

# Service Oriented Architecture

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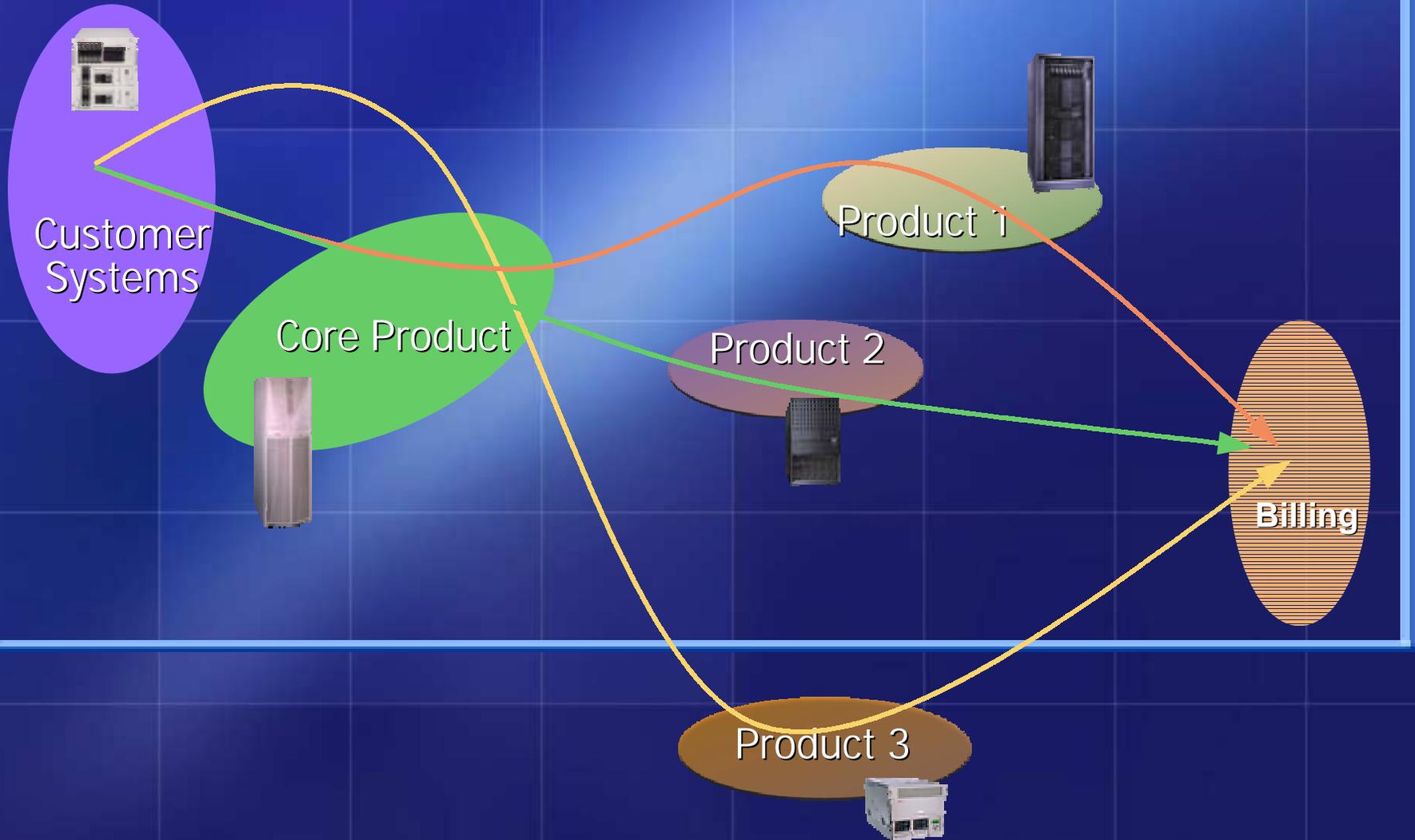
# Agenda

- Enterprise IT
- Models and Patterns
- Service Oriented Architecture
- Application Architecture
- Architectural Integration
- Windows Server 2003

# Enterprise IT Today

- IT is increasingly central to how business is done & how new value is created
- Focus to date: build to task, build to last
  - Singular LOB function, reliability
- New challenges for IT at center of business
  - Provide an Agile infrastructure
    - Connect the company, inside and outside
    - Adapt rapidly with changing business
  - At minimum TCO (Development and Operations)

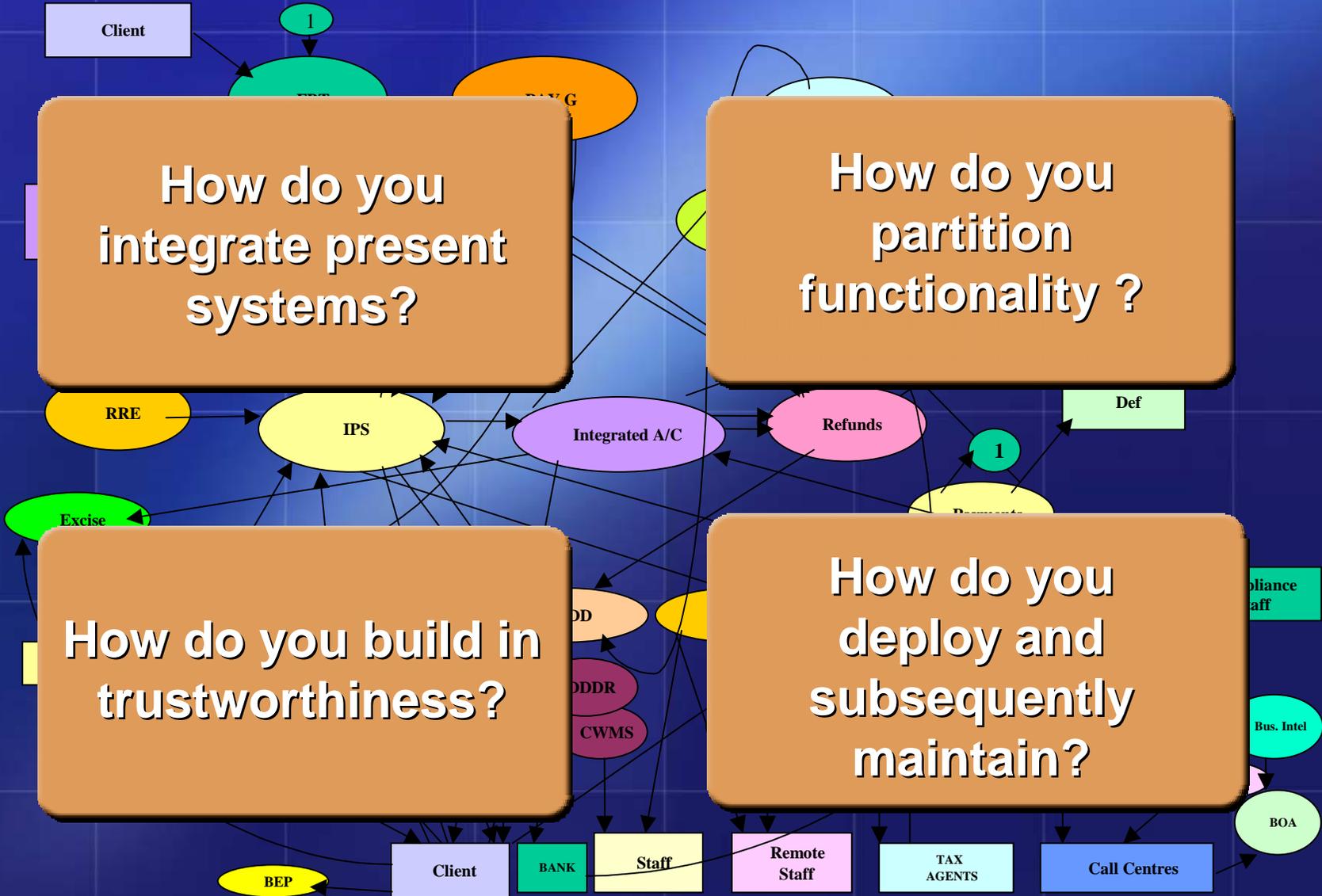
# The Agile Company



# Connected and Agile

- Designed and built for the connected world
  - Built on open XML Web service interoperability standards
- Connects what you have & what you will have
  - Existing & new; internal & external
  - Transcends 'legacy', heterogeneity, EAI
- Unlocks information to flow dynamically
  - New, programmable access to 'islands' of decision data
  - Everything a 'component' for tailored, secure solutions
- Allows orchestration of business function
  - New business processes dynamically

# Architecture Today



# Patterns, Models, Architectures

Patterns

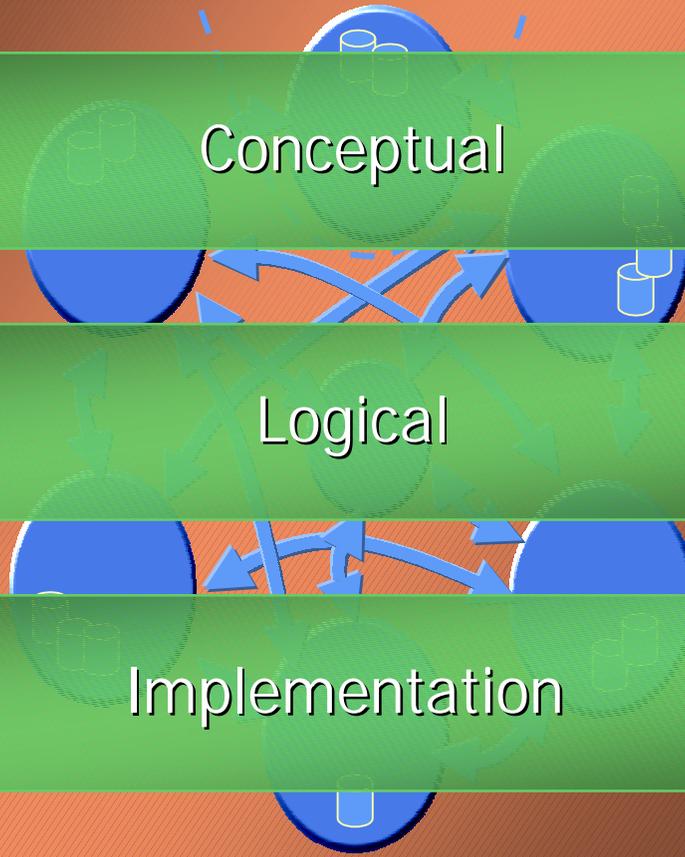
Architecture

Models

Conceptual

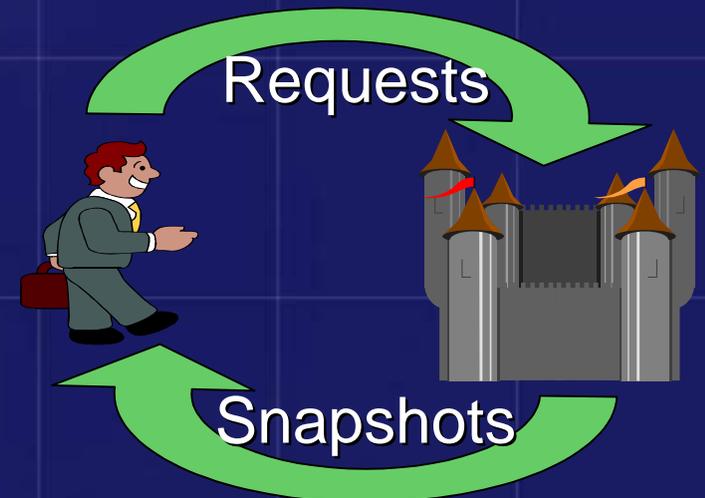
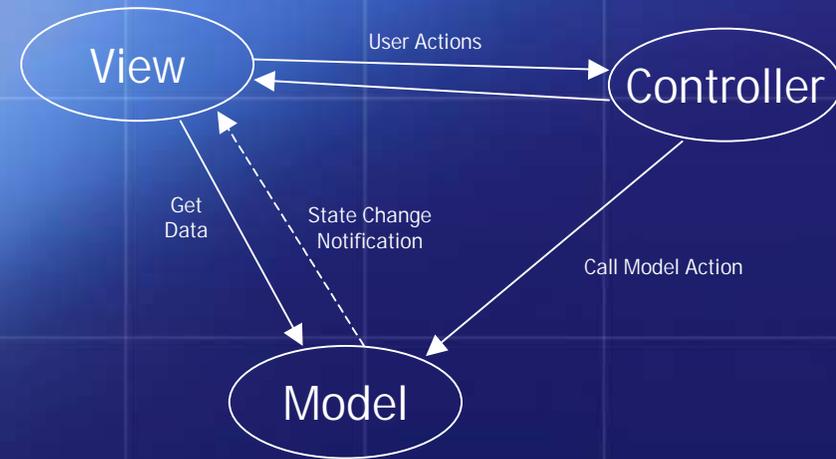
Logical

Implementation



# Patterns

- Provide reuse and repeatability
- Design and Architectural
  - MVC / MVP
    - M=Data + logic
    - V=Display
    - C=State Manager
  - Fiefdoms / Emissaries
    - F=State Control + Data
    - E=Display + Preparation



# Guidance Available Today

## Reference Architectures

- Internet Data Center
- Business to consumer retail site
- Enterprise, and ASP-based messaging
- Distributed LOB Application

## Reference Building Blocks

- Building enterprise-class distributed apps

## Operational Practices

- Core Infrastructure Deployment
- Data Center Operations

- Microsoft Systems Architecture: Internet Data Center (IDC)
- Reference Architecture for Commerce
- Exchange 2000 Server Upgrade Series
- Exchange 2000 Server Hosting

- Data Access for .NET
- Exception Management in .NET
- Authentication in ASP.NET
- Monitoring in .NET Distributed Application Design
- .NET/COM Migration and Interoperability

- Active Directory Branch Office Deployment
- Team Development with Visual Studio .NET and Visual SourceSafe
- Security Operations for Windows 2000 Server
- Exchange 2000 Server Operations
- SQL Server 2000 Operations
- Backup and Restore (IDC)

**Microsoft**  
**PAG**

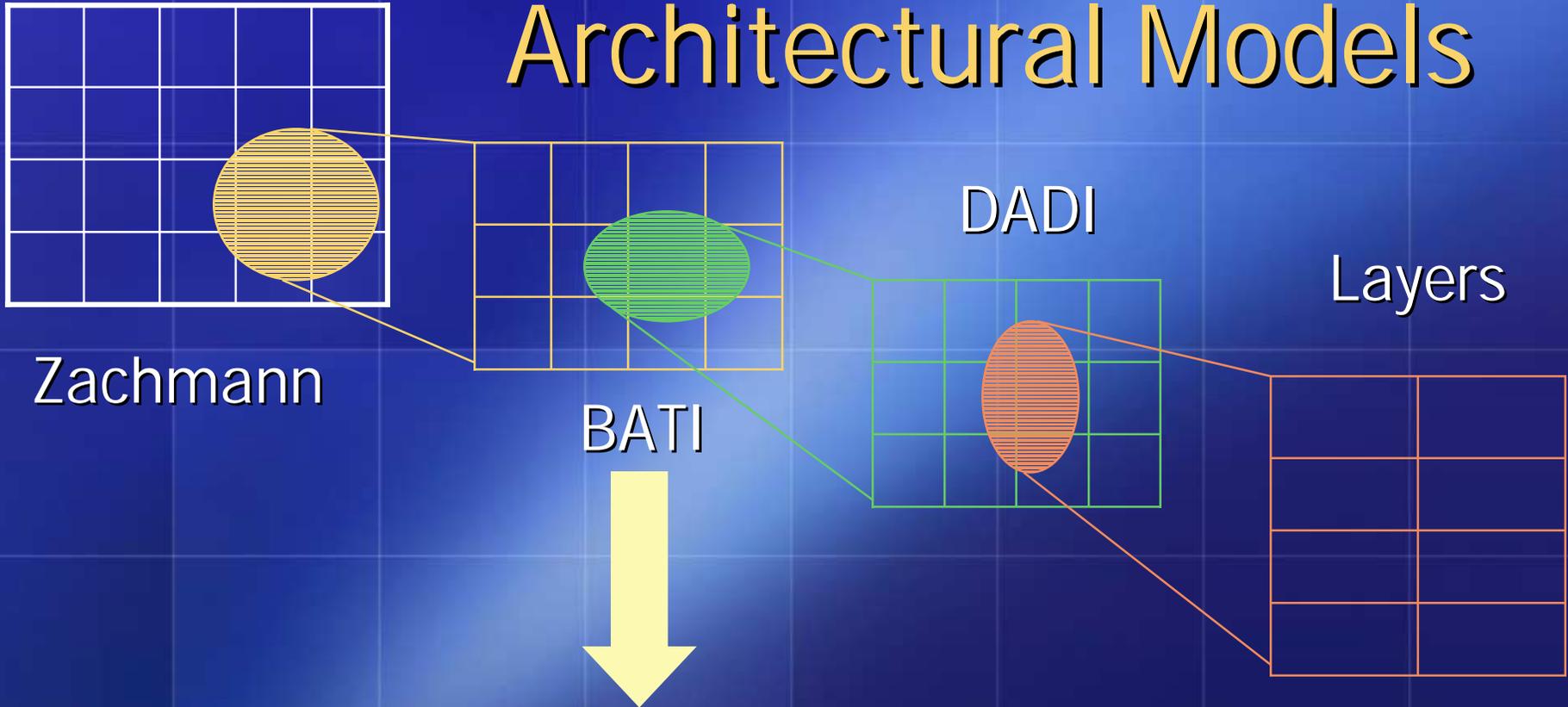
Proven Practices For Predictable Results

# Design Templates

The image is a screenshot of the Microsoft Visual Studio IDE in design mode for an ASP.NET web form. The interface includes a menu bar, a toolbar, a Toolbox on the left, a Solution Explorer on the right, a Properties window, and a Dynamic Help window. Several callout boxes with arrows point to specific features:

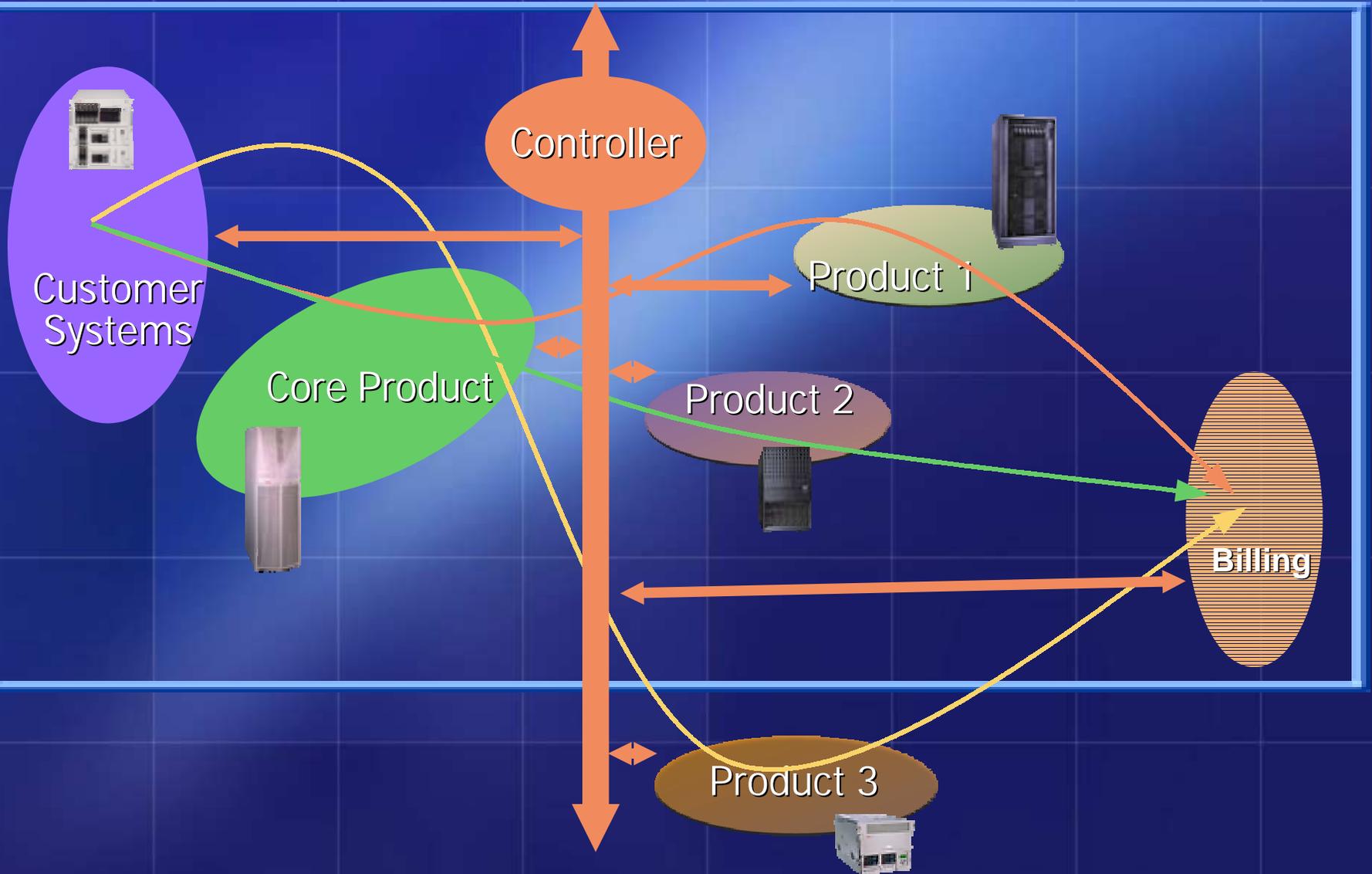
- Toolbox & Menu Constraints:** Points to the Toolbox on the left, which lists various web form controls like Pointer, Label, TextBox, Button, etc.
- Initial Project Structure:** Points to the Solution Explorer on the right, showing a project named 'SampleApplication' with sub-folders like BusinessFacade, BusinessRules, etc.
- Constrain Additions:** Points to the central design area where a control is being added to the form.
- Property Constraints:** Points to the Properties window on the right, which shows the configuration for the selected control.
- Policy Task List Reminders:** Points to a list of reminders at the bottom of the design area, such as 'Policy Reminder: Project 'WinUI.csproj' (Element prc http://STEVENPOLAP/.../ExistingWebForm1.aspx) 1'.
- Dynamic Guidance:** Points to the Dynamic Help window on the right, which displays context-sensitive help topics like 'Distributed Applications and Enterprise Template Pol'.

# Architectural Models

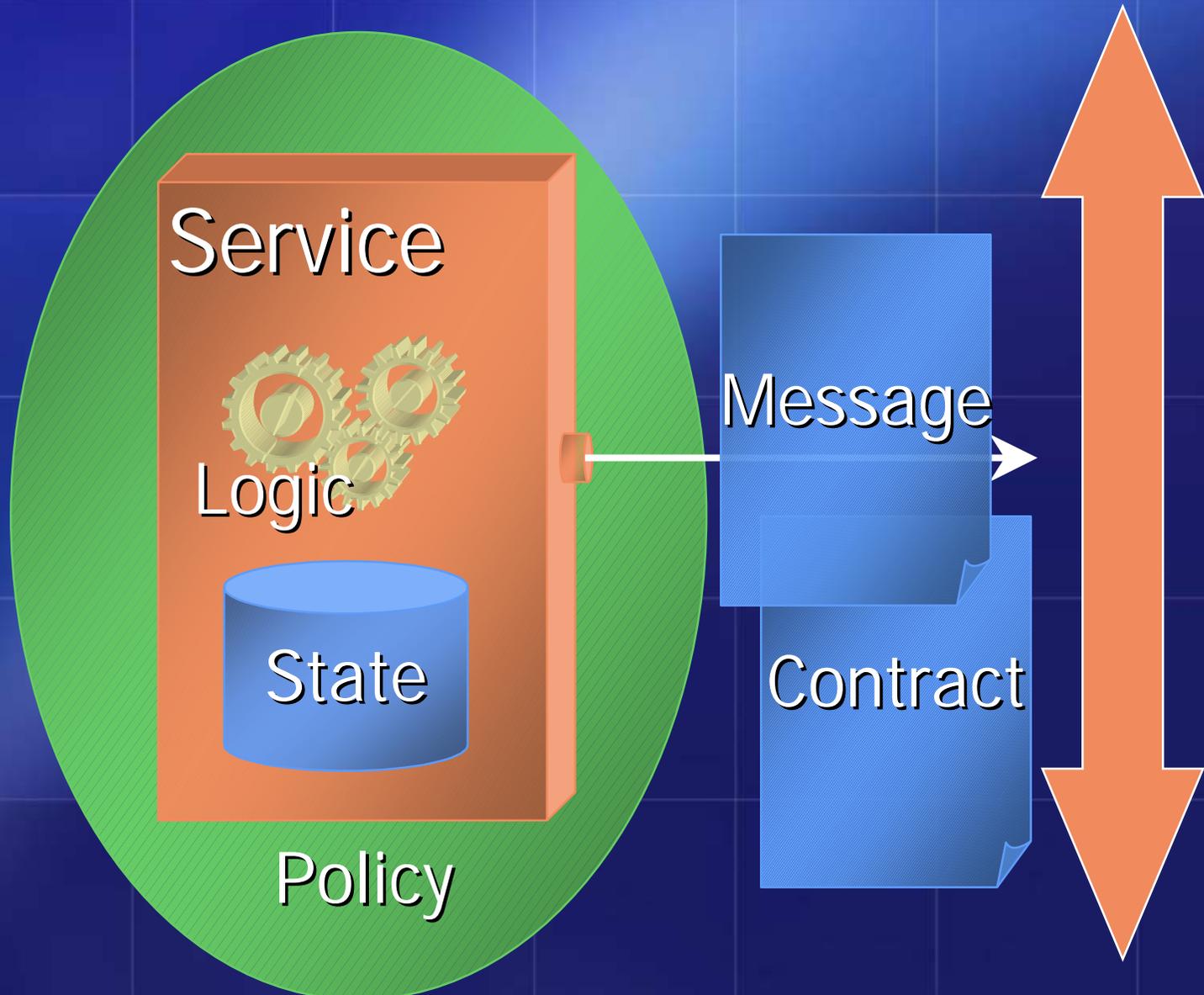


	Business	Application	Technical	Information
Conceptual	RTE	SOA	Web Services	KM
Logical	B2B etc	Application Diagram	N Tier	Information & Schema
Physical	Business Transaction	Code	Products & Hardware	Data

# Service Oriented Architecture (SOA)



# Inside a Service



# Layered Architecture



# Logical Technical Architecture

## Services Framework

Security

Reliable  
Messaging

Transactions

Process

Integration

Component

Component

Component

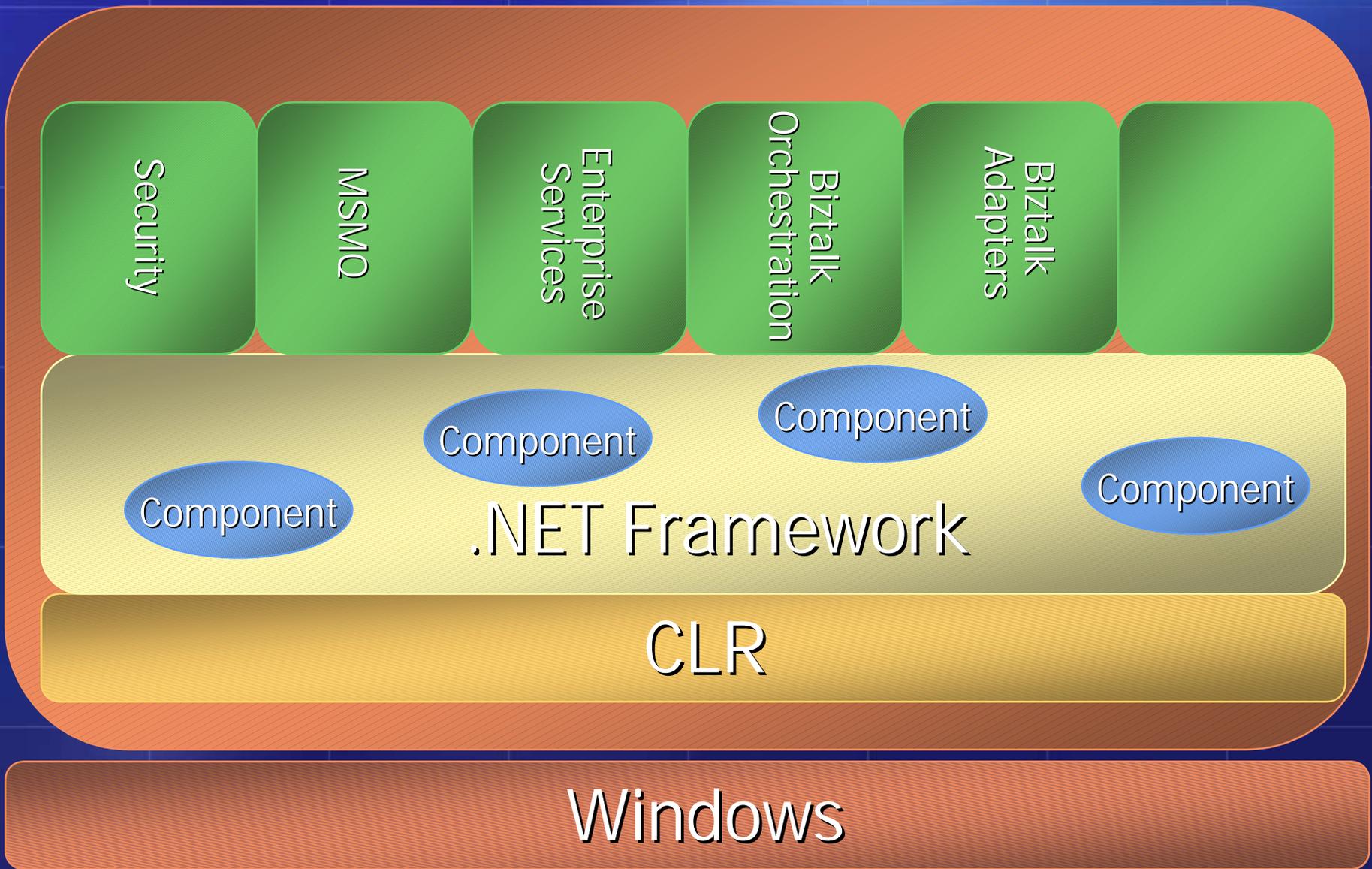
Component

Component Support

Language Support

Services Platform

# .NET Technical Architecture



Security

MSMQ

Enterprise  
Services

Biztalk  
Orchestration

Biztalk  
Adapters

Component

Component

Component

Component

.NET Framework

CLR

Windows

# J2EE Technical Architecture

Security

JMS

JTA

ebXML

JCA

Component

Component

Component

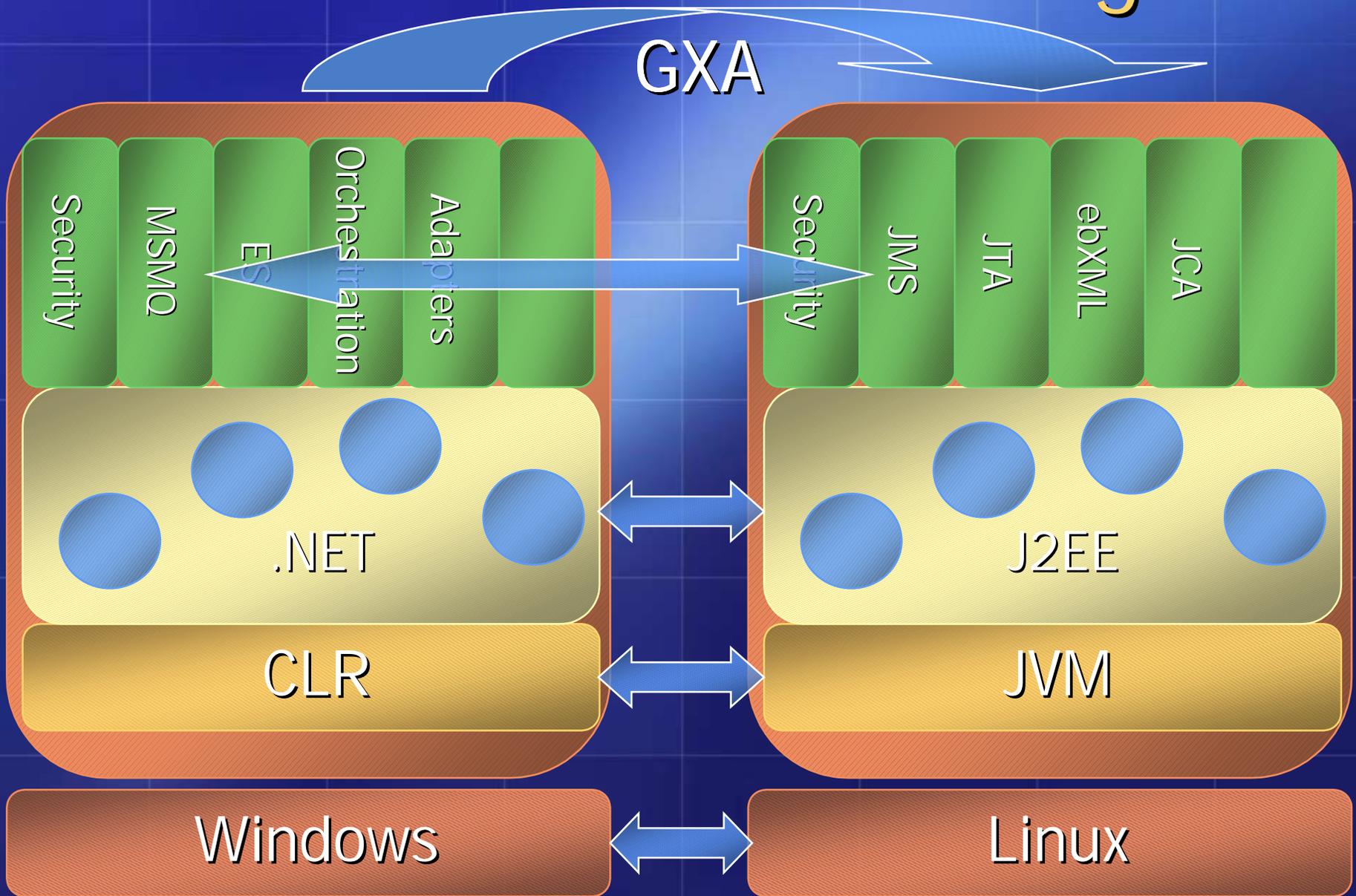
Component

J2EE Framework

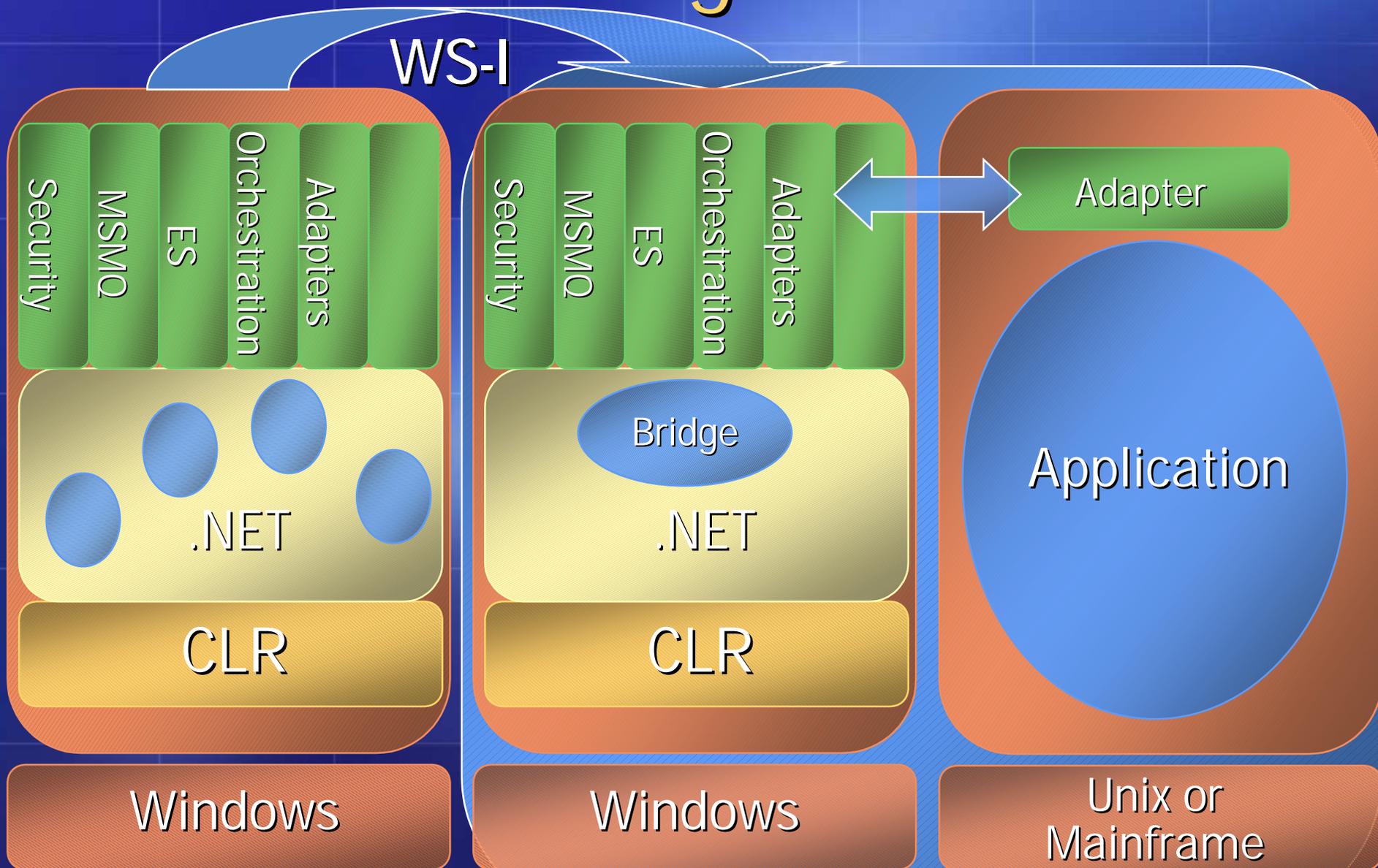
JVM

Any Platform

# Technical Architectural Integration



# Architectural Integration



# Windows Server 2003

- Component Hosting
  - Existing COM applications
  - .NET
  - Web Services
- Data Access
  - ADO.NET
  - New Providers including Oracle 8i
- Support for Clients
  - ASP.NET for Thin Client
  - Windows Forms for Rich Client
- Enhanced COM+ Functionality
  - Improved Transaction, Message Queuing, and Object Pooling Support
  - Application Pooling, Application Partitions, and Application Pause and Disable

# Summary

- Key Business Drivers
  - Agility
  - TCO
- Web Services are the base of Agile business
  - .Net is the lead Web Service

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