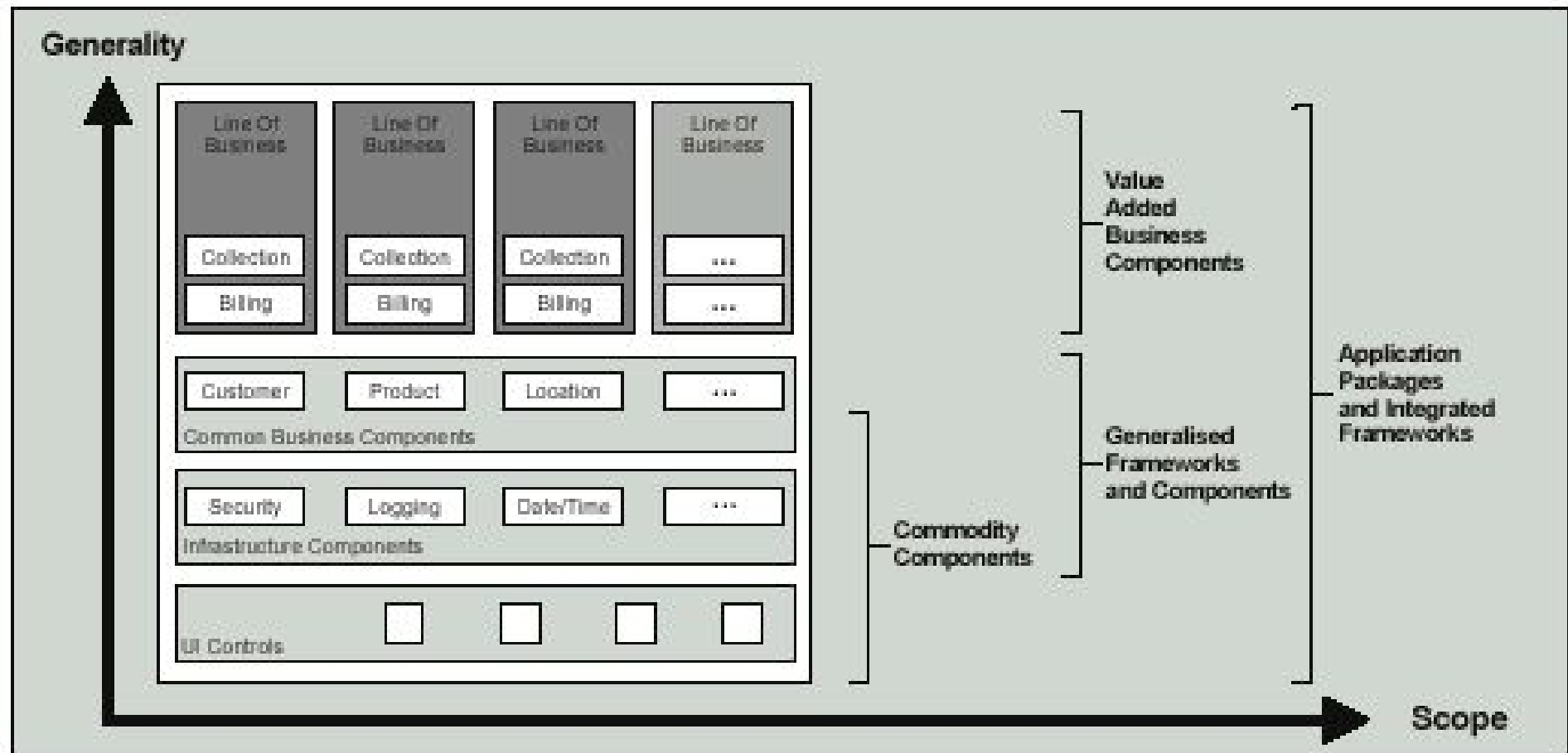
- ❑ Visual specification and assembly of application
- ❑ at the business semantic level
- ❑ at the component technology level

❖ EAI software

- ❑ platform integration
 - integration of different technologies across execution platforms
- ❑ package integration
 - integrating different packaged applications

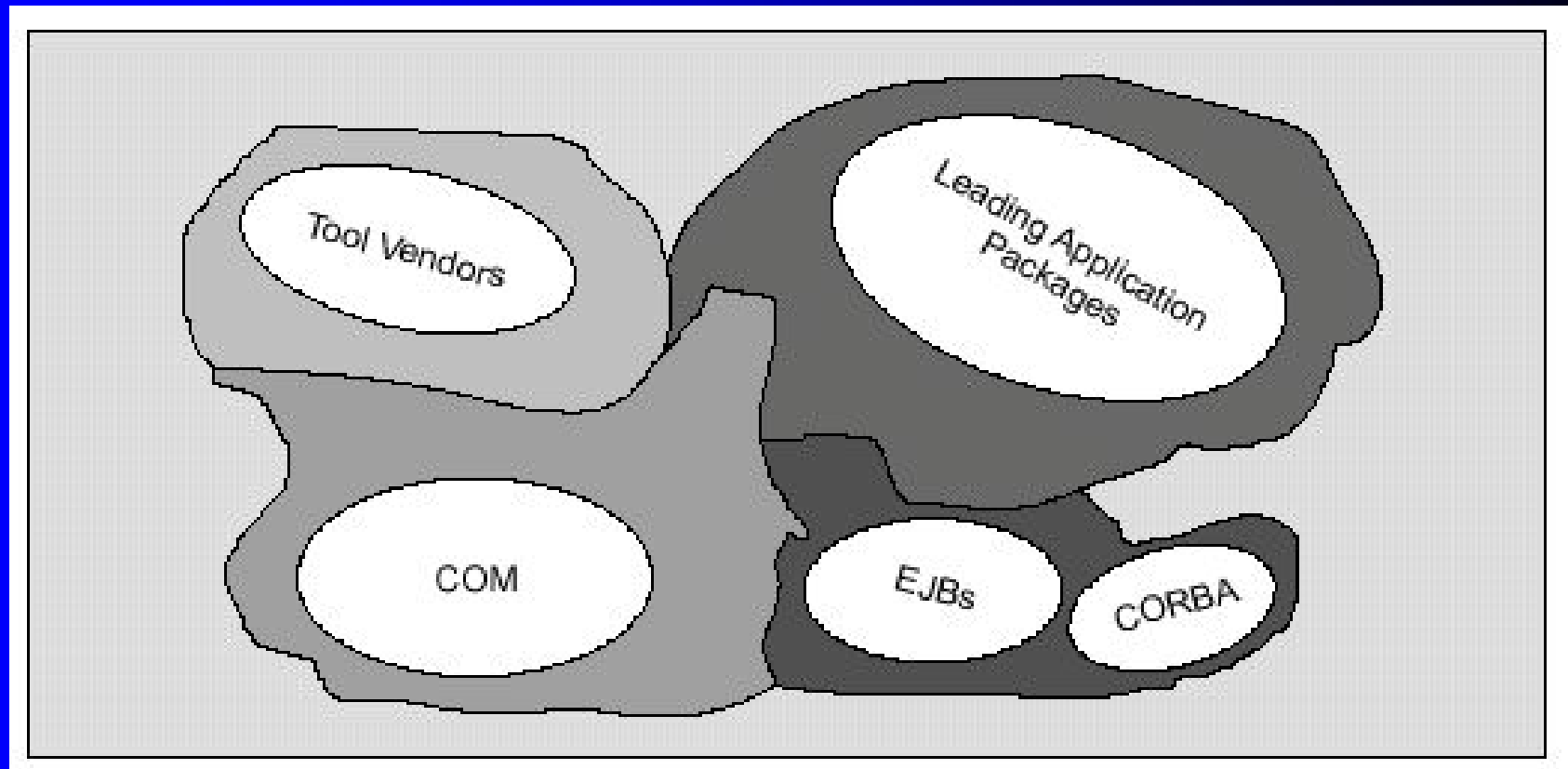
Future of Component

❖ Component Market



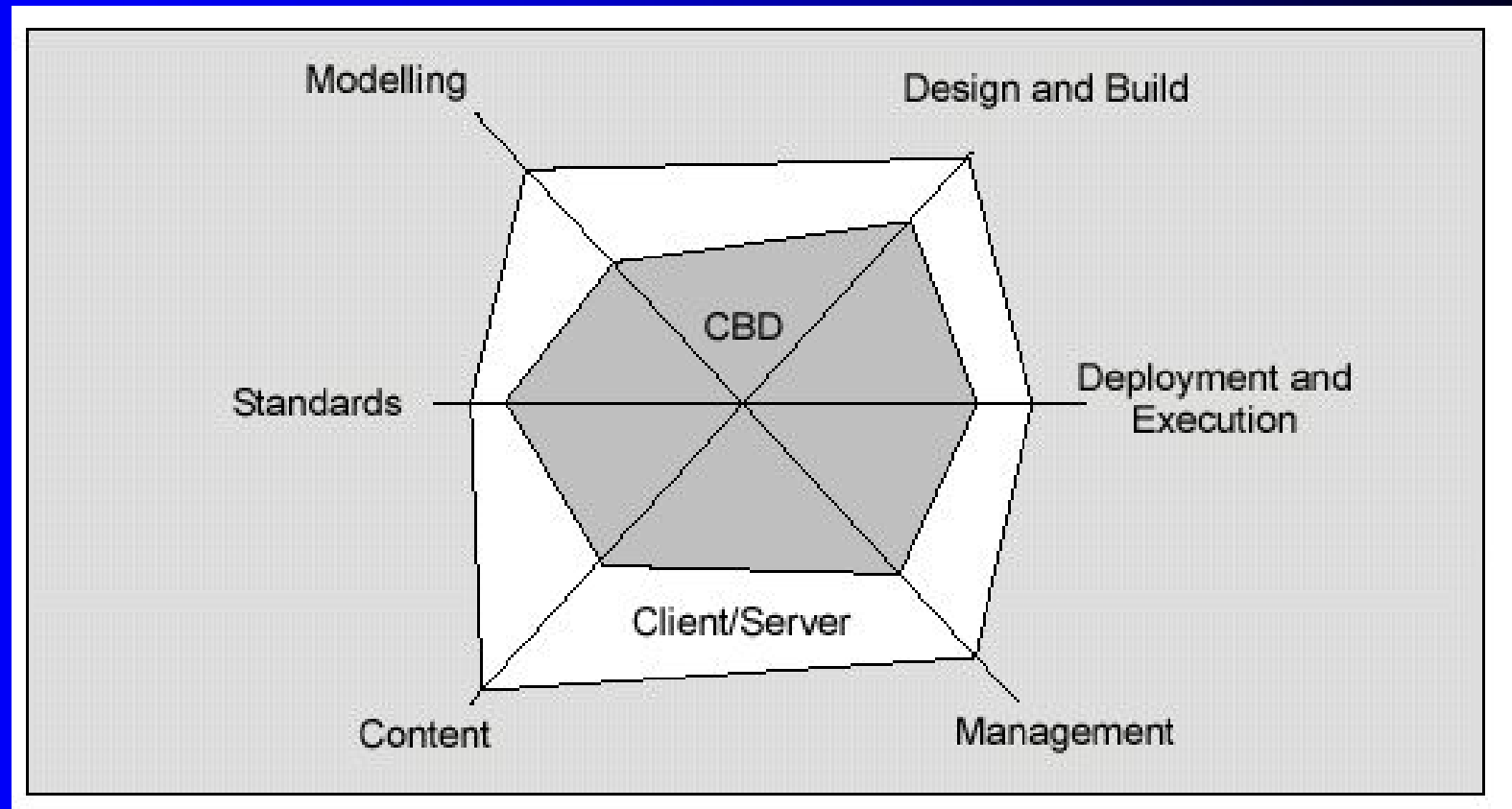
Future of Component

- ❖ Component Market



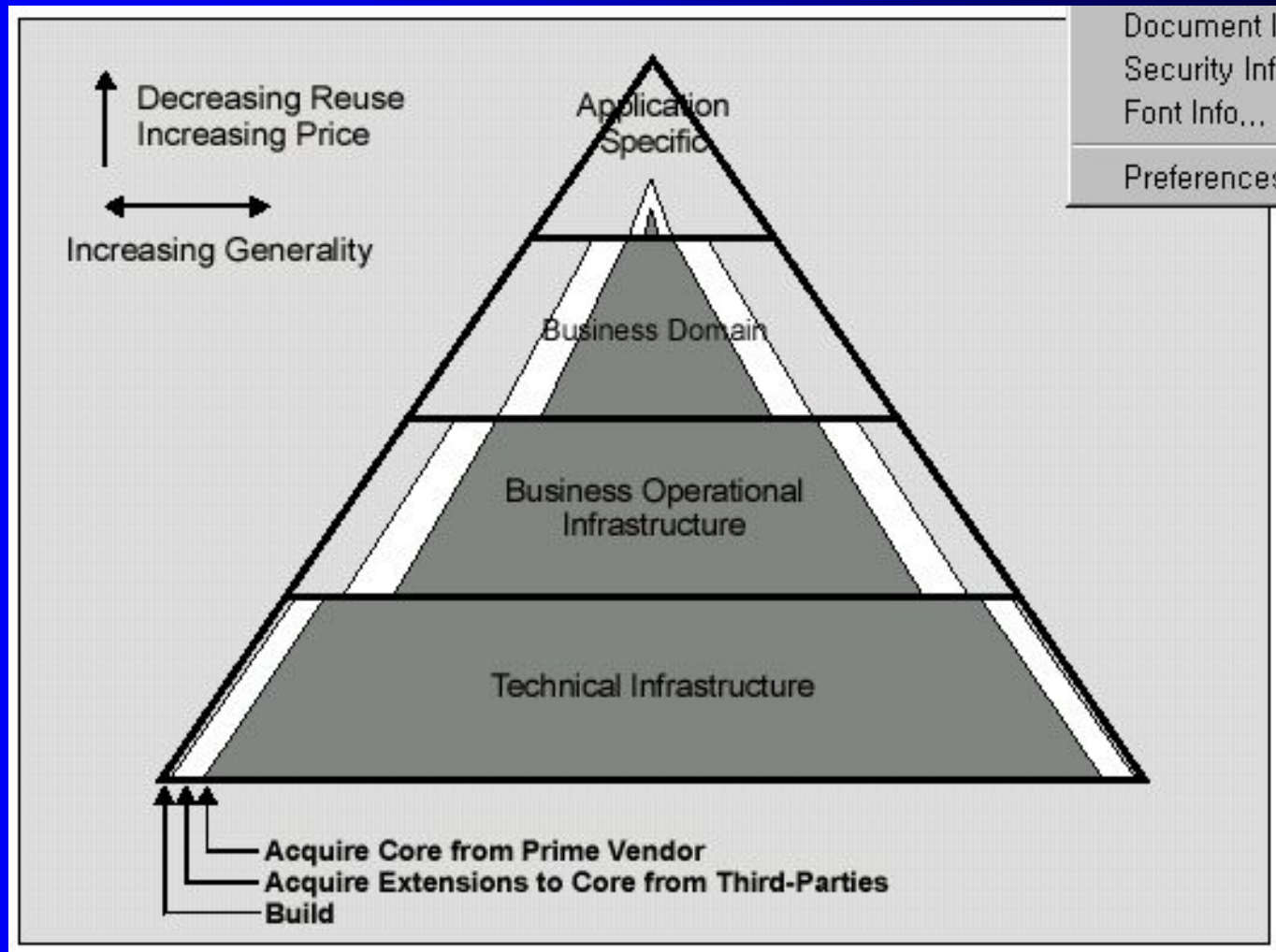
Future of Software Component

❖ Comparison of Maturity



Future of Software Component

❖ Build & Buy



Success Factors for CBD

- ❖ A project' s success is influenced by many hygiene factors
 - ❑ New Roles/Organization
 - ❑ Training
 - ❑ Technical Infrastructure
 - ❑ Standards/Methods
 - ❑ Architecture
 - ❑ Policy